An integrative and holistic approach to implementing curriculum for a school garden

Elizabeth Janette Newmeyer

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AN INTEGRATIVE AND HOLISTIC APPROACH TO
IMPLEMENTING CURRICULUM FOR A SCHOOL GARDEN

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Holistic and Integrative Education

by
Elizabeth Janette Newmeyer
March 2007
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ABSTRACT

The purpose of my project was to develop a curriculum guide that would allow teachers to effectively and efficiently utilize a school garden to teach the required standards while promoting peace among the students. The curriculum guide would need to be teacher friendly and engaging for students. In order to accomplish that task I developed a multi-step methodology. I completed a thorough review of the literature in the following areas: school gardening, peace curriculum, and curriculum design. Based on my review of the literature, I determined that in order for my guide to be of true value, I would need to integrate as many subjects and state standards into each lesson as possible, address multiple learning modalities, and offer teachers a way to teach social skills to their students. The guide would also need to be easy for the teachers to use. A list of proposed curriculum units was drafted and teachers were surveyed concerning its appropriateness. I then created unit and lesson templates to allow for easy readability and had them reviewed by three teachers. Finally, I created a
sample curriculum guide and had it evaluated by nine teachers using a survey that I developed. The teachers overwhelmingly determined that the guide was effective and engaging. They appreciated the integration and hands-on opportunities within each lesson. The guide was then revised based on the feedback I received.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vii</td>
</tr>
<tr>
<td>CHAPTER ONE: INTRODUCTION</td>
<td></td>
</tr>
<tr>
<td>General Statement of Problem</td>
<td>1</td>
</tr>
<tr>
<td>CHAPTER TWO: REVIEW OF THE LITERATURE</td>
<td>7</td>
</tr>
<tr>
<td>Creating a School Garden</td>
<td>8</td>
</tr>
<tr>
<td>Peace Education</td>
<td>15</td>
</tr>
<tr>
<td>Curriculum Design</td>
<td>25</td>
</tr>
<tr>
<td>CHAPTER THREE: METHODOLOGY</td>
<td>43</td>
</tr>
<tr>
<td>CHAPTER FOUR: RESULTS AND ANALYSIS</td>
<td>57</td>
</tr>
<tr>
<td>Curriculum Unit Survey</td>
<td>58</td>
</tr>
<tr>
<td>Unit and Lesson Plan Template Interviews</td>
<td>61</td>
</tr>
<tr>
<td>Curriculum Guide Review Survey</td>
<td>64</td>
</tr>
<tr>
<td>Interviews</td>
<td>72</td>
</tr>
<tr>
<td>Revision</td>
<td>74</td>
</tr>
<tr>
<td>CHAPTER FIVE: CONCLUSIONS AND IMPLICATIONS</td>
<td>76</td>
</tr>
<tr>
<td>Conclusions</td>
<td>77</td>
</tr>
<tr>
<td>Limitations</td>
<td>81</td>
</tr>
<tr>
<td>APPENDIX A: CURRICULUM UNIT SURVEY</td>
<td>83</td>
</tr>
<tr>
<td>APPENDIX B: LESSON PLAN TEMPLATE</td>
<td>86</td>
</tr>
<tr>
<td>APPENDIX C: UNIT PLAN TEMPLATE</td>
<td>88</td>
</tr>
</tbody>
</table>
APPENDIX D: DRAFT OF CURRICULUM GUIDE .................. 90
APPENDIX E: CURRICULUM GUIDE REVIEW SURVEY .......... 172
APPENDIX F: REVISED CURRICULUM GUIDE ................. 174
REFERENCES .................................................. 260
LIST OF TABLES

Table 1. Average Score Comparisons ...................... 68
CHAPTER ONE

INTRODUCTION

General Statement of Problem

I first became fascinated with school gardens while completing observation hours during my teacher credentialing program. I witnessed firsthand a class that used a small school garden in all aspects of their daily school life. Students studied the anatomy of plants, compared and contrasted different types of plants, measured plant growth, wrote poetry about nature, and simply lived peacefully within their garden. The students had raised their test scores and seem to love coming to school each day. From that day on, I was hooked.

As a young and naïve teacher, I believed that all teachers loved teaching and learning. I believed that all students had a strong desire to soak up knowledge by engaging in meaningful conversations with teachers. What I found in reality were teachers who were frustrated by the demand of high stakes testing, who in turn felt forced to forgo their beloved lessons and units adopting instead a rigorous schedule of test prep materials and worksheets.
Instead of students engaged in learning, I found students who were bored by the monotony, lost in the ever increasing difficulty, or frustrated by the lack of creativity and diversity. This was no longer the teaching field I had dreamed of entering.

With the development of the No Child Left Behind Act of 2001, teachers began to fear low test scores and the repercussions thereof. As a new elementary school that opened its doors in August of 2005, the staff of Roger Anton Elementary School definitely felt the pressure to succeed right from the beginning. The school is located in a low income area of San Bernardino, California and filled with numerous students who were lacking the basic social and academic skills needed to achieve at grade level. In addition to this, the school is also a magnate for the performance arts resulting in students missing valuable academic learning time to take part in orchestra classes, chorus, band, and a twelve week arts course. This results in constant interruptions that disturb the flow of learning. What is left of learning time is filled with rigorous but uncreative scripted lessons and workbooks.
Science and Social Studies are virtually non-existent classes anymore.

Many of the professional resources that I reviewed (e.g. Levy (1996), Bamford & Utne (2003), and Clifton, Mauney, and Falker (1998)), seemed to agree that integration is key to a student's success. Studies suggest that students do better in schools where student choice is considered. Environmental service learning has been shown to have many desirable effects. By combining integration, student choice, and environmental service learning, students might do better academically.

Years later, when I became a teacher at Roger Anton, I longed to emulate what I had seen in that peaceful, garden classroom. As a way to address the issues facing our school, I proposed to the Anton staff that we create a school garden that would allow us to integrate our curriculum together, thus taking less time to teach more, but in a much more enjoyable way. The staff heartily agreed. Thus began the concept of the Roger Anton school garden.

The specific purpose of this study is to develop a curricular unit for a kindergarten classroom that has the
following characteristics: (1) integrative, (2) peace
building, (3) approach to using a school garden, and (4) teacher friendly. I strove to integrate curriculum areas
and infuse excitement for both the teacher and the
students while still addressing the many state standards
that must be taught. This curriculum guide is a holistic
and integrative approach to teaching that I hope any
teacher would enjoy teaching.

I hope that by doing this project, I learn how to
integrate curriculum in such a way that it will bring the
joy back into schools everywhere and teach students to
live peacefully within nature. It is my desire to gain the
skills necessary to teach in a holistic way while still
addressing the standards and striving to improve student
achievement and test scores. I anticipate developing a
guide that will be well received and well used by many
teachers. Most importantly, I would like to learn how to
encourage others to use school gardening within their own
daily school lives.

There is great potential for many teachers and
students to benefit from my project. The staff and
students at Roger Anton will be the first to benefit from
my curriculum guide. Teachers will be able to begin using my guide immediately upon completion. They will gain new lessons to use with our school garden, and they will learn how to design their own lessons that will tailor their curriculum to the needs in their personal classrooms. Students at Roger Anton will also benefit as their teachers will now be much more likely to use the school garden to teach all areas of their curriculum.

There is also the potential benefit to other teachers who desire to develop a school garden or to use a current school garden more effectively. During the course of my project, I came across schools that already had school gardens that teachers simply were not utilizing. It is my belief that teachers would be more willing to use school gardens if they simply knew how to integrate them into their daily or weekly teaching schedule. My project would have the capacity to give these teachers a curriculum guide from which to build upon.

Last but not least, I believe that my project has an added benefit to society as a whole. By infusing the curriculum guide with social skills and peace curriculum, our schools will not be growing just food to eat or pretty
flowers. We will be teaching students about how life is interconnected. We will be teaching students to live peacefully. We will teach students to love learning. And we will be teaching students about social responsibility. In short, we have the potential to grow peaceful, responsible, and educated young adults who will become productive members of our society.

In Chapter two, I review the literature relevant to my project: school gardening, peace education, and curriculum design and integration. In Chapter three, I describe the methodology I used in order to create a curriculum guide. In Chapter four, I review the results of my data collection and in Chapter five I discuss the conclusions I reached and the potential implications of my project.
Over the past year or more, I have devoured any research that I could find that would help me develop a garden that promotes peace, allows an integrative approach to subject matter, and is exciting for students, teachers, and community members to be in. I have read countless gardening manuals, conducted interviews with school garden coordinators, read educational books about making learning integrated and fun, and analyzed research articles about peace education. Gardening became an obsession with me as a new teacher when I went to Lugonia Elementary School to observe the ever experienced and effective teacher, Mrs. Holly. Her entire day revolved, in some way, around the school garden she had built. Her students were enthusiastic about their work and learning, her classroom had a Zen like peacefulness to it, and she radiated love for her job. From then on, I was hooked on the idea of school gardening as a way to promote peace. The first section of my literature review deals with the question of how to create a school garden. The second section of my
review delves into the confusing aspects of fostering peace among students and staff. Everyone wants to come to a peaceful school but no one on my staff is quite sure exactly how to go about creating peace. The third section of my literature review deals with how to develop an effective and engaging curriculum guide than can be used in connection with a school garden. Lots of schools have gardens that go untouched by student hands because teachers are at a loss for ways to effectively tie the garden in to their state mandated curriculum.

Creating a School Garden

Why should we build a school garden? What do the students gain from the garden? What do the teachers, parents and community gain? According to the National Gardening Association (1990) gardening promotes personal growth and social skill development. By working together, students learn cooperation, patience, and how to problem-solve, when they are working hard tending their crops. When students are invested in a project, they see the value of hard work and are therefore empowered by the
experience and are motivated to work hard in other areas of their lives.

Gardening also has the potential to help students see how everything in the world is interconnected. For example, if we grow food, we need to be responsible and take care of the crops. When we harvest the food, the food will then take care of us by providing the nourishment we need. Students learn about natural cycles, habitats, and protecting the environment. They learn about health and nutrition, community improvement, hunger and other social concerns. In the end, they have learned a fun and practical skill that can enrich all other areas of learning, as well as help them become responsible adults (Ocone & Pranis 1990).

Starting a school garden involves many steps and requires a great deal of planning. To begin with, the entire staff, student body, and administration must have the desire to undertake such a long and involved project. They must also be committed to making the project a success. Freeman and Rees (2003) suggest conducting a meeting to enlist community help. During the meeting several concerns should be addressed such as where to
build the garden, who would participate and identifying possible volunteers. Many logistical issues are raised within the article. For example, since the garden is utilized school-wide, the garden must be divided up so that each class has a say in the design of the garden and an area to work in. Trying to allow 500-600 students to have the power of decision making would make it nearly impossible for any decisions to be reached.

Freeman and Rees (2003) also suggest finding plenty of community support. Community support can come from business owners, parents, concerned citizens, or master gardeners. High school or college students would also be able to provide some of the support a school garden would need. During the meeting several concerns could be addressed such as where to build the garden, who would participate and identifying possible volunteers. Community members would need to be trained to be active volunteers. Volunteers can help with guiding the planning of the garden, planting of crops, and teaching and supervising of students. In short, volunteers can be invaluable to the sustaining of a productive school garden.
Although the article (Freeman & Rees, 2003) offers many good tips and ideas, it is not detailed enough to be the only source of information for a garden coordinator. I found that I was left wanting information that would tell me what specific crops I should grow and when. This article is enough to get someone started but not enough to be the only source of information.

Seeking donations and grants was also mentioned frequently throughout my review of the literature (i.e. National Wildlife Federation, 2001). In an interview with Diane Holly (personal communication, November 14, 2005) garden coordinator from Lugonia Elementary School in Redlands, California, many funding sources were discussed. Virtually every major corporation sponsors worthwhile ventures, especially those in the schools. Grants are sponsored by Toyota, Wal-Mart, Starbucks, Home Depot, and Target, just to name a few. The students at Lugonia Elementary School hold bake sales and sell the birdhouses that they make throughout the school year. Most of the buyers are parents who are thrilled to be able to purchase handmade goods and support the garden at the same time. “Some of the most valuable gifts are donations..."
(Freeman & Rees, 2003). Time, seeds, or free items might be donated by local businesses or community members. My own mother even donated her old birdbath!

When it comes to actually designing the garden, several different garden areas might be desirable. The Edible Schoolyard in Berkeley, California (www.edibleschoolyard.org) combines gardening with cooking. Their garden includes a shed for the storage of equipment, a double-burner propane range, chicken coop, compost area, worm bin, wood fired oven, washstand, picnic tables and Ramada. The crops they grow differ with the seasons. The Life Lab Garden Classroom (www.lifelab.org), located on two acres at the University of California, Santa Cruz campus, includes many areas designed for hand-on exploration. The garden classroom includes a tea bed, fiber and dye garden, pond habitat, plant crawl tunnel, garden art, zoo bed, and edible landscaping, and much more. The Lugonia Elementary School garden was much smaller in size but included fruit trees, roses, a pond, and benches for students to sit on to enjoy the peacefulness of the garden. Regardless of size, it is clear that the garden areas are determined by the space
available to the school and the needs of the students and teachers (Diana Holly, personal communication, November 14, 2005).

When it comes to actually planting crops, several books (e.g. Complete Guide to Vegetables, Fruits & Herbs (2004); How Does Your Garden Grow? (2005); and Jumbo Book of Gardening (2000)) are more than willing to give you information about the various plants or crops you might want to grow, but it is very hard to find information on location specific crop planting seasons. In other words, for my project I need to know what plants can I grow in San Bernardino and when should I plant my crops? Most of the information that I have found assumes that we have cold weather and snow or frost. According to Morris (2000), locations with hot summers and mild winters are able to plant cool-weather crops, spring crops, and fall crops.

When designing the garden there are multiple aspects to consider. Space, water, and access are top priorities. Any garden, especially one big enough for an entire school, must have room to grow. Should we plant in the ground or build raised garden beds? Do we have enough
space or should we do smaller container gardens that don’t require land? A school garden should consider ease of access to ensure that all students and community members, regardless of size or disability, will be able to move easily and safely through the garden. By utilizing raised beds approximately 18 inches high, visitors in wheelchairs won’t have to bend over. Wide paths are a must as are easy to read signs, preferably in several languages and/or Braille (Morris, 2000, 217).

While Morris (2000) was useful, the best source that I found to help guide the planning of a garden is the National Wildlife Federation. In their Schoolyard Habitats Site Planning Guide (National Wildlife Federation, 2001), teachers are given step by step directions for creating a school garden. The guide includes planning sheets, student activities to help with the planning, and a wide variety of resources. In the appendix section of the guidebook, you can find the accessibility guidelines that are required for a publicly funded garden. Pathway width and surface requirements are just a couple of the many items to take into consideration when designing your garden. Building a garden is certainly a daunting task!
Peace Education

How do we create a peaceful school environment? Is it appropriate to teach students manners? Should we focus on manners or on social skills? These are the questions I want to address in this section. When trying to teach students how to live peacefully and politely, it is important to first determine which values to teach and how to teach them.

It is very difficult to build a community of trust and love when the students don’t truly know each other and the teachers are not connected to the students (Tomlinson & Doubet, 2005). Tomlinson and Doubet profiled four teachers who focused on building connections with their students. One of the teachers, Katie Carson, who teaches ninth and eleventh grade English, makes it a point to “create an environment in which students learn about one another and get to know their peer’s strengths” (page 126). Students are encouraged to tell their own stories. Weekly five-minute assignments are given to highlight unusual strengths. Teamwork is utilized daily. It is really tough to dislike someone when you know and understand that person. By fostering these connections,
students began to value each other for a variety of reasons. Not everyone is strong in school, so by pointing out non-academic strengths, students would seek out other, typically-ignored students because they wanted the best person for the job.

This concept of mutual respect and love of the community is mirrored in The Earth Charter. The Earth Charter (2002), commissioned by the United Nations World Commission on Environment and Development, was created to set up basic principles that would aid sustainable development. Since the charter was developed, educators around the world have begun to use the 16 principles to teach others about respecting and caring for the community of life, ecological integrity, social and economic justice, democracy, nonviolence, and peace.

In general, these principles are standards for living a moral and peaceful life. Many of the principles discuss sustaining the earth and ensuring that all people are given their basic rights however some of the principles lend themselves nicely for establishing a positive classroom atmosphere. Principle 15 deals with "treating all living beings with respect and consideration". That
one principle alone can be the center of a peace curriculum at any school. It lends itself nicely to discussions of: What is peace? What is respect? How do I treat all living beings with respect? What are living beings? Do living beings include nature?

Although most educators are not aware of The Earth Charter, many educators are concerned with the same issues and therefore promote teaching moral education. There are many different proposed methods for teaching moral education. Joseph and Efron (2005) try to describe each type of moral education system and then explain why Character Education is the least appealing of the choices. Character Education refers to the belief that "schooling can shape the behavior of young people by inculcating in them the proper virtues" (page 101). The main issue with teaching character education is the questions it leaves us asking: Whose values should we be teaching? What are the proper virtues that every student needs? As a response to these questions, many different systems of moral education have been developed. What was most striking in the different systems was that most of them had common values.
Respect was mentioned over and over again. Compassion and community were also mentioned frequently.

Character Education assumes that schooling can change or shape the behavior of children by teaching them the appropriate virtues. This approach relies on teachers modeling good behavior and students being rewarded when they demonstrate the proper virtues. Unfortunately, many people are in disagreement over whether it is the school’s place to teach values or what values are appropriate. Is it the school’s place or the parents’ place? Whose values do we teach? These questions alone are enough to sway you away from character education and consider less controversial methods.

A second moral education model, termed the peace education system, "stems from an ethic of care that extends beyond the classroom" (Joseph & Efron, 103). I like the concept that morals can affect student’s daily life and global perspective. Often I have found that the character traits I have taught my children are used only when we are learning them. Then they tend to forget them when they are away from my classroom. In peace education, students learn about conflict resolution, peace studies,
environmental education, global education, and human rights education. This type of approach can show them the "connection between peaceful personal behaviors and promoting peace throughout the world" (103). I strongly agree that children would begin to recognize that they hold the key to changing society so that we are all living in a peaceful world.

Rather than teaching students about peace or character, Marino (2003) makes the case for teaching courage. According to Marino, students used to be courageous in times past. Now we have done away with the lessons and games that promoted courage. Unfortunately, I strongly disagree with the author. Today's children are courageous. Several of them come from broken homes, resist drugs, and are placed in harm's way on a daily basis. I see no need to play dodge ball (one of Marino's suggestions) with my students just so they will learn to have courage. I'm not even sure it is possible to teach anyone how to be courageous.

In contrast Sergiovanni (2004) writes that "Hopeful school communities clearly articulate their articles of faith and then create realistic structures to translate
faith into action” (page 214). The author believes that hope and faith are the missing ingredients in today’s society. He points to how hope and faith have the power to heal the sick. In addition, he gives a few guidelines that can help a school move from merely hoping their students will do well to putting forth actions that will make it so. He suggests that school need to set specific goals and figure out what routes they will take to actualize their hopes. Schools needs to identify the obstacles they face, and determine how committed they are to their actions. If you are not actually willing to make a dream a reality, why try? And lastly, he recommends looking inward to verify that the school has enough faith that they can make a difference in the children. If they don’t believe, how will they strengthen their faith? While I firmly believe that these steps are valid, I understand that it will take more than just a lot of hope and faith for students to succeed in life.

Another possible solution to creating a peaceful school comes from Ron Clark (2003), who advocates teaching students proper manners. He recalls growing up in the south where manners are engrained from an early age. When
he began teaching he noticed that children were lacking those basic skills. He devised a list of the 55 essential manners that his students would need to survive in this world. Many of the manners that he advocated were basic: please, thank you, hold the door for others, and clean up after yourself, etc. Some of the manners are more life skills than manners. They include: carpe diem, be the best person you can be, learn from your mistakes and always be honest (Clark, 2003).

While these skills are important, his system does not guarantee that being polite is the same thing as living a peaceful life. I have personally implemented these manners into my classroom but I have often found that many of the students know what the manners are and how to use them but elect to not use the manners outside of the classroom. In my opinion this system is good but can be cut down to only about 15-20 of the most important manners. The drawback of this system is that it will be difficult to get teacher buy in. Teachers have different ideas about what good manners are and are reluctant to change their own method of teaching.
Clark (2003), Sergiovanni (2004), Marino (2003), Joseph and Efron (2005) all discuss what we should be teaching, however Marzano and Marzano (2003) stress how we teach as a valid way to keep the peace and promote achievement. Classroom management has the largest effect on student achievement. For example, poor classroom management can lead to chaos which does not bode well for learning. Good classroom management is comprised of several factors such as room arrangement, rules, and starting the year off right, but the most important factor is the quality of student-teacher relationships.

Effective teacher-student relationships demonstrate the appropriate levels of teacher dominance, cooperation and a heightened awareness of the needs of all students. Dominance is defined as “the teacher’s ability to provide clear purpose and strong guidance regarding both academics and student behavior” (Marzano & Marzano, 121). Exhibiting dominance is a threefold process. To begin with the teacher must set clear expectations and consequences. Procedures should be in place for each activity and transition. Procedures might include the process for exiting the classroom and walking to the garden, handling
of tools and materials, and clean up. Hand signals may be used to cue the students on what to do next. Students should be aware of the procedures and consequences and be held accountable accordingly. Teacher follow-through with regards to rewards and consequences must be reliable in order for the classroom to run effectively (Marzano & Marzano, 2003).

The second aspect of dominance is establishing clear learning goals prior the beginning any unit. Students need to be aware of their goals and objectives and teachers must provide the appropriate feedback to students regarding the progress toward accomplishing those goals. Clearly defined rubrics aid in this process. For example, in an upcoming science unit about decomposition students goals might be: (1) describe the decomposition process (2) build a compost machine (3) chart the progress of decomposition. Students would be aware of these goals and would be provided with the rubric from which they will be graded. They would then be able to monitor their own progress and learning (Marzano & Marzano, 2003).

The third component of dominance is exhibiting assertive behavior. Using body language, tone of voice,
and proximity to communicate dominance is a must. If a class feels that they are more dominant than the teacher, they will be less likely to achieve their goals and their success in school will falter. Most teachers learn these techniques but oftentimes become too comfortable with students and let their dominance slip (Marzano & Marzano, 2003).

According to Marzano and Marzano (2003) dominance is not the only component of an effective teacher-student relationship. Teachers must also exhibit the appropriate level of cooperation. “Cooperation is characterized by a concern for the needs and opinions of others” (page 122). Teachers must be flexible. They should be willing to allow students to help set their own objectives within reason and ability. Students should be able to exercise some level of choice. As a way to stay connected with students, teachers can show cooperation by taking an interest in their students’ lives outside of school. When students feel liked, they are much more willing to buy into what the teacher is doing in class. They tend to work harder to please the teacher and themselves (Marzano & Marzano, 2003).
In connection with cooperation, a teacher must be aware of the different levels of needs of each high-needs student (Marzano & Marzano, 2003). These students might include passive or aggressive students, students with attention problems, perfectionists, gifted and talented students, or socially inept students. Each of these students requires that the teacher use different strategies for each student. Perhaps the gifted student needs more challenging assignments and can be used as a tutor. The students with attention problems might require a quieter work area and a peer tutor. Behavior contracts might be necessary for the aggressive students. Whatever the challenge our students bring through the classroom door, the effective teacher should be prepared to do more than cope. They should be prepared to build strong relationships with their students by being flexible, cooperative, and yet dominant at the same time.

Curriculum Design

So now we know how to create a school garden and we have some solid ideas about the different ways to bring peace to our school. How do we combine these two very
different concepts into one seamless school-based, action-based project? By developing curriculum units for the school to use that will teach students to live peacefully through the use of a school garden. Sounds easy, right?

Before designing a set of curriculum units for the entire school to use, it is important to consider a variety of strategies that might be applicable to this project. What do students need to learn? How should they learn it? How do we ensure that our students are truly engaged in and responsible for their own learning? The three models that follow best illustrate curriculum designs most consistent with the purposes of this project.

In the first model, according to Steven Levy (1996), integration is the key to building a curriculum based on student interests. A single good question has the ability to awaken in students a curiosity long since buried. Once the students become intrigued by a question, their search for the answer will take them everywhere, thus facilitating the integration of different content into one seamless curricular unit. In Steven Levy's classroom, he developed units that allowed the children to explore and experience. They worked on their reading and writing
abilities on a daily basis. They learned complex scientific and mathematical concepts without ever realizing that they were learning science and math. To them it was all just research for the sake of their project. In his Pilgrims '94 project, students learned to live as the pilgrims did. They made their own desks by soliciting donations from community members. They kept accurate accounting records, debated the size and measurements the desks should be, predicted and averaged the amount of stain to purchase, and send out weekly newsletters detailing the project. In that one project, which admittedly took up much of the school year, the students learned nearly all of their math, science, social studies, and language arts lessons (Levy, 1996).

Just as Steven Levy sparked interest in his students through the use of a thought-provoking question, Diane Holly (personal communication 2002) allowed her students to explore their garden by integrating every subject. When I first met Mrs. Holly, I was there to observe her class for my credential courses. Class for her began long before the bell rang. Students silently trickled in, whispered greetings, and then got down to work. Some students
grabbed life-size dolls replicating Dorothy and the Wizard of Oz characters, placing them in strategic locations around the garden. Others swept off the pathways and the classroom porch. Still others began tenderly tending the flowers. As the day got underway, I witnessed true integration. Each child possessed a garden folder bearing his or her name. Inside were: charts and graphs, measurements and illustrations, poetry writings, short stories, and diagrams detailing the anatomy of a plant. It was clear that the garden was discussed in all subject matters and the students truly loved what they were learning because it had meaning in their lives.

In the third model, Waldorf schools employ a truly unique curriculum design (Bamford & Utne, 2003, 229). Students develop a multi-year connection with one teacher who takes them from first grade through eighth grade. By doing this, classes become a family group who cares for each member regardless of scholastic ability. At each grade level, students study in depth an age appropriate block of curriculum. At the primary level, students learn to knit, crochet, and place the recorder. At grades four and five, students learn “farming, gardening, house
building, measurement, and grammar" (page 229). As the years progress students learn about history, botany, and poetry. At each level students are encouraged to "live deeply into the subject" (page 229). This allows students to focus on what they are discovering (Bamford & Utne, 2003).

According to Bamford and Utne (2003) students of Waldorf schools are independent, ethical, compassionate, and artistic but practical. Relationships develop and perspectives are encouraged and examined. While learning a new idea, various views are presented so that the learning is never one sided or skewed. Waldorf schools engage "the whole child - body, soul, and spirit" (page 231).

Each of these models has many commonalities with the others. They all suggest that an interdisciplinary integrative approach to curriculum can help students become independent students who see the connections between ideas and who truly love learning. In these models, self-efficacy has seamlessly been addressed. Self-efficacy refers to how a student views their ability to succeed. Students with high self-efficacy tend to be willing to try a new and harder task and thus succeed
because they have the belief that they will be successful. Students with low self-efficacy tend to give up easily or not try at all simply because they don’t believe in their own abilities. As a way to promote high self-efficacy, Margolis and McCabe (2004) suggest that student work should be at their own instructional level rather than their frustration level. Working at the frustration level, while it differs for each student, means that the work is simply too hard for the student to accomplish even with support from the teacher and will merely frustrate the student further. By avoiding the frustration level, students begin to gain a sense of accomplishment in small successes.

Additional ways to raise or strengthen a student’s self-efficacy are to relate curriculum to the student’s own lives and interests, stimulate curiosity, foster respect, and use cooperative activities. Student choice is also highly stressed (Margolis & McCabe 2004). All three of the models (Mrs. Holly, Levy, and Waldorf) employed many of these techniques. Levy’s model of integration allowed student interests to help guide his curriculum basing his assignments on the curiosity of his students.
The Waldorf model stresses respect and discovery based learning. Mrs. Holly employs cooperative activities to stimulate curiosity. Each of these techniques to raise self-efficacy also ties into Marzano's stipulations for running an effective classroom. Students are encouraged to share their interests while at the same time, student work is tailored to the specific needs of each student. In my opinion each of these models addressed self-efficacy through their use of integration and effective class management methods.

So is it possible to develop a school garden that is based on a blend of Waldorf, Levy, and Mrs. Holly's ideas? By taking the school gardening project a step further, it becomes environmental service learning in which students learn about pollution, natural resource depletion, endangered habitats, etc. This type of project would definitely fall under the Waldorf and Levy models. Environmental service learning is especially appropriate for students in grades three and up. In this model, students would select a topic or problem that is relevant to their school or community. Recycling, beautifying a park, or raising awareness about an endangered species,
are easy topics that an entire school can tackle by
devising creative and varying solutions. According to
Clifton, Mauney, and Falker (1998), using environmental
service learning activities has many benefits. It can:

• enhance the framework objectives in the curriculum
  while addressing needs in the community

• make science education more relevant to students,
  thus meeting the need to increase student interest
  in science

• let interdisciplinary activities provide
  connection and strength to the academic program

• give students opportunities to research
  information, analyze environmental issues within
  the context of the information gathered, determine
  positive alternatives, and practice implementing
  solutions within the classroom setting

• improve grades and achievement test scores as
  students become involved

• draw the community into the school, providing
  intergenerational learning opportunities
• utilize the school as an ideal laboratory for hands-on experiments as it provides a real world model
• motivate students to come to school, increasing attendance rates
• give students a sense of pride in the school and community
• develop a feeling of belonging to school and community
• help at-risk students become leaders, while lowering dropout rates
• enable students to recognize qualities in other students that have never surfaced in the academic environment (page 10-11)

While developing an environmental service learning program is certainly enticing, it would also require an enormous amount of work on everyone’s part. Finding a cause to back or a problem to solve is by far the easiest part of the process. Once a problem has been identified by the students or staff, then the students much begin to develop their action plan. Each plan is creative and can
be unique to a specific class or team of students. As a result, the teachers must be able to be the facilitator that helps students along the way, and the referee that helps reduce team strife. In all, developing a service learning project is worthwhile but only if the students and staff members are willing to put in the effort and work necessary to make the project a success.

Even though a service learning program is work intensive, there are small ways to allow students the joy of discovery and creativity. As a teacher, part of your job requires designing learning experiences that allow students to discover concepts on their own (Murphy, 2003). For example, it is not enough to simply teach the students about apples; if they have never seen or tasted an apple they have no frame of reference and will never fully understand anything about apples. These experiences need to allow the children to stumble upon learning through everyday playing. By doing this the children are becoming prepared for later, more intensive school experiences. They will have experiences to connect knowledge to and will have gained the social skills necessary for all areas of life.
Murphy (2003) explains her views about using experiential learning:

The real must come first! All subsequent abstract understanding is based on the initial experience of the real. And while the experiences are important it is also vital that we remember that there is so much "learning" that can be attached to the experiences we provide children. Remember, playing is not separate from learning! Instead we work on blending the concepts with the experiences.

(page 47)

Although Murphy's work (2003) is specifically concerned with the experiences of preschool age children, from my experience many of her conclusions apply to older children: They tend to learn better by doing it for themselves and experiencing firsthand. Murphy offers an example of a play-based unit that would allow children to experience apples firsthand while still learning about math, art, and language. In this unit children would cut apples, make apple sauce, count seeds, plant seeds, chart and graph students' apple preferences, and make apple
prints with paint. Throughout the unit, children are experiencing apples while learning about dividing, counting, measuring, observing, and so on. They are also learning social skills at the same time. Skills such as patience and learning how to care for a living thing are imperative for our children to learn.

It is not enough to just provide experiences for the children without also providing the language and concept development they need, “Children need experiences to attach words to.” (Murphy, 2003, page 48). An experience alone is just fun. An experience attached to dialogue helps deepen a child’s understanding of the world.

Unfortunately, many educators fail to see the value of play based or discovery based learning. They are so focused on teaching to the standards that they don’t allow children the luxury of experiencing life thus robbing students of the ability to connect concepts to prior knowledge based in experiential learning.

While it is important to create learning experiences based in play and inquiry that allow students to experience life as it is meant to be, integrated and connected, it is also important to know how to explore
nature with students. When preparing to explore nature, Joseph Cornell (1998) suggests teaching less and sharing more. In his opinion, it is far better to teach “the bare facts of nature” and spend more time sharing your inner feelings about nature. Discuss the things you wonder when looking at a tree. This can open the door to further exploration and research in the future. Listen to nature and be aware of what is happening around you. You might find that your lesson needs to be altered to take into account something new that you find outside. Allow yourself to be sensitive to the children’s thoughts and questions. When preparing for an outdoor adventure, prepare the children by helping them focus. Most importantly, “look and experience first; talk later” (Cornell, 1998, 14). Allow children to observe nature and then they can talk about it. “They will gain a far better understanding of things outside themselves by becoming one with them than from second-hand talk. Children seldom forget a direct experience” (Cornell, 1998, 15).

Observing nature is all about making connections to your own life and the world around you. For Chad Prather, a ninth grade social studies teacher, making connections
is everything. Prather knows that many students have little motivation to learn so he tries to connect with them by showing that he understands them. His projects allow for student choice. He uses technology and catchy lesson titles to catch their attention. "What does work is connecting with students. Not only does it more successfully get them to work, but is also encourages them to accept living within the classroom rules" (Tomlinson & Doubet, 2005, 128).

So the real question emerges. How do we develop a discovery-based garden and standards-based curriculum that integrates all subject matters and encompasses a variety of learning styles while teaching children the social skills they need to lead a peaceful life? Two models address this question well. The first, the S.A.C.K. Alignment Model (S.A.C.K. stands for: skills, affects/attitudes, concepts and knowledge) offers teachers a method of developing and organizing their lessons so that they are aware of: the skills that are required in order for the students to complete the activities, the attitudes or feelings that students will develop, the concepts they will learn and the knowledge they will gain
for the lesson. To begin with, this model (Sappier, T., 1996, 3) requires that lessons start with simple skills and sensory input and then proceed to the more complex emotions and integrated learning. There are four essential components to this system of lesson planning.

1. Sensory Input - lesson components should address Howard Gardner’s Multiple Intelligences. They should be well rounded and connect to every student.

2. Processing - students should process the information and skills they are learning.

3. Retrieval - the skills students learn should be able to be transferred to other lessons.

4. Application - this is where students begin to make connections to their life.

In the examples given, teachers determined what activity they wanted to teach to their students and then listed the skills, attitudes, concepts, and knowledge that they believed their lesson would help students develop. Then they connected the activity to multiple applicable content areas that could be integrated in each of the four areas. Finally, each area is connected to the related state
content areas. Another important component in this model is the assessment. I particularly liked the recommended scoring rubric that allows students to clearly understand why they are at the level/score that they are. Rather than working on a deficit model as most rubric do, this model emphasizes the strengths of the student even if they are at the beginner level.

The second relevant model (Levy, 1996) suggests that when planning curriculum, there are nine elements to consider. To begin the process, a topic is needed. Oftentimes the topic is a subject required by the curriculum or evolves from conversations with students. Once a topic is determined, it is up to the teacher to find the "genius of the topic, or what makes it unique" (page 30). This approach, according to Levy, is the most important part of the process since it is what will help excite the students and allow them to enjoy learning while taking ownership of their own education. The third step is finding illustrations or examples that will make the abstract concepts more concrete. These illustrations need to be real-life examples such as reading biographies or researching the history of the topic. The fourth step is
experiences. Levy tries to help students connect difficult concepts to experiences in their own life. If the students don’t have prior background knowledge to connect to, it is the teacher’s job to create an experience for the students. Questioning is the next step of the process. Rather than providing answers for the students, which may involve no thinking or learning, the teacher develops questions that will encourage students to seek out the answers. These questions will help students see the connections between their experiences and the concepts they are learning. The sixth step of developing a unit is storytelling. Levy finds a way to turn any topic into a story that includes a beginning, middle, and end, a protagonist and an antagonist. For example: what is the story of a hurricane? The beginning is what causes the hurricane to form. The middle is the path the hurricane takes and the end is the effect of the hurricane as it dies out. The antagonist might be the hurricane itself or the conditions that allowed it to form in the first place. The protagonist might be the people trying to get out of the hurricane’s way. Teaching in this way helps facilitate memory and is just fun for the students to listen to or
develop themselves. The seventh step is the development of activities. Activities need to be open ended and “allow for a wide range of participation, depending on the children’s developmental stage and ability” (page 32). The eighth step is skills and habits. It is important to be clear about what skills you want the students to develop and then offer several opportunities to practice those skills. The last step of the process is evaluation. Assessments are as varied as are the students. Writing assignments and projects are just a couple of good formats for assessments.

Although the S.A.C.K. model and Levy’s method are a bit labor intensive they do offer great ideas. If a curriculum unit is to be truly great, the teacher needs to have thought about what they want their students to learn and how they will learn it. By developing a quick check off list to fill in during the lesson creation process, teachers can be ensured that they have thought about the essentials: content area integration, multiple intelligences, differentiation, writing components, and assessment methods.
CHAPTER THREE

METHODOLOGY

The purpose of this project is to develop a curricular unit for a kindergarten classroom. In this chapter, I will explain the methodology I used to develop the curriculum guide with the following characteristics: (1) integrative, (2) peace building, (3) approach to using a school garden, and (4) teacher friendly. The first step of my methodology was to do a complete review of the literature. Then, using knowledge gained from my literature review, I drafted a list of proposed unit topics and presented teachers with a survey for feedback on the units. The next step was to create templates for the unit and lesson plans and show them to three teachers for feedback. Then, I developed the curriculum guide for one grade and developed a survey that would allow teachers to evaluate the effectiveness of the curriculum guide. The survey was shown to nine teachers and interviews were completed. Finally, the curriculum guide went through its final revision. In the rest of this chapter, I will
discuss the details and context of each of the steps of the methodology.

Since the opening of Roger Anton Elementary School in August of 2006, the teachers and administrators have worked hard to develop a sense of community among the students. In addition to the many issues faced by any new school, our students are struggling academically. Given the current political education climate, and the low test scores of our school, many teachers feel the pressure to teach to the test rather than design integrated hands-on lessons that require critical thinking skills. As a way to address all of these issues, we decided to build a school garden to help foster a sense of community while strengthening student attitudes toward school. The curriculum that will accompany the garden will focus on including the state standards, integrating many different subjects and allowing students to express themselves artistically. This will allow teachers to cover more material, more standards, to a deeper level of understanding and mastery, in a shorter time period.

The curriculum guide that I have created is composed of lessons from a variety of sources. I have also created
a guideline for teachers to use to help them properly and effectively teach the lessons or create their own lessons. The true challenge has been to create units and lessons that are interesting to the students, challenging without being frustrating, fun to do, but easy for the teachers to prepare. The lessons must integrate a multitude of subjects while addressing the multiple intelligences and learning styles of every student at each elementary grade. In light of this, I developed the following research questions:

1. Are the garden curriculum units appropriate for each grade level (K-6)?
2. Is the timing of the units suitable?
3. Are the units challenging for each student regardless of ability level?
4. Will the teaching of these units be feasible for the teacher?

The first step of my methodology was to complete a thorough and on-going review of the relevant literature and research. I selected three main topics to review: school gardening, peace curriculum, and curriculum design.
and integration. These topics would prove to be useful when it came to designing a curriculum unit for the school garden.

The literature on gardening provided me with a number of ideas for what to plant, when to plant, and child-friendly garden ideas. While reviewing the gardening handbooks and school garden websites, I came across several suggested project ideas to do with children. Some of the garden ideas were specific to the related curriculum such as a butterfly garden, which correlates with the second grade science standards. Other ideas were general in nature and allowed all children to explore at their own ability level. Some of the general garden ideas included creating a garden bed of herbs for making tea, or worm observatories.

The peace curriculum literature addressed the varying ideas about the appropriateness of teaching students morals, manners, and values. Many of the articles discussed the notion that before morals or values could be taught, the students must first learn to trust the teacher and their fellow students. Moreover, virtually every article agreed that one of the basic values all students
should be taught is a love of nature and respect for all living things or beings. Most cultures stress respect for elders and so teaching students respect would be appropriate for nearly all students. After some great debate and reviewing a considerable number of articles, I determined that the most appropriate way to address character education, or peace education, was to provide opportunities within the garden curriculum for the students to develop a love of all nature and its creatures by focusing on teamwork and quiet reflection.

The literature that I reviewed that dealt with curriculum design provided me with many different designs to consider. One method was based on student interests and allowed a single question to spark their interests. Another method used the school garden to integrate each subject thereby allowing student to see the interconnections between subjects. Still another method, allowed students to simply play with what interested them while introducing difficult concepts in subtle ways. After much deliberation, I determined that a good curriculum unit for my context would allow teachers to use whichever
method worked best for them, thus addressing all of these methods.

For the purpose of this research project, the subjects that I used to help me evaluate the curriculum units were teachers at Roger Anton Elementary School as well as a few selected outside teachers. The teachers in this project represent a wide range in years of teaching service and philosophy. One Anton teacher per grade level reviewed a sample unit for their grade level. The outside teacher reviewers do not have access to a school garden and were specifically evaluating the feasibility of teaching these units without a garden.

Throughout the design and evaluation of these units, I felt it was vital to include the teachers who will later be teaching these units in order to best address their concerns and incorporate any appropriate ideas they suggest. It was equally important to include like-minded teachers who can ensure that I am creating well-rounded lessons that address a multitude of subject matters while being sensitive to the multiple intelligence styles of our students. They had the unique opportunity to evaluate the
feasibility of teaching the units without the ability to use the garden for exploration and extension.

The second step of my methodology was to develop a tentative list of curriculum units. I based my unit topics on the recurring lessons themes that I came across during my review of the literature. While developing these units, I tried to be sensitive to the additional pressures throughout the school year. Each unit was expected to take one month to complete and would include approximately 4-8 lessons. The unit topics and timing schedule are as follows:

- Unit 1 - August: Introduction to the Garden
- Unit 2 - September: Planting the Seed
- Unit 3 - October: Habitats
- Unit 4 - December: Cultural Food and Celebrations
- Unit 5 - January: Nutrition
- Unit 6 - February: Food Preparation
- Unit 7 - April-May: Taking Care of the World and All Its People
- Unit 8 - June: Celebrations
Following the development of the unit topics and the unit timing, I sent a survey out to all Anton staff members. The survey was simple and included the proposed unit topics. The following are the questions I asked:

1. Will these units work into your current curriculum units?
2. Are the units appropriate for your grade level?
3. Does the timing of the units make sense and work for you?
4. Any suggestions?

Each of the questions required a closed response (yes/no) but allowed teachers to make their suggestions or voice concerns at the bottom of the survey. Following the completion of the curriculum topic and timing survey, I analyzed the data and made adjustments as needed. Once the adjustments were made, I commenced with the unit and lesson design.

The third step of my methodology was to gather lessons that could be used in conjunction with a school garden. Many of the lessons came from the garden literature that I reviewed. Some of the lessons were provided by fellow teachers or came from experiences in my
own classroom. While gathering lessons, I attempted to keep in mind the curriculum standards for each grade, organizing lessons first by appropriate grade level and then by topic.

From my review of the literature, I gained insight into how to incorporate a variety of subject matters into a school garden. To ensure that the lessons were well rounded, I devised a lesson template that would give the teachers simple directions and included extensions and/or modifications to allow for scaffolding and differentiation as needed.

Following this compilation of lessons and lesson template design, I decided that my curriculum units would benefit from a unified unit plan. I developed a unit plan template that would tell the teacher what subjects, standards, objectives and multiple intelligences are addressed in that particular unit and would give a brief overview of how the unit components fit together. In general, the template compelled me to consider all aspects of curriculum design.

Once I created the lesson template and unit plan template, I then asked for input from three of the Anton
staff members. I held personal interviews with the school's program specialist, a primary grade teacher, and an upper grade teacher. I chose these specific staff members because I valued their opinions as innovative teachers. I also wanted to select one upper grade and one primary grade teacher to ensure that I met the needs of both groups of teachers. I specifically chose the school's program specialist because of her wide range of teaching experience. These staff members were asked to consider the readability, completeness, and usability of the templates. Any changes that were suggested were considered and made when necessary.

Once the templates were evaluated and altered, unit plans and lessons were then typed onto the templates. When necessary, additional lessons were created to help ensure that the units were complete and addressed as many subject areas and literature connections as possible to allow for teacher choices based on student interests.

Finally, the curriculum units for one grade level (kindergarten) were ready for a complete evaluation. To help teachers evaluate a sample curriculum unit, I presented nine teachers with a brief survey to complete.
Four of the teachers were primary teachers, one of which teaches pre-school from her home. Another four of the teachers were upper grade (3-6) teachers. The final teacher is a program specialist at Roger Anton elementary school and has extensive experience in teaching the primary grades. I selected these specific teachers for their wide range of teaching methods and expertise. I also wanted to ensure that I had a sample of teachers that represented the overall staff at the school. The survey utilized a range of responses to better gauge teacher attitudes toward the units and lessons. A second part of the survey asked teachers to write a brief narrative regarding their initial reaction to the unit overview and lessons. In the narrative, they were encouraged to include any concerns or ideas that came into their minds as they read through the unit. The survey asked the following questions:

1. How well does the preface explain the design of the guide?

2. How well does the Guidelines for Creating Lessons explain how to create new lessons?

3. How well does the unit plan explain the unit?
4. How well does the lesson template explain each lesson?

5. How would you describe the quality of each unit?

6. How would you describe the quality of most of the lessons?

7. How likely are you to use this curriculum guide or one like it?

8. How likely are you to encourage others to use this guide?

9. Based on the directions given in the Guidelines for Creating Lessons, how likely are you to develop new lessons for use in this guide?

10. How likely are you to use the Lesson template when designing new lessons?

Narrative

1. What is your overall impression of the curriculum guide?

2. What is your favorite unit? Why?

3. What are your 3 favorite lessons? Why?

4. What is the most useful part of the unit plan for you?
5. How feasible are the lessons, units, and timing of lessons for a typical kindergarten classroom?

6. Please share any lesson ideas or suggestions to help make this guide more effective and entertaining?

7. Any comments?

Once teachers had a chance to review the units and complete the survey, I gathered the initial results and compared grade level comments to help me determine if there were common complaints or recurring issues. If several teachers had similar problems or took issue with the same unit topic, I adjusted my lessons or units accordingly. Approximately one week after teachers had reviewed the unit, interviews were held.

Following the initial curriculum review, I conducted a personal interview with two teachers; one primary teacher and one upper grade teacher, to help me further alter the units as needed. The primary grade teacher that I interviewed was selected because of her low scores given on the curriculum guide survey. I wanted to better understand her apprehensive feelings. I selected the upper
grade teacher because of our close working relationship and similar teaching style. During the interview, I asked the teachers for their initial response to the units as well as their secondary response once time had passed and they had a chance to further digest the units.

The curriculum guide was then revised based upon the comments I received from both the interviews and the curriculum guide evaluation survey.
CHAPTER FOUR

RESULTS AND ANALYSIS

For my project, I chose to develop a curriculum guide that would be used in tandem with the new Roger Anton Elementary School garden. My goal was to help students become academically and socially stronger through the use of the curriculum guide and school garden. My methodology included the following steps:

1. Complete a thorough review of the relevant literature
2. Draft proposed curriculum units and survey teachers about its appropriateness
3. Create unit and lesson templates and have them reviewed by three teachers
4. Create a sample curriculum guide
5. Develop a survey and have nine teachers evaluate the curriculum guide
6. Conduct interviews with two teachers
7. Final revision of the curriculum guide

This chapter describes the results of implementing that methodology.
For the first step of my methodology, I selected three main topics of literature to review: school gardening, peace curriculum, and curriculum design. Based on my review of the literature, I determined that my curriculum guide would need to integrate many subjects and state standards into each lesson, while still addressing the multiple modalities in which we all learn. I also included in the lessons, ways to teach students to become peaceful through gardening. In order for the curriculum guide to be effective, each unit would need to be engaging for the students, well rounded and thorough, and easy for the teachers to use.

Curriculum Unit Survey

The second step of my methodology was to send a survey to teachers at Roger Anton Elementary School. The survey, which was completed by nine respondents, included four questions that asked respondents to evaluate the feasibility and appropriateness of the proposed curriculum units and timing. Units and proposed timing is as follows:

- Unit 1 - August: Introduction to the Garden
- Unit 2 - September: Planting the Seed
• Unit 3 - October: Habitats
• Unit 4 - December: Cultural Food and Celebrations
• Unit 5 - January: Nutrition
• Unit 6 - February: Food Preparation
• Unit 7 - April-May: Taking Care of the World and All Its People
• Unit 8 - June: Celebrations

The first question of the survey asked, “Will these units work into your current curriculum units?” Of the nine respondents, eight answered that yes, the proposed units would work for them. One respondent, answered yes but wrote that these units would somewhat work for her classroom.

The second question of the survey asked, “Are the units appropriate for your grade level?” Eight teachers responded that yes, the units were appropriate. One respondent, answered yes, somewhat.

The third question of the survey asked, “Does the timing of the units make sense and work for you?” Again, eight answered that yes, the timing was appropriate, while one respondent, answered yes, somewhat.
The fourth question of the survey asked for suggestions. One kindergarten teacher replied that the curriculum guide should be kept simple for kindergarten classes but “looks good!” Four first grade teachers returned a completed survey. Some of their comments are as follows:

“These lessons look wonderful and are in line with topics and stories we are doing in those months.” This teacher also wrote a comment regarding to the second unit of the proposed curriculum unit. “Neat, I do an apple unit. We do tree parts, cycle of apple.” One of the first grade teachers had the following suggestions: “Maybe high school students from agriculture program could come to my classroom and do a demonstration.” Yet another teacher replied, “I really liked your December unit. I think this is a great way for us to accept, learn, and celebrate our differences. Thank you for your hard work.”

Two second grade teachers and two fourth grade teachers also returned a completed survey. Some of their comments were, “Looks great” and, “Sounds good!” One teacher also asked if they would get another copy of the list of proposed curriculum units. This feedback told me
that the curriculum units were appropriate for virtually every teacher in our school. I used this feedback to then begin gathering lessons that fit into these unit topics. To review the Curriculum Unit Survey, please see appendix A.

Unit and Lesson Plan Template Interviews

The second step of data collection was to allow teachers to evaluate the quality of the unit and lesson plan templates that I had created. Before I began developing the templates, I first outlined what teachers usually include in a lesson plan, and what information they would need in a unit plan. This included topics such as state standards, objectives, and materials needed. Then I augmented my list with additional items that would make the templates easier to use and more appealing to most teachers, such as: reading connections, and multiple intelligence links.

The lesson plan template includes the objectives, standards, and pertinent materials needed. It also shows the different subjects addressed within the lessons in addition to the activity directions. The unit plan
template is a form that allows teachers to quickly see what a unit entails. It includes all of the objectives, standards, and subjects addressed in the unit. It also includes: possible assessments, a culminating activity suggestion, topic question, reading connections, writing connections, multiple intelligence links, and lesson overview.

To evaluate the quality of the templates, I chose to hold interviews with three teachers rather than send a survey to all of the teachers to allow for more in-depth feedback. I selected one primary grade teacher, one upper grade teacher, and the school's program specialist. I chose these specific staff members because I valued their opinions as innovative teachers. I also wanted to select one upper grade and one primary grade teacher to ensure that I met the needs of both groups of teachers. I specifically chose the school’s program specialist because of her wide range of teaching experience.

The first teacher was a program specialist at Roger Anton Elementary School. First she looked at the lesson plan template. She approved of the overall layout of the design and suggested that I include a space to list the
source of my lessons. This would allow me to give proper credit to any book, website, or teacher from whom I received lessons or lesson ideas. She especially liked that all subjects were constantly shown and that the subjects addressed were merely checked off. She suggested that this feature would allow others to design lessons with all subjects in mind. Next, she evaluated my unit plan template. Again, she approved of my overall design and specifically mentioned that she liked that teachers could get a general feel for the unit within seconds. No changes were suggested.

The second teacher I asked to evaluate my templates was a primary grade teacher, teaching at the Kindergarten level. She found the directions to be the most helpful part of the lesson plan template. She also indicated that having all of the standards and objectives listed on both the lesson template and the unit template would save teachers time since they would not need to find those on their own. It was her opinion that the templates were well organized for the purposes of the curriculum guide.

The final teacher that evaluated my templates was an upper grade teacher who is also the technology liaison for
our school. He responded that the templates would be easy for most teachers to use to create their own lessons or units. He suggested that we upload the templates to a folder on our share point so that any teacher at Roger Ante could easily access the templates. He also shared that the templates had all of the pertinent information that he would need as an upper grade teacher. He did not suggest any changes to the templates. To review the templates, please see appendix B and appendix C. The feedback that I received allowed me to alter my templates by adding a space to list sources. Overall, the feedback gave me confidence that my templates were complete and easy to use for the teachers at our school.

Curriculum Guide Review Survey

Once the templates were evaluated, I was ready to gather lessons and develop the curriculum guide. I decided that I had more lessons for the kindergarten grade level than any other grade so I developed the guide for that grade only, given the limited scope of this project. The guide has eight units and includes a unit plan at the beginning of each unit. Unit lessons ranged from
approximately one lesson to six lessons per unit. A typical unit included a literature connection, science or social studies connection, math connection, and fine arts connection. Not all subjects were addressed in each unit but every attempt was made to create well-rounded and thorough unit plans. To review the first draft of the curriculum guide, please see appendix D.

The third step of data collection involved teachers evaluating my curriculum guide for a Kindergarten classroom. I elected to develop a one page survey that combined ten scaled response questions with seven narrative response questions. Scaled responses were on a five point scale with five being the most favorable response and one being the least favorable. Nine teachers evaluated the curriculum guide. Four of the teachers are primary school teachers, pre-school through second grade, while four of the teachers represented the upper grades, grades three through six. One evaluator is the school program specialist and has experience primarily with primary grades. I selected these specific teachers for their wide range of teaching methods and expertise. I also wanted to ensure that I had a sample of teachers that
represented the overall staff at the school. The evaluation survey asked the following questions:

1. How well does the preface explain the design of the guide?
2. How well does the Guidelines for Creating Lessons explain how to create new lessons?
3. How well does the unit plan explain the unit?
4. How well does the lesson template explain each lesson?
5. How would you describe the quality of each unit?
6. How would you describe the quality of most of the lessons?
7. How likely are you to use this curriculum guide or one like it?
8. How likely are you to encourage others to use this guide?
9. Based on the directions given in the Guidelines for Creating Lessons, how likely are you to develop new lessons for use in this guide?
10. How likely are you to use the Lesson template when designing new lessons?
Narrative

1. What is your overall impression of the curriculum guide?

2. What is your favorite unit? Why?

3. What are your 3 favorite lessons? Why?

4. What is the most useful part of the unit plan for you?

5. How feasible are the lessons, units, and timing of lessons for a typical kindergarten classroom?

6. Please share any lesson ideas or suggestions to help make this guide more effective and entertaining?

7. Any comments?

For the purpose of analysis, scaled responses were first looked at as a whole group and then divided into primary or upper grade interests to determine if there were any commonalities or differences between levels. When looking at the data for all nine of the respondents, I found that most of the scores were favorable. When comparing primary grade scores to the upper grade scores, I did not include the data from the survey returned by the program specialist. The scores from the program specialist are only reported in the total group average. What follows
below are the average scores (mean) for each of the three groupings I reviewed: total average scores, primary grade scores, and upper grade scores.

Table 1. Average Score Comparisons

<table>
<thead>
<tr>
<th>Average Scores by Question</th>
<th>Teacher Responses</th>
<th>Teacher Responses by Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>4.625</td>
<td>4.3</td>
</tr>
<tr>
<td>Question 2</td>
<td>4.75</td>
<td>4.6</td>
</tr>
<tr>
<td>Question 3</td>
<td>4.88</td>
<td>4.75</td>
</tr>
<tr>
<td>Question 4</td>
<td>4.77</td>
<td>4.5</td>
</tr>
<tr>
<td>Question 5</td>
<td>4.625</td>
<td>4.6</td>
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<tr>
<td>Question 6</td>
<td>4.88</td>
<td>4.75</td>
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<td>Question 7</td>
<td>4.33</td>
<td>3.5</td>
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<tr>
<td>Question 8</td>
<td>4.22</td>
<td>3.75</td>
</tr>
<tr>
<td>Question 9</td>
<td>4.375</td>
<td>4.3</td>
</tr>
<tr>
<td>Question 10</td>
<td>4.125</td>
<td>3.75</td>
</tr>
</tbody>
</table>

In general, I found that all of the average scores rated the curriculum guide between effective and very effective. When comparing the average primary grade scores to the average upper grade scores, I found that the upper grade teachers typically rated the guide higher than did the primary teachers. All of the upper grade average scores ranged between effective and very effective. Three
of the primary grade scores ranged between somewhat effective and effective while seven of the scores ranged between effective and very effective.

When analyzing the total group scores by question, I found that the scores for questions seven through ten were significantly lower than the scores for questions one through six. The first six questions primarily dealt with the teacher’s attitudes toward the design of the curriculum guide while questions seven through ten dealt with how likely the teachers were to use the curriculum guide in their own classrooms. This indicated to me that the curriculum guide had an overall appeal to the teachers but that putting the guide into practice might be more difficult than previously anticipated. Teachers appeared to be hesitant about using the curriculum guide.

The scores for questions three and six were found to be significantly higher than then scores for the rest of the questions. Question three asked: How well does the unit plan explain the unit? The high score indicated to me that teachers found the unit plan template to be an effective means of explaining the lessons within the unit. Questions six asked: How would you describe the quality of
most of the lessons? Again, the high scores indicated to me that the lessons within the units were of high quality and appealing to teachers. The fact that these two questions had significantly higher scores suggests that teachers find the curriculum guide to be effective and of high quality.

To analyze the narrative question portion of my survey, I looked at the overall comments and sought out common themes. Below is a summary of the responses for each narrative question.

**Question 1: What is your overall impression of the curriculum guide?**

Most of the teachers responded that the curriculum guide was well organized and well thought out. One teacher also mentioned how user friendly it was.

**Question 2: What is your favorite unit? Why?**

Three of the respondents listed Unit Two as their favorite unit because of the number of lessons and the good literature connections. Other teachers mentioned the Habitats unit because of the hands-on activities and level
of student enjoyment. Still others mentioned the Nutrition and Food Preparation units because they found value in the lessons and had a personal connection to the lessons.

Question 3: What are your 3 favorite lessons? Why?

Rather than list the individual favorite lessons, which are many, I looked at the common reasons given. Respondents appreciated specific lessons for their level of potential student participation and enjoyment, the high level of integration of subjects, the hands-on or kinesthetic appropriateness, and the real life applications. Surprisingly, many of the teachers listed lessons that involved cooking.

Question 4: What is the most useful part of the unit plan for you?

The responses to this question were greatly varied showing how different each teacher really is. Multiple respondents thought that the inclusion of the subjects and standards was the most helpful to them. Other teachers commented on the inclusion of the objectives, materials, directions or activities as their favorite part.
Question 5: How feasible are the lessons, units, and timing of lessons for a typical kindergarten classroom?  

The overall impression of the guide was that it was very feasible for a kindergarten classroom. The one problem that was mentioned was the difficulty teachers might have trying to find the time to teach these lessons.

Question 6: Please share any lesson ideas or suggestions to help make this guide more effective and entertaining?

One of the teachers requested the addition of pictures of the finished activities so that she could see what the product would look like. Another teacher mentioned specific lesson ideas. The inclusion of an English Learner component checklist was also mentioned as a way to round out the lesson plans. The final comment made referred to the lack of literature in some of the units. To review the Curriculum Guide Survey, please see appendix E.

Interviews

During the interview portion of my methodology, I selected one primary grade teacher and one upper grade
teacher. I only asked one main question: “What is the biggest obstacle you can see to our school implementing this curriculum guide?” While interviewing the primary grade teacher I noticed that she had mixed feelings about my curriculum guide. Although she liked the lessons in the guide, she was apprehensive about her desire and availability to teach the lessons. Her main concern was time. Teachers are already pressed for instructional time during the day and face an enormous amount of interruptions on a daily basis. She didn’t feel like she would be able to take the time to teach the “fun” lessons that she wanted to. She mentioned that her kids were so far behind academically that she was spending much of her day simply re-teaching what she already taught.

During my second interview, the upper grade teacher disagreed with the first teacher. She appreciated the integration that was evident in each unit and responded that that allowed her to combine lessons in order to find the time to teach the guide. She didn’t see any obstacles in the way of implementing the curriculum.

During the interview portion of my methodology, it became apparent that my curriculum guide would face two
major obstacles: (1) teacher buy in and (2) time to teach
the lessons. If the teaching staff and administration does
not see the value in the school garden or its curriculum
guide, then the garden and garden lessons will sit unused
on a shelf somewhere. But, if the teachers see the value
in teaching multiple standards at one time, they will be
much more excited to use the new curriculum. Likewise, if
the administration does not see the value in the lessons,
they will not encourage teachers to take the time to teach
the lessons.

Revision

Based on the results of the methodology I used, I
determined that very few revisions were needed. The
evaluating teachers overwhelmingly rated the curriculum
guide to be of high quality and effectiveness however a
few small details did need minor revisions. Therefore, I
decided to make the following revisions:

1. Units would be lengthened if necessary to include a
   minimum of three lessons.

2. Each unit would be revised, if necessary, to include
   at least one children’s literature connection.
These revisions allowed me to address the few concerns that I, and a couple of other teachers, did express. In the end, I feel that the curriculum guide was strengthened by these minor revisions. To review the revised curriculum guide, please see appendix F.
CHAPTER FIVE

CONCLUSIONS AND IMPLICATIONS

At the beginning of my project, I questioned whether it was possible to develop a curriculum guide that would allow teachers to effectively and efficiently utilize a school garden to teach the required standards while promoting peace among the students. This was in direct response to watching the students of Roger Anton Elementary School struggle to become proficient both academically and socially. Students come to school frustrated by the increasing pressures at home (poverty and family/community violence) and then sit in classrooms where the “fun” subjects (science, physical education, and art) dwindle away only to be replaced with worksheets. Students come to school frustrated but rather than alleviate the frustrations, we merely add to them by demanding the students excel on a multitude of standardized tests.

The purpose of this project was to develop a curriculum guide to be used in connection with a school garden with the following purposes: (1) integrative, (2)
peace building, (3) approach to using a school garden, and (4) teacher friendly. In order to accomplish that task I developed a multi-step methodology. To begin with I completed a thorough review of the literature. Then, I drafted a list of proposed curriculum units and surveyed teachers about its appropriateness. Following that step, I created unit and lesson templates to allow for easy readability and had them reviewed by three teachers. Finally, I created a sample curriculum guide and had it evaluated by fellow teachers. The guide was then revised based on the feedback I received.

Conclusions

I first completed a review of the relevant literature in the following areas: school gardening, peace curriculum, and curriculum design. Based on my review of the literature, I determined that in order for my guide to be of true value, I would need to integrate as many subjects and state standards into each lesson as possible. It would also need to address multiple learning modalities while still offering teachers a way to teach social skills to their students. The guide would also need to be well
rounded, exciting for the students, and easy for the teachers to use.

Based on the recurrent lessons and themes from my literature review, I developed a list of eight proposed units and timing schedule. Each unit was to take approximately one month to complete. Teachers were surveyed to determine the appropriateness of the units. Of the nine teachers surveyed, all of the teachers reported that the units were appropriate and the timing would work in most classrooms.

In order to make the curriculum guide easy to read and use, I decided to create unit and lesson plan templates. Each template was developed through the use of Microsoft Word and incorporated a multitude of topics. Unit templates included the objectives, standards, multiple intelligences, and subjects addressed within a specific unit. Lesson templates included the objectives, standards, and lessons directions. The templates were evaluated by three teachers, all of whom approved of the templates.

Finally, I was prepared to develop an effective kindergarten curriculum guide. Lessons were gathered from
a variety of sources and were divided into the appropriate units. Units were then rounded out to include as many subjects as possible. The sample guide was then given to nine teachers to evaluate with the use of a survey that I developed. The teachers overwhelmingly determined that the guide was effective and engaging. They appreciated the integration and hands-on opportunities within each lesson. Most of the teachers determined that the curriculum guide was entirely feasible for a kindergarten classroom to use and enjoyable for the teachers and students.

Following the initial review of the curriculum guide, I conducted an interview with one primary grade teacher and one upper grade teacher. The primary teacher reiterated how overwhelming the daily tasks of teaching can be and was concerned about the time factor. She didn’t feel that the teachers would be allowed to take the time to teach the lessons in light of the many demands and rigors required to get our students to pass the state exams. Her concern was one that I shared as well. The second teacher I interviewed felt that the curriculum guide would allow teachers to take less time to teach more. She felt that it was a good solution to the problems
we faced in our school. The curriculum guide was then revised as needed to include more lessons in a couple of units, and a stronger literature connection in other units.

Following the conclusion of my data collection and analysis, I have come to the understanding that while it is possible to create a curriculum guide that combines school gardening, state standards, and peace education, the curriculum guide is only able to work its magic if the staff is willing to use it wholeheartedly. The subjects of my study were all very enthusiastic about the guide but I was left with no promises that they would actually put the curriculum into use in their classrooms.

During the interview portion of my methodology, it became apparent that my curriculum guide would face two major obstacles: (1) teacher buy in and (2) time to teach the lessons. If the teaching staff and administration does not see the value in the school garden or its curriculum guide, then the garden and garden lessons will sit unused on a shelf somewhere. But, if the teachers see the value in teaching multiple standards at one time, they will be much more excited to use the new curriculum. Likewise, if
the administration does not see the value in the lessons, they will not encourage teachers to take the time to teach the lessons.

Limitations

There are many limitations to the methodology that I have presented. Since the curriculum is site specific and designed to be used in tandem with a school garden and our own track system, other schools might find it necessary to alter the timing of the units. Likewise, other schools may not see the value in some of the lessons since the lessons were gathered to coordinate with the proposed garden crops. If another school does not have the same crops, some of the lessons might be obsolete for them.

Unfortunately, the sample of teachers reviewing the units that I have prepared is quite small. Only eight Anton teachers had the opportunity to review a sample unit. Ideally, I would have created a curriculum guide for each grade level (kindergarten - 6th grade) and then asked teachers to evaluate only the curriculum guide for their specific grade.
It would be worthwhile to do a more extensive curriculum review by allowing each grade level to review all of the units as a group. They might feel the need to spend one afternoon completing a group review or split up the units between the teachers to lighten the workload. By widening my review to include all Anton teachers, I could get a better sense of the level of teacher buy in and enthusiasm.
APPENDIX A

CURRICULUM UNIT SURVEY
Dear Staff,

I am still working on getting our school garden set up and am currently working on writing more grants. In the meantime, I am trying to develop some simple lessons for each grade that would allow us to use the garden to teach our math, language arts, science and social studies lessons. These lessons will be fun for the kids, easy for you, and connected to the standards. They will include a children's literature connection, writing activity, and address the multiple intelligences. Please fill out the survey below to help me determine if the units I am considering will work for you. This will help me develop the best, stress-free lessons for everyone. Feel free to offer your constructive criticism and suggestions. Thank you for being patient with this project.

Betsy Newmeyer - 5th grade

Garden Curriculum Survey

Name: ___________________________ Grade: ____________

Please read the list of potential units and suggested lessons ideas on the back of this paper. This is not a complete list of lessons but a general idea of what we might be doing. Please answer the following questions and return this to my box by Friday if possible.

Will these units work into your current curriculum units? Yes / No

Are the units appropriate for your grade level? Yes / No

Does the timing of the units make sense and work for you? Yes / No

Suggestions? ___________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________
Garden Unit Topics

Unit 1 - August
  Topic: Introduction to the Garden and Safety Procedures
  Lesson Examples: nouns, verbs, adjectives, adverbs, nature walks, etc.

Unit 2 - September
  Topic: Planting the Seed
  Lesson Examples: plant types, plant parts, stages of a plant, different farming methods

Unit 3 - October
  Topic: Habitats
  Lesson Examples: types of habitats, build a habitat

Unit 4 - December
  Topic: Cultural Food and Celebrations
  Lesson Examples: how is food used in different cultures, types of celebrations and the food they use

Unit 5 - January
  Topic: Nutrition
  Lesson Examples: New Year's Resolutions, food values and the food pyramid, chart exercise level or food intake, why do we need food?

Unit 6 - February
  Topic: Food Preparation
  Lesson Examples: food fractions, create a class cookbook

Unit 7 - April-May
  Topic: Taking Care of the World and All Its People
  Lesson Examples: recycling, art out of recycled materials, community action

Unit 8 - June
  Topic: Celebrations
  Lesson Examples: butterfly release?
APPENDIX B

LESSON PLAN TEMPLATE
APPENDIX C

UNIT PLAN TEMPLATE
# Unit Plan Overview

**Grade Level:**

**Subjects Addressed:**
- [ ] Reading
- [ ] Writing
- [ ] Spelling
- [ ] Grammar
- [ ] Math
- [ ] Social Studies
- [ ] Science
- [ ] Art
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Newspapers

**Objectives:**

**Standards:**

**Assessments:**

**Culminating Activity:**

**Topic Question:**

**Experiential Activity:**

**Reading Connection:**

**Writing Connection:**

**MI Links:**
- [ ] Linguistic
- [ ] Logical-Mathematical
- [ ] Visual-Spatial
- [ ] Musical
- [ ] Bodily-Kinesthetic
- [ ] Interpersonal
- [ ] Intrapersonal
- [ ] Naturalist

**Reflection/Processing:**

**Lesson Overviews:**

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
</tr>
</thead>
</table>
APPENDIX D

DRAFT OF CURRICULUM GUIDE
Preface

This curriculum guide is designed to be used in connection with the Roger Anton Elementary School garden. The guide strives to integrate curriculum areas and infuse excitement for both the teacher and the students while still addressing the many state standards that must be taught. This curriculum guide is a holistic and integrative approach to teaching that I hope you enjoy!

Each unit was specifically designed with the school schedule in mind, allowing for holidays, off track vacations, and testing schedules. The units are as follows:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Month</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>August</td>
<td>Introduction to the Garden and Safety Procedures</td>
</tr>
<tr>
<td>2</td>
<td>September</td>
<td>Planting the Seed</td>
</tr>
<tr>
<td>3</td>
<td>October</td>
<td>Habitats</td>
</tr>
<tr>
<td>4</td>
<td>December</td>
<td>Cultural Food and Celebrations</td>
</tr>
<tr>
<td>5</td>
<td>January</td>
<td>Nutrition</td>
</tr>
<tr>
<td>6</td>
<td>February</td>
<td>Food Preparation</td>
</tr>
<tr>
<td>7</td>
<td>April-May</td>
<td>Taking Care of the World and All Its People</td>
</tr>
<tr>
<td>8</td>
<td>June</td>
<td>Celebrations</td>
</tr>
</tbody>
</table>

Units were designed to follow a natural flow curriculum but are able to be taught out of sequence depending on teacher needs. Each unit includes several lessons that address multiple curriculum areas. Most units will have at least one children's literature component, one math lesson, one science lesson, and one fine arts connection. Some units have fewer lessons so as to allow for teachers to include their own favorite lessons or design new lessons.

Lessons were selected based primarily on three main criteria:
1. Excitement/Enjoyment level for the students
2. Ease of preparing and presenting the lesson
3. Ability to address: multiple curriculum areas, peace studies/social skills, and the multiple intelligences.

Although most units include multiple lessons, teachers are encouraged to select three to five of the lessons that best fit their needs. Teachers are also encouraged to adapt lessons as they see fit and write new lessons to be included in the guide.

I hope this guide is exciting to use and fits all of your curricular needs!

Elizabeth Newmeyer
Guidelines for Creating New Lessons

This curriculum guide works best when its lessons are engaging and easy to use. Teachers are encouraged to add their favorite lessons and create new ones in order to make this guide, one worth teaching.

When developing new lessons, here are a few items to consider. Lessons should:

1. Be engaging
2. Be easy to use
3. Address the unit topic and topic question.
4. Address multiple subjects
5. Include a variety of extensions, if possible

Attached, you will find a blank lesson plan format. Please use this form to help you write well rounded and thorough lessons. If lessons are borrowed from a book, internet, or another teacher, be sure to cite the source, giving credit where credit is due.

When listing the standards addressed, consider all possible connections. Life is filled with connections and so too are our standards. Most science lessons can also address math, include a reading or writing component, and a fine arts component. Be thorough when adding standards.

Enjoy writing lessons!
Unit One:

Introduction to the Garden and Safety Procedures
Garden Introduction Unit Plan Overview

Grade Level: Kindergarten

Time Length: 1 month

Subjects Addressed:

- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music/Theater
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Objectives:

1. Children will discuss and make different health and safety rules for the garden.
2. Children will use gardening tools to dig in potting soil, searching for seeds and bugs.
3. Children will make a job chart.
4. Children will discuss sun safety and sun protection.
5. Children will practice gross motor skills by marching and singing.
6. Children will make a family vine and practice counting the family members.

Standards:

- Sci 1a - Students know objects can be described in terms of the materials they are made of and their physical properties.
- Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
- Sci 2c - Students know how to identify major structures of common plants and animals.
- Sci 3b - Students know changes in weather occur from day to day and across seasons, affecting Earth and its inhabitants.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.
- Sci 4e - Students will communicate observations orally and through drawings.
- Math 1.2 - Count, recognize, represent, name, and order a number of objects.
- LA R1.6 - Recognize and name all uppercase and lowercase letters of the alphabet.
- LA L&S 1.2 - Share information and ideas, speaking audibly in complete, coherent sentences.
- LA L&S 2.1 - Describe people, places, things, locations, and actions.
- LS L&S 2.2 - Recite short poems, rhymes, and songs.
- HSS K1.1 - Follow rules, such as sharing and taking turns, and know the consequences of breaking them.
- HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

Assessments: Students will be able to identify the jobs needed for the garden, how to dress in the garden, and how to behave in the garden.
Culminating Activity: Students will march in a parade around the garden demonstrating their jobs in the garden and their safety rules/sun protection.

Topic Question: What is a garden?

Experiential Activity: Students will dig in a sensory table filled with soil.

Reading Connection: none

Writing Connection: The teacher will write the student responses.

MI Links:

- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist

Reflection/Processing: Students will draw pictures of their favorite part of the garden.

Lesson Overviews:

1. Garden Rules
   Description: Students will discuss what a garden is and make rules to be used in the garden.
2. Pull out the Potting Soil
   Description: Students will dig in a sensory table filled with soil, seeds, and bugs.
3. Garden Jobs
   Description: Students will make a job chart of each person's job in the garden.
4. Too Much Sun
   Description: Students will talk about sun protection and put the appropriate sun protection on their worksheet.
5. When You're Walking...
   Description: Students will sing a song about the garden while marching.
6. The Family Vine
   Description: Students will make a family vine showing their own family members.
Lesson Title: **Garden Rules**

Grade Level: Kindergarten  
Time Length: 1/2 hour - 45 minutes  
Source: none

Subjects Addressed:  
- [X] Reading  
- [X] Writing  
- [X] Spelling  
- [X] Grammar  
- [X] Math  
- [X] Social Studies  
- [X] Science  
- [X] Art/Music  
- [X] Physical Education  
- [X] Peace Education  
- [ ] Social Skills  
- [ ] Other

Objectives:
Students will discuss and make different health and safety rules that will be implemented in their garden setting.

Standards:
HSS K1.1 - Follow rules, such as sharing and taking turns, and know the consequences of breaking them.

Materials Needed:  
Large paper  
Marker

Activity Directions  
Approximate Time Needed: 1/2 hour - 45 minutes  
1. The class will discuss some of the dangers that can happen in a garden.  
2. The class will then suggest rules that can help the classmates stay safe in the garden.  
3. The teacher will then write the rules on the large paper to be posted in the classroom or the garden.  
4. The children will help draw pictures on the poster of children being safe and using the rules in the garden.

Examples of garden rules:  
1. Wear gloves  
2. Put tools back where they belong  
3. Do not spray others with the water hose  
4. Tools are only used for the garden, not for playing swords  
5. Walk on the pathways  
6. Wash your hands when you are done  
7. Be kind to nature and your friends.
Lesson Title: **Pull Out the Potting Soil**

**Grade Level:** Kindergarten  
**Time Length:** 1 hour or more

**Source:** Dibble, Carole H., and Lee, Kathy H. (2000) *Wacky Crazy Activities for Young Children.* Gryphon House, Inc. Beltsville, MD 20705

**Objectives:**
Students will use gardening tools and their hands to dig in potting soil to find seeds and bugs.

**Standards:**
Sci 1a - Students know objects can be described in terms of the materials they are made of and their physical properties.  
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.  
Sci 2c - Students know how to identify major structures of common plants and animals.  
Sci 4a - Students will observe common objects by using the five senses.  
Sci 4d - Students will compare and sort common objects by one physical attribute.  
Sci 4e - Students will communicate observations orally and through drawings.  
Math 1.2 - Count, recognize, represent, name, and order a number of objects.  
LA L&S 1.2 - Share information and ideas, speaking audibly in complete, coherent sentences.  
LA L&S 2.1 - Describe people, places, things, locations, and actions.

**Materials Needed:**
Shallow tub to put soil in  
Tools such as shovels, spoons, cups  
Plastic bugs  
Big seeds: pumpkin, etc.  
Real bugs: sowbugs or ladybugs

**Activity Directions**  
Approximate Time Needed: Keep out for a few days!
1. Pour a bag of potting soil into a large tub or sensory table.  
2. Add cups, spoons, and shovels.  
3. Hide bugs (plastic and real) and seeds.
Extension Activities:

Peace Education
Discuss with students about how to be kind to bugs. This will allow them to respect life and get over any bug phobias they may have. Make sure to talk about being gentle.

Science
Help students make observations about bug, soil, and seed appearances, behavior, and movements.

PE
Create a bug dance or movement game based on the bug behavior

Art
Draw, paint, cut and paste, etc, the bugs and seeds.

Language Arts
Sound out the names of the bugs or seeds. Discuss predictions of what it/they might turn into. Write the names and predictions. Create a class story about a bug or seed or child who finds one.

Math
Count the legs or spots on the bugs. Figure out how many legs are in the classroom (bugs vs. children).
Lesson Title: **Garden Jobs**

**Grade Level:** Kindergarten - 6th grade  
**Time Length:** 1/2 hour - 45 minutes


### Subjects Addressed:

- Reading
- Social Studies
- Writing
- Science
- Spelling
- Art/Music
- Grammar
- Physical Education
- Math
- Peace Education
- Social Skills
- Other

### Objectives:

Students will demonstrate a positive group environment by making a job chart for the garden that will incorporate everyone in the class. Each student will be assigned a specific job.

### Standards:

HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

### Materials Needed:

- Large Paper
- Marker

### Activity Directions

Approximate Time Needed: 1/2 hour - 45 minutes

1. The teacher will discuss with the class about the necessary jobs that need to be done in the garden for the garden to thrive.
2. The class will compile a list of jobs that would be necessary for their specific garden.
3. The teacher will then write down the jobs that are needed on a large piece of paper.
4. The jobs will be given out to every child in the class. (Some jobs may be shared)

### Examples of Jobs:

1. Watering the plants
2. Weeding
3. Picking the ripe vegetables and fruits
4. Keeping a chart on how tall the produce is growing
5. Cleaning up garden area
6. Tool clean up
7. Weatherman - report on the day’s weather
Lesson Title: **Too Much Sun**

**Grade Level:** Kindergarten  
**Time Length:** 1/2 hour  
**Source:** Cowling, T.K. (1998 July/August). Too Much Sun. Schooldays, 16

**Subjects Addressed:**
- [X] Reading  
- [ ] Writing  
- [ ] Spelling  
- [ ] Grammar  
- [X] Math  
- [ ] Social Studies  
- [X] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [X] Peace Education  
- [ ] Social Skills  
- [ ] Other

**Objectives:**
The class will discuss sun safety and then will decide the best choice for sun protection and match it to the corresponding shape on the boy. (see worksheet)

**Standards:**
Sci 3b - Students know changes in weather occur from day to day and across seasons, affecting Earth and its inhabitants.  
LA L&S 1.2 - Share information and ideas, speaking audibly in complete, coherent sentences.

**Materials Needed:**
"Too Much Sun" worksheet  
Crayons or markers  
Glue sticks or tape  
Additional props are optional: wide-brimmed hat, bottle of sun block, sunglasses

**Activity Directions**  
Approximate Time Needed: 1/2 hour  
1. The teacher will discuss sun safety with the class. Discuss topics such as how too much sun can be harmful and hurt (sunburn).  
2. During the discussion, the teacher can share any props with the kids and talk about their purpose.  
3. The teacher will then handout the worksheet to the student (precut if necessary).  
4. Students will match up the best choice for sun safety to the picture of the boy, corresponding shapes.  
5. Glue or tape shapes in place and have the children color their pictures with the glue is dry.
Lesson Title: When You're Walking In The Garden

Grade Level: Kindergarten - 2nd grade  Time Length: 20 - 30 minutes

Source: Adapted from Marjorie Eide's "When you're walking in the forest..."
Second Grade, Lake Arrowhead Elementary, Lake Arrowhead, CA. 1987

Subjects Addressed:
[ ] Reading  [ ] Social Studies  [ ] Social Skills
[ ] Writing  [ ] Science
[ ] Spelling  [ ] Art/Music
[ ] Grammar  [ ] Physical Education
[ ] Math  [ ] Peace Education

Objectives:
Students will employ functional movement with gross motor skills while marching and singing, "When You're Walking in the Garden."

Standards:
LS L&S 2.2 - Recite short poems, rhymes, and songs.

Materials Needed:
"When You're Walking in the Garden", see attached words.
A large area with lots of room for marching and other movements.

Activity Directions  Approximate Time Needed: 20 - 30 minutes
1. Sing the song through once to the tune of "When you're happy and you know it..." to acquaint students with the lyrics, tune, and tempo.
2. Practice singing the song with the children.
3. Have the students form a circle or line up for marching.
4. Sing the song and march, taking movement cues from the song. For example, walk softly when the lyrics say to, look up and down in the last stanza, and make worms with fingers in the fourth stanza.

Suggestion:
Try using this song to get walk to the garden together.
When You’re Walking in the Garden
(Sung to the tune of, “When you’re happy and you know it . . . ”)

When you’re walking in the garden, watch your step.
When you’re walking in the garden, watch your step.
Watch for plants and things that bloom,
Please be careful, give them room.
When you’re walking in the garden, watch your step.

When you’re walking in the garden, please take care.
When you’re walking in the garden, please take care.
There are bees and birds and bugs,
There are butterflies and slugs.
When you’re walking in the garden, please take care.

When you’re walking in the garden, please walk soft.
When you’re walking in the garden, please walk soft.
There are earthworms down below,
And they help you plant and sow.
When you’re walking in the garden, please walk soft.

When you’re walking in the garden, please slow down.
When you’re walking in the garden, please slow down.
Just look up and then look down,
There is nature all around.
When you’re walking in the garden, please slow down.
Lesson Title: **The Family Vine**

Grade Level: Kindergarten

Source: Patricia Couch

**Subjects Addressed:**
- [ ] Reading
- [x] Writing
- [x] Spelling
- [x] Grammar
- [x] Math
- [x] Social Studies
- [x] Science
- [x] Art/Music
- [x] Physical Education
- [x] Peace Education

**Objectives:**
Children will make a family vine and practice counting the family members.

**Standards:**
Math 1.2 - Count, recognize, represent, name, and order a number of objects.
LA R1.6 - Recognize and name all uppercase and lowercase letters of the alphabet.
LA L&S 1.2 - Share information and ideas, speaking audibly in complete, coherent sentences.

**Materials Needed:**
- Green construction paper
- Pattern for the vine and leaves (attached)
- Glue
- Names of the children's family members

**Activity Directions**
Approximate Time Needed: 30 minutes
1. Teacher will ahead of time cut out lots of leaves and vines.
2. Children will then decorate and glue the leaves on the vine.
3. Teacher will write the names of the child's family members on each leave.
4. The Family Vine will be placed on a bulletin board.
5. Students will practice counting how many leaves are on the vine.

**Suggestion:**
Rather than using green construction paper, use white so the kids can color them and then when they count them, they can chart how many red leaves, green leaves, etc.
Unit Two:

Planting the Seed
Planting The Seed Unit Plan Overview

Grade Level: Kindergarten
Time Length: 1 month or more

Subjects Addressed:

- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Objectives:
1. Students will help plant a mixed-salad container garden.
2. Students will help design small scarecrows to place in the garden or around the classroom.
3. Students will pretend to be a produce vendor, purchasing/selling produce to each other.
4. Students will demonstrate a finger play after hearing the story "Bunny and The Great Carrot Race".
5. Students will classify different vegetables and group them by name.
6. Students will listen to and discuss the story "The Carrot Seed" while eating carrot sticks.
7. Students will experiment with which type of soil allows carrot seeds to grow best.
8. Students will listen to the book, "The Ugly Vegetables" and make labels for the garden plants.
9. The students will use adjectives to describe a word of their choosing to make "word flowers".
10. Students will count throughout the book, the different vegetables mentioned.
11. Students will identify which vegetable was seen the most during the story.
12. Students will grow grass in an egg shell and decorate the project to look like a person.
13. Students will sing planting songs while either doing hand motions or planting seeds.

Standards:
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
R1.18 - Describe common objects and events in both general and specific language.
LS2.2 - Recite short poems, rhymes, and songs.
Math A&E 1.0 - Sort and classify objects.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

Assessments: Students will be able to describe the value of gardening and explain the steps of planting a seed.

Culminating Activity: Students will create a class garden either inside the class or out and decorate it.

Topic Question: What seeds do we want to plant?
Experiential Activity: Students will plant a variety of seeds and tend to their gardens over time.

Reading Connection: Bunny and the Great Carrot Race by Liane Payne, The Ugly Vegetables by Grace Lin, The Carrot Seed by Ruth Krauss

Writing Connection: none

MI Links:
☐ Linguistic ☑ Musical ☑ Bodily-Kinesthetic ☐ Intrapersonal
☑ Logical-Mathematical ☑ Visual-Spatial ☑ Naturalist ☑ Interpersonal

Reflection/Processing:

Lesson Overviews:
Lesson Title Description
1. Mixed-Salad Basket The class will create and care for a salad garden container.
2. **Scarecrow in Your Garden**  The students will create a variety of scarecrows for their garden.

3. **Buying Produce**  This is a dramatic play center that lets kids pretend to buy/sell produce.

4. **Bunny and the Great ...**  Students listen to the story and perform a simple fingerplay.

5. **Counting Veggies**  The students discuss vegetables and count the veggies from the story *Bunny and the Great Carrot Race*.

6. **The Carrot Seed**  This story is about a child who grows carrots so the students eat carrots as they listen to and discuss the story.

7. **How Does Your Carrot ...**  In this lesson, students will plant carrot seeds in two types of soil to determine which soil lets plants grow best.

8. **The Ugly Vegetables**  Students will listen to the story "The Ugly Vegetables" and make labels for their own plants.

9. **Word Garden**  This is a really cute bulletin board idea that teaches students to describe objects.

10. **The Hairy Egghead**  In this lesson, students will grow their own version of a chia pet.

11. **Planting Time**  This is a song about planting plants

12. **This is How We Plant ...**  Another song about planting.
Lesson Title: **Mixed-Salad Basket**

**Grade Level:** Kindergarten  
**Time Length:** 30 minutes to plant


**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

**Objectives:**
1. Students will help plant a mixed-salad container garden.

**Standards:**
Sci 2c - Students know how to identify major structures of common plants and animals.

**Materials Needed:**
1. Medium sized container
2. Plastic shopping bag large enough to line bottom of the container
3. Soil and compost
4. A variety of lettuce seeds or seedlings
5. Seeds for other mixed greens: spinach, arugula, or mustard
6. Nasturtium seeds

**Activity Directions** Approximate Time Needed: 30 minutes to plant

***The teacher will do the majority of the work with student help.***

1. Line the basket with the plastic bag and fill with soil and compost.
2. Sprinkle seeds for mixed greens and lettuce on top of the soil. Cover them very lightly with soil.
3. Because nasturtiums do not like to be moved, plant the seeds directly in your container. The seeds should be covered well with soil.
4. Place the container in a spot that gets some afternoon shade.
5. Spray the surface of the soil with warm water every day until the seeds sprout.
6. When the new seedlings are about 1 inch high, thin them to about 3-4 inches apart.
7. Water when the soil feels dry.
Lesson Title: **Scarecrow in Your Garden**

Grade Level: Kindergarten  
Time Length: 30 minutes - 1 hour

Source:  

Subjects Addressed:  
- [x] Reading
- [ ] Writing
- [ ] Spelling
- [ ] Grammar
- [ ] Math
- [ ] Social Studies
- [ ] Science
- [x] Art/Music
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Other

Objectives:  
1. Students will help design small scarecrows to place in the garden or around the classroom.

Standards:  
LS2.2 - Recite short poems, rhymes, and songs.  
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

Materials Needed:  
1. Variety of old children’s clothes  
2. Plastic bags

Activity Directions: Approximate Time Needed: 30 minutes - 1 hour
1. The teacher will introduce the concept of a scarecrow to the class through discussion and a few poems or songs about scarecrows.  
2. Students will work in teams to make their own scarecrow.

Scarecrow Directions:  
1. Use old pants, an old shirt, an old hat, and gloves to make your scarecrow.  
2. Stuff the pants, shirt and gloves with plastic bags.  
3. Use a plastic bag to make a head and face.  
4. Plant your scarecrow around the classroom or the garden.

Extensions:  
Math - Count the number of scarecrows the class has made

Visit http://www.theteachersroom.com/scarecrowunit.htm for more ideas.
Scarecrow Songs & Poems

Scarecrow, Scarecrow
Tune: Twinkle, Twinkle
Scarecrow, scarecrow turn around.
Scarecrow, scarecrow
touch the ground.
Stand up tall and blink your eyes.
Raise your hands up to the sky.
Clap your hands,
then tap your knees.
Turn around and tap your feet.

Scarecrow, scarecrow
touch your toes.
Scarecrow, scarecrow
tap your nose.
Swing your arms so very slow,
Now real fast to scare the crows!
Touch your head, jump up and down.
Now sit down without a sound.

I'm a Little Scarecrow
Tune: I'm a Little Teapot
I'm a little scarecrow,
Raggedy and worn.
I wear a hat,
And a shirt that's torn.
When the crows come,
I wave and shout,
"Away from my garden ----
Get on out!"

The Scarecrow
Scarecrow standing in the field
On a bright and sunny day,
Don't forget to do your job.
Scare the hungry crows away!

The Scarecrow in the Field
The scarecrow in the field,
The scarecrow in the field,
Hi Ho! It's harvest time,
The scarecrow in the field.
The scarecrow picks the _______.
Have the children think of fall words that would be appropriate (pumpkin, crow, corn, leaf etc)

Scarecrow, Scarecrow
Tune: Teddy Bear, Teddy Bear
Scarecrow, scarecrow, turn around.
Scarecrow, scarecrow,
touch the ground.
Scarecrow, scarecrow,
stretch up high.
Scarecrow, scarecrow,
blink your eyes.
Scarecrow, scarecrow,
kick your feet.
Scarecrow, scarecrow,
bend so low.
Scarecrow, scarecrow,
touch your toe.
Scarecrow, scarecrow,
roll your head.
Scarecrow, scarecrow, go to bed!

Scarecrows
Tune: Sing a Song of Sixpence
We're the farmer's scarecrows
We scare away the birds,
We keep the farmer's corn safe
Without any words.
But when Halloween comes
We jump out of the ground.
And we scare the boys and girls
When they come walking 'round.

The Floppy Scarecrow
The Floppy, floppy scarecrow
Guards his fields all day.
He waves his floppy, floppy hands
To scare the crows away!
Repeat and replace hands with arms, toes, etc

Five Black Crows
Tune: Five Green and Speckled Frogs
Five crows all shiny black,
Sat on a scarecrow's back
Eating some most delicious corn
"Caw! Caw!"
Scarecrow winked and shouted, "Boo!"
Scared a crow and away he flew
Now there are four black shiny crows.
Five Little Scarecrows
Five little scarecrows
by the old barn door,
One went home and then there were four.
Four little scarecrows
by the old oak tree
One went home and then there were three.
Three little scarecrows
with nothing to do,
One went home and then there were two.
Two little scarecrows
out in the sun,
One went home and then there was one.
One little scarecrow all alone through the day,
He scared the crows and they all flew away.

The Scarecrow
The old scarecrow is such a funny man.
He flops in the wind as hard as he can.
He flops to the right.
He flops back and forth
Till he's most out of breath.
His arms swing out;
his legs swing, too.
He nods his head in a
How-do-you-do?
See him flippity flop when the wind blows hard,
The funny scarecrow in our backyard.

Have You Ever Seen A Scarecrow?
Tune: Have You Ever Seen A Lassie?
Have you ever seen
a scarecrow,
A scarecrow,
a scarecrow?
Have you ever seen a scarecrow
With ten hungry birds?
Ten birds, ten birds,
Ten wing-flapping birds.
Have you ever seen a scarecrow
With ten hungry birds?

I'm A Scarecrow
Tune: "Frere Jacques"
I'm a Scarecrow,
I'm a Scarecrow
( stand with arms out)
Standing in the corn,
Standing in the Corn
(continue)
Scare the crows away,
Scare the crows away
(Push arms out as if to scare the crows away)
That's my job, That's my job (arms out again)

Choose one child to be the scarecrow and stand in front of the group. Choose 10 crows - I give these children laminated crow pictures. Sing the song and have the children act it out. Repeat the second verse (replacing the red number word with the appropriate number word) until all of the birds have been scared away.
Lesson Title: **Buying Produce**

**Grade Level:** Kindergarten  
**Time Length:** 15 minutes to prepare


**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

**Objectives:**
1. Students will pretend to be a produce vendor, purchasing/selling produce to each other.

**Standards:**
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

**Materials Needed:**
1. Artificial flowers
2. Artificial produce
3. Play money
4. Baskets to put produce inside of
5. Apron (optional)

**Activity Directions** Approximate Time Needed: 15 minutes to prep
1. Discuss gardens and the food and plants that come from them with the children prior to setting up this dramatic play center.
2. Place all materials in the dramatic play center so they can pretend to be the gardener, seller or buyer of the food and flowers.
Lesson Title: **Bunny and the Great Carrot Race**

**Grade Level:** Kindergarten  
**Time Length:** 15-30 minutes

**Source:**  

**Subjects Addressed:**  
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Social Skills  
- Other

**Objectives:**  
1. Students will listen to the story "Bunny and The Great Carrot Race".  
2. Children will perform a fingerplay.

**Standards:**  
R1.1 - Identify the front cover, back cover, and title page of a book.  
R1.2 - Follow words from left to right and from top to bottom on the printed page.  
R2.2 - Use pictures and context to make predictions about story content.  
LS2.2 - Recite short poems, rhymes, and songs.

**Materials Needed:**  
"Bunny and The Great Carrot Race" by Liane Payne

**Activity Directions**  
Approximate Time Needed: 15-30 minutes  
1. The teacher will read the story aloud to the class.  
2. The class will discuss gardens and what plants need to grow.  
3. The children will then learn and perform the fingerplay about a garden.

**Fingerplay**  
This is my garden (hold out palm as if garden was on hand)  
I'll rake it with care (rake hand with fingers from other hand)  
And then some flower seeds (pretend to drop seeds in palm)  
I'll plant in there  
The sun will shine (put hands in circle over head)  
And the rain will fall (trickle fingers downwards)  
And my garden will blossom  
And grow up tall (stand tall with arms up in the air)
Lesson Title: *Counting Veggies*

**Grade Level:** Kindergarten  
**Time Length:** 15-30 minutes


**Subjects Addressed:**
- Reading  
- Math  
- Social Skills

**Objectives:**
1. Students will classify different vegetables and group them by name.
2. Students will count throughout the book, the different vegetables mentioned.
3. Students will identify which vegetable was seen the most during the story.

**Standards:**
- Math A&F 1.0 - Sort and classify objects.
- NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less than the other.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.

**Materials Needed:**
1. Pre-made veggi chart  
2. Markers

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**Activity Directions** Approximate Time Needed: 15-30 minutes

1. Discuss with the class what a vegetable is and name the different vegetables the students know.
2. The teacher will make a chart of the different veggies seen in the book.
3. The teacher will read the story aloud to the class.
4. The class will keep track of how many times they see each veggie.
5. Discuss which had the most and the least.
Lesson Title: **The Carrot Seed**

Grade Level: Kindergarten  
Time Length: 30 - 40 minutes

Source: "The Carrot Seed" by Ruth Krauss

Subjects Addressed:  
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education  
- Social Skills  
- Other

Objectives:  
1. The children will listen to the story "The Carrot Seed" and discuss the story.

Standards:  
R1.1 - Identify the front cover, back cover, and title page of a book.  
R1.2 - Follow words from left to right and from top to bottom on the printed page.  
R2.2 - Use pictures and context to make predictions about story content.  
R2.4 - Retell familiar stories.

Materials Needed:  
1. "The Carrot Seed" by Ruth Krauss  
2. Small paper plates  
3. Carrot sticks  
4. Peanut butter and/or Ranch dressing

Activity Directions  
Approximate Time Needed: 30 - 40 minutes

1. The teacher will read the book, "The Carrot Seed".  
2. The class will explain the story to their neighbors.  
3. The teacher will then talk about the moral of the story.  
4. Selected student helpers can pass out the carrot sticks, peanut butter and/or ranch dressing to eat.

Extensions:  
Math  
1. Students can count the number of carrot sticks at the table.  
2. Students can predict how many bites it will take them to eat their carrot stick and then count how many bites they can actually take.  
3. The teacher can graph the predictions and compare and contrast the predictions to the actual results.

Social Skills: 1. The teacher can discuss table etiquette.
Lesson Title: **How Does Your Carrot Grow?**

**Grade Level:** Kindergarten - 3rd grade  
**Time Length:** 30 minutes

**Source:** Science Wizardry for Kids by Margaret Kenda & Phyllis S. Williams  
"The Carrot Seed" by Ruth Krauss

**Subjects Addressed:**
- Reading  
- Social Studies  
- Writing  
- Science  
- Spelling  
- Art/Music  
- Grammar  
- Physical Education  
- Math  
- Peace Education

**Objectives:**
1. The students will plant carrot seeds in two different kinds of soil.

**Standards:**
- Sci 2c - Students know how to identify major structures of common plants and animals.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.
- Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. "The Carrot Seed" by Ruth Krauss  
2. Plastic cups  
3. Two different kinds of soil  
4. Carrot seeds  
5. Water

**Activity Directions**  Approximate Time Needed: 30 minutes with extra help
1. Read "The Carrot Seed" to children.
2. Hand out two plastic cups to each child or each team of 2 children.
3. Hand out carrot seeds.
4. Hand out the two different kinds of soil (or prefill the cups before starting the activity).
5. Instruct students to plant their carrot seeds and cover with soil.
6. Help students water their carrots.
7. Discuss with students about the types of soil and ask them to predict which cup with sprout first and why.
8. Chart the students responses and progress of their plants over time.

Soils to choose from:
- Potting soil, Peat moss, Gardening soil, Compost from a compost pile, Sand, or Clay soil
Lesson Title: **The Ugly Vegetables**

**Grade Level:** Kindergarten  
**Time Length:** 30-40 minutes

**Source:** "The Ugly Vegetables" by Grace Lin

**Subjects Addressed:**
- [x] Reading  
- [ ] Writing  
- [ ] Spelling  
- [ ] Grammar  
- [ ] Math  
- [ ] Social Studies  
- [x] Science  
- [x] Art/Music  
- [ ] Physical Education  
- [ ] Peace Education  
- [ ] Social Skills  
- [ ] Other

**Objectives:**
1. Children will listen to the book, "The Ugly Vegetables".
2. Students will make labels for their garden plants.

**Standards:**
- R1.1 - Identify the front cover, back cover, and title page of a book.
- R1.2 - Follow words from left to right and from top to bottom on the printed page.
- R2.2 - Use pictures and context to make predictions about story content.
- R2.4 - Retell familiar stories.

**Materials Needed:**
1. Pre-cut rectangle paper  
2. Color crayons or markers  
3. Craft sticks  
4. Glue

**Activity Directions**  
Approximate Time Needed: 30-40 minutes
1. The teacher will read the book, "The Ugly Vegetables" by Grace Lin.
2. The students will explain the story to their partners.
3. The children will then make labels for their own garden plants.
Lesson Title: **Word Garden**

**Grade Level:** Kindergarten - 3rd grade  
**Time Length:** 30-45 minutes

**Source:** Sunflower, C. (1993). 75 Creative Ways to Publish Students Writing. New York: Scholastic Inc.

**Subjects Addressed:**
- [ ] Reading
- [X] Writing
- [X] Spelling
- [X] Grammar
- [ ] Math
- [ ] Social Studies
- [ ] Science
- [ ] Art/Music
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Other

**Objectives:**
1. Students will pick a subject and then describe the subject.
2. Students will make "word flowers" with the subjects and adjectives they have chosen.

**Standards:**
R1.18 - Describe common objects and events in both general and specific language.

**Materials Needed:**
1. Different colors of construction paper cut into petal shapes.
2. Green construction paper or tag board cut into leaf shapes and long rectangles for stems.
3. Yellow construction paper or tag board cut into large circles.
4. Glue or tape
5. A bold marker

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**Activity Directions**  
Approximate Time Needed: 30-45 minutes

1. Instruct students to pick a subject (noun), like bug, cloud, seed, etc.
2. Write the subject in the center of the yellow circle.
3. Ask the students to describe the subject with adjectives, adverbs, or verbs (Cloud = white, fluffy, floats, etc. Ideally 5-7 words
4. Write the describing words on five petals and two leaves, depending on the number of describing words.
5. Have students paste or tape the petals to their yellow "subject" circles, adding the stems and leaves, to create their word flower.
6. Hang flowers in a row to make a garden of words.
Lesson Title: The Hairy Egghead

Grade Level: K-6
Time Length: 30 minutes
Source: Crafts for Young Children, Evan-Moor EMC 720

Subjects Addressed:
☐ Reading ☑ Social Studies
☐ Writing ☑ Science
☐ Spelling ☑ Art/Music
☐ Grammar ☑ Physical Education
☐ Math ☑ Peace Education
☐ Other

Objectives:
1. Students will grow grass in an egg shell and decorate the project to look like a person.

Standards:
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4e - Students will communicate observations orally and through drawings.

Materials Needed:
1. Empty plastic egg shell half
2. Potting soil
3. Toilet paper rolls
4. Grass seed
5. Construction paper scraps
6. Permanent markers for face
7. Colored marking pens
8. 4" construction paper squares

Activity Directions Approximate Time Needed: 30 minutes
1. Pass out the toilet paper rolls and let students decorate it like a person (doesn’t matter if it is decorated like a man, woman, or child).
2. Each child will get half an egg and fill it with soil.
3. Each student will then add grass seeds and cover them with a bit more dirt.
4. Add a little water. Water it when needed.

Extensions:
Science: Use real egg shells and not fake ones. Discuss how egg shells have calcium in them and why that is important to the soil.
Math: Chart on a daily basis the progress of the grass growth. Chart number of grass blades or grass height.

Language Arts: Write short stories about a city filled with "hairy egghead people". Read aloud to the class.

Peace Education: Discuss the many uses of grass. Talk about the responsibility to care for plants or animals.
Lesson Title: **Planting Time**

Grade Level: Kindergarten  

Time Length: 10-20 minutes


**Subjects Addressed:**

- [ ] Reading
- [ ] Writing
- [ ] Spelling
- [ ] Grammar
- [ ] Math
- [ ] Social Studies
- [x] Science
- [ ] Art/Music
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Other

**Objectives:**
1. Students will sing the song "Planting Time".

**Standards:**
LS2.2 - Recite short poems, rhymes, and songs.

**Materials Needed:**
None

**Activity Directions**  
Approximate Time Needed: 10-20 minutes

1. Sing the song once for the students to hear the song and see the hand motions.
2. Practice hand motions and then sing the song together several times through.

**Planting Time**  
Sung to: "Row, Row, Row Your Boat"

Dig, dig, dig the earth  
(make digging motions)

Then you plant your seeds  
(pretend to drop seeds)

A gentle rain  
(flutter fingers down)

And bright sunshine  
(circle arms above head)

Will help your flowers grow  
(hold one arm parallel to the ground and move the other arm up behind it with fingers extended to represent a flower growing)
Lesson Title: **This is How We Plant the Seed**

**Grade Level:** Kindergarten - 1st  
**Time Length:** 5-15 minutes

**Source:** Patricia Couch

**Subjects Addressed:**

- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

**Objectives:**
1. Students will sing a planting song while either doing hand motions or planting seeds.

**Standards:**
LS2.2 - Recite short poems, rhymes, and songs.

**Materials Needed:**
Planting materials if desired

**Activity Directions**  
Approximate Time Needed: 5-15 minutes

1. This song is sung to the tune of "This is how to brush our teeth"
2. Students will first listen to the song while mimicking the hand motions.
3. Then students can join in the singing.

"This is How You Plant the Seed"
This is how we plant the seed
Plant the seed
Plant the seed
This is how we plant the seed
On planting day

This is how we water the seed
Water the seed
Water the seed
This is how we water the seed
Every other day

This is how we watch it grow
Watch it grow
Watch it grow
This is how we watch it grow
Each and every day
Unit Three:

Habitats
Habitats Unit Plan Overview

Grade Level: Kindergarten

Time Length: 1 month

Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Objectives:
1. Students will read the story "Inch By Inch"
2. Students will measure themselves and graph their heights.
3. Students will construct a worm home and observe a worm in that habitat.
4. Students will discuss habitats of common garden creatures.
5. Students will match each animal to its best indoor home.

Standards:
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
M&G 1.1 - Compare the length, weight, and capacity of objects by making direct comparisons with reference objects.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.

Assessments: Students will be able to explain what a worm needs to survive and describe his home.

Culminating Activity: Students will build a worm home and observe a worm in that habitat.

Topic Question: Where do we live? Where do other things live?

Experiential Activity: Students will build a habitat for a worm
Reading Connection: Students will read the story "Inch by Inch" by Leo Lionni

Writing Connection: Students can help the teacher write a story about a creature and his home.

MI Links:
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist

Reflection/Processing: Students will be able to reflect on what living creatures need for survival.

Lesson Overviews:

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inch By Inch</td>
<td>This is a great story about a worm who measures things.</td>
</tr>
<tr>
<td>2. How Tall Are You?</td>
<td>Measure students' height on an &quot;inchworm&quot; graph and make inchworm rulers.</td>
</tr>
<tr>
<td>3. Make Friends with a Worm</td>
<td>Make a home for worms so the students can observe and explore a worm.</td>
</tr>
<tr>
<td>4. Find Me A Home</td>
<td>Kids will explore habitats and humane treatment of garden creatures.</td>
</tr>
</tbody>
</table>
Lesson Title: **Inch By Inch**

**Grade Level:** Kindergarten - 2nd grade  
**Time Length:** 30 - 45 minutes


**Subjects Addressed:**
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education

**Objectives:**
1. Students will read the story "Inch By Inch" by Leo Lionni

**Standards:**
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.

**Materials Needed:**
1. "Inch by Inch" by Leo Lionni
2. Poster paper
3. Markers
4. Thick light green yarn (4-inch strands)
5. Movable eyes

**Activity Directions**  
Approximate Time Needed: 30 minutes - 45 minutes

Prior to the lesson
1. Cut yarn into 4 inch strands. Enough for each student or team to have one.
2. Glue tiny movable eyes to one end to make an inchworm.

The Lesson
1. Ask students if they know how long an inch is. Record answers.
2. Read the story "Inch by Inch" asking for story predictions along the way.
3. Ask students to summarize the story for their neighbors.
4. Pass out yarn inchworms
5. Ask students to use their inchworm to measure common items in the classroom.
6. Record results.
Lesson Title: **How Tall Are You?**

**Grade Level:** Kindergarten


**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Social Skills
- Other

**Objectives:**
1. Students will measure themselves and graph their heights.

**Standards:**
M&G 1.1 - Compare the length, weight, and capacity of objects by making direct comparisons with reference objects.

**Materials Needed:**
1. Crayons or markers
2. Glue stick or tape
3. Copies of name tags, graph sheet, and inchworm ruler (attached)

**Activity Directions** Approximate Time Needed: 45 minutes - 1 hour

**Before the lesson:**
1. Copy, cut, and color the measuring graph. Construct and tape to a wall. Laminate for future use.
2. Copy, cut, and color inchworm measuring tape. Tape or glue lengths together, making it long enough to measure the students. This will be the classroom tape.
3. Copy and cut out name tags.
4. Copy and cut "Today I am ... tall" cards.
5. Copy, cut and tape together inchworm rulers.

**Lesson:**
1. Students can color their name tag. Either the teacher or helper will write their name on their tag.
2. In pairs, the students can take turns measuring each other by standing with their back to the graph, and directly attaching the name tag to the graph.
3. Students may also take turns measuring with the tape.
4. Record name, height, and date on the "Today I am ... tall" cards. Students may color their card.
5. Pass out inchworm rulers and allow students to color them. Laminate them if desired.
6. Repeat throughout the year so the kids can compare their growth as the year progresses.
Lesson Title: **Make Friends with a Worm**

**Grade Level:** K - 2  
**Time Length:** 30 minutes or more

Tennessee: Incentive Publishing Inc. p. 166

**Subjects Addressed:**  
- [ ] Reading  
- [ ] Writing  
- [ ] Spelling  
- [ ] Grammar  
- [x] Math  
- [x] Science  
- [x] Social Studies  
- [ ] Art/Music  
- [ ] Physical Education  
- [x] Peace Education  
- [ ] Other  
- [ ] Social Skills  
- [ ] Other

**Objectives:**  
1. Students will construct a worm home and observe a worm in that habitat.

**Standards:**  
Sci 2c - Students know how to identify major structures of common plants and animals.  
Sci 4a - Students will observe common objects by using the five senses.  
Sci 4e - Students will communicate observations orally and through drawings.  
NS1.2 - Count, recognize, represent, name, and order a number of objects.

**Materials Needed:**  
1. Worms  
2. Glass jar or old aquarium  
3. Worm food: lettuce, dead leaves, grass clippings, bits of table food  
4. Black paper  
5. Tape  
6. Soil, sand, dead leaves  
7. Magnifying lens  
8. Water  
9. Drawing paper and pencils

**Activity Directions**  
Approximate Time Needed: 30 minutes or more

***The children can build the worm house or it can be built previously.***

**Building the House**
1. Each team of students will start with a glass container and add layers of soil, dead leaves and sand.  
2. Sprinkle water on each layer.  
3. Cover the outside of the container with dark paper so the worms will come close to the glass.  
4. Keep the paper on at all times unless observing the worms.
5. Add worms
6. Keep the container covered by punch small holes in the lid for air.
7. Feed small pieces of lettuce, dead leaves, grass clippings, or bits of table food. Take uneaten food out so it doesn’t spoil.
8. Lay the food on top of the soil and keep the soil moist by sprinkling on a little water every day.

Observing the Worms
1. Students can watch the worms move around the dirt.
2. Students can take the worms out and use a magnifying lense to find the satae (worm’s feet)
3. Watch the worms squeeze and contract their muscles.
4. Draw a picture of how the earthworm looks when they move.
5. Try to find the worm’s head, eyes, ears?? Does it have any?
6. Count worm segments.
7. Measure the worms
8. Experiment: Worms feel vibrations. Try playing music or tapping on the ground to see if the worms come to the surface.
Lesson Title: **Find Me A Home**

**Grade Level:** Kindergarten - 2nd grade  
**Time Length:** 20 minutes  

**Subjects Addressed:**
- ❌ Reading  
- ✔️ Writing  
- ❌ Spelling  
- ❌ Grammar  
- ❌ Math  
- ✔️ Science  
- ❌ Social Studies  
- ❌ Art/Music  
- ❌ Physical Education  
- ❌ Peace Education  
- ❌ Social Skills  
- ❌ Other

**Objectives:**
1. Students will discuss habitats of common garden creatures.  
2. Students will match each animal to its best indoor home.

**Standards:**
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.

**Materials Needed:**
1. "Find Me A Home" worksheet  
2. Crayons or markers  
3. Scissors (optional)  
4. Glue or tape

**Activity Directions**  
**Approximate Time Needed:** 20 minutes  
1. The teacher will discuss what creatures we find in a garden.  
2. Let students suggest what all creatures need if they are brought inside to be studied (food, water, shelter, air)  
3. Talk about the different homes found on the worksheet.  
4. Using the worksheet, have students color, cut, and glue the garden critters into their appropriate homes.

**Extensions:**
Science - Build small enclosures and bring creatures in for the day to be studied and then release them. (worms, ants, pillbugs, ladybugs, etc.)

Language Arts - Students can select one critter and his home to write a story about.

Art - Students can illustrate their stories.
Critter Home Information
Two liter plastic bottle home - should include soil and a cupful of water - can house a butterfly, ant, or snail.
Jar home - should include a branch, gravel, and water - can house butterfly, lizard, ant, or snake.
Milk carton home - should include oatmeal and a slice of potatoe - can house mealworms or isopods.
Plastic shoebox/aquarium home - should include water and a rock - can house fish, tadpole, or turtle.
Unit Four:

Cultural Food and Celebrations
Cultural Celebrations Unit Plan Overview

Grade Level: Kindergarten

Time Length:

Subjects Addressed:

- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Objectives:
1. Students will bring a vegetable from their family heritage.
2. The class will write a poem about the vegetables.

Standards:
Math A&F 1.0 - Sort and classify objects.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
LS2.2 - Recite short poems, rhymes, and songs.
HSS K1 - Follow rules, such as sharing and taking turns, and know the consequences of breaking them.

Assessments:

Culminating Activity:

Topic Question: What foods do we use for our celebrations?

Experiential Activity:

Reading Connection:

Writing Connection: The class will write a poem about the vegetables from their heritage.

MI Links:

- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist

Reflection/Processing:

Lesson Overviews:

Lesson Title    Description
1. Vegetable Salad  Students bring a vegetable from their heritage to school.
Lesson Title: **Vegetable Salad**

Grade Level: Kindergarten - 3rd grade  
Time Length: 30 minutes

Source: Dllly, D., Sassman, C. Fun Filled 5- to 10- Minute Social Studies Activities for Young Learners (Grades PreK-1), p. 9

Subjects Addressed:
- [x] Reading  
- [x] Writing  
- [ ] Spelling  
- [ ] Grammar  
- [x] Math  
- [x] Social Studies  
- [ ] Science  
- [x] Art/Music  
- [ ] Physical Education  
- [ ] Peace Education  
- [ ] Social Skills  
- [ ] Other

Objectives:
1. Students will bring a vegetable from their family heritage.
2. The class will write a poem about the vegetables.

Standards:
Math A&F 1.0 - Sort and classify objects.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
LS2.2 - Recite short poems, rhymes, and songs.
HSS K1 - Follow rules, such as sharing and taking turns, and know the consequences of breaking them.

Materials Needed:
1. Plastic knife (for teacher only)
2. Vegetables brought to class from home each student
3. Flip chart paper
4. Markers

Activity Directions  
Approximate Time Needed: 30 minutes

***Send home a letter a week in advance that this activity will be taking place, and if there is a vegetable that the child is allergic to, to please note.

1. Have the students bring their chosen vegetable to class.
2. Students will talk about their vegetable and why they brought it.
3. Together on flip chart paper, write a poem. Be sure to mention the vegetable and who brought it.
4. Practice reading the poem throughout the day.
5. If desired, make a salad from the vegetables for the class to try.

Extensions:
Math: 1. Count the number of vegetables that were brought. 2. Sort and classify the objects by color, by size, or by family
Unit Five:

Nutrition
Nutrition Unit Plan Overview

Grade Level: Kindergarten

Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Social Studies
- Newspapers

Objectives:
1. Students will be able to recite the song, "I'm a Little Apple".
2. Students will learn that common foods may be served in a variety of ways.
3. Students will predict how many peas are in a pod.
4. Students will determine which objects are heavy or light.
5. Students will recognize that some of our food comes from seeds, and is edible.
6. Students will demonstrate different types of sorting.
7. Students will compare different vegetables and fruits.

Standards:
Math A&F 1.0 - Sort and classify objects.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
NS 3.1 - Recognize when an estimate is reasonable.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.

Assessments:

Culminating Activity:

Topic Question: What foods are good for us?

Experiential Activity:

Reading Connection:

Writing Connection:

MI Links:
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist
- Interpersonal

136
Reflection/Processing:

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I'm A Little Apple</td>
<td>Students will learn about apples and sing an apple song.</td>
</tr>
<tr>
<td>2. Peas in a Pod</td>
<td>Students will make predictions about how many peas are in a pod.</td>
</tr>
<tr>
<td>3. Light and Heavy</td>
<td>Students compare vegetables based on their weight.</td>
</tr>
<tr>
<td>4. Seeds to Eat</td>
<td>Students will learn about seeds that are edible.</td>
</tr>
<tr>
<td>5. Garden Sorting</td>
<td>Students will use produce to sort, compare, and describe.</td>
</tr>
</tbody>
</table>
Lesson Title: **I'm A Little Apple**

**Grade Level:** Kindergarten  
**Time Length:** 30 minutes


**Subjects Addressed:**
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Science  
- Social Studies  
- Art/Music  
- Physical Education  
- Peace Education

**Objectives:**
1. Students will be able to recite the song, "I'm a Little Apple".
2. Students will learn that common foods may be served in a variety of ways.

**Standards:**
- Math A&F 1.0 - Sort and classify objects.
- NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.
- Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. Apples of various sizes and colors (some cut, some whole)  
2. Apple sauce  
3. Dried apple chips

**Activity Directions**  
Approximate Time Needed: 30 minutes
1. The teacher will sing the song first so the kids learn the words and tune.
2. Students join in.
3. Discuss the various ways we might see apples (store, trees)
4. Discuss the different forms an apple can take (apple sauce, apple slices, pie, apple chips)
5. Enjoy a snack of apple products.

**Lyrics**
Tune of: "I'm a Little Teapot"
I'm a little apple, short and round
I make a crunchy, munchy sound.
If you bite into me, you will see
I'm delicious as can be!

Extensions:
1. Visit Oak Glen to pick apples
2. Take a fieldtrip to Riley's Farm in Oak Glen to learn about apples
3. Sort the apples by color, taste, shape, size, etc.
4. Count the apples
Lesson Title: **Peas in a Pod**

Grade Level: Kindergarten  
Time Length: 20 minutes

Source: Grace Granados at Renu Hope Foundation (2003)

**Subjects Addressed:**

- [ ] Reading  
- [ ] Writing  
- [ ] Spelling  
- [ ] Grammar  
- [x] Math  
- [ ] Social Studies  
- [ ] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [ ] Peace Education  
- [ ] Social Skills  
- [ ] Other

**Objectives:**
1. Students will predict how many peas are in a pod.

**Standards:**
NS 3.1 - Recognize when an estimate is reasonable.

**Materials Needed:**
1. Pea Pods

**Activity Directions**  
Approximate Time Needed: 20 minutes
1. Students will predict how many peas are in one pod.
2. Children (with help as needed) will open the pods.
3. Students will count the peas in their pods to see if their prediction was correct.
Lesson Title: **Light and Heavy**

Grade Level: Kindergarten  
Time Length: 30 minutes

Source: Month by Month Preschool Almanac, Scholastic, p. 98

**Subjects Addressed:**

- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education

**Objectives:**
1. Children will determine which objects are heavy or light

**Standards:**
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.

**Materials Needed:**
1. Vegetables or fruits

**Activity Directions**  
Approximate Time Needed: 30 minutes

1. Explain the difference between light and heavy.
2. As the teacher presents each vegetable, discuss and name it. Do not tell if it is light or heavy.
3. Group students in groups of 3-4
4. Each group gets four objects.
5. The teacher will call the name of two objects.
6. Have one student in the group hold up to objects and identify which is heavier or lighter.
7. Switch until every student in the team holds those two objects.
8. Have a discussion to hear student answers and tell them which one does weigh more.
9. Continue with different combinations of objects.
10. Try having students use a scale to judge the weight of each object.
Lesson Title: **Seeds to Eat**

**Grade Level:** Kindergarten  
**Time Length:** 20 minutes


**Subjects Addressed:**
- [ ] Reading  
- [ ] Writing  
- [ ] Spelling  
- [ ] Grammar  
- [x] Math  
- [ ] Social Studies  
- [ ] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [ ] Peace Education  
- [ ] Social Skills  
- [ ] Other

**Objectives:**
1. Students will recognize that some of our food comes from seeds, and is edible.

**Standards:**
Math A&F 1.0 - Sort and classify objects.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.

**Materials Needed:**
1. Corn on the cob  
2. Wheat (flour)  
3. Peas in the pod  
4. Green Beans  
5. Shelled Peanuts  
6. Dried pumpkin or sunflower seeds  
7. Plates

**Activity Directions** Approximate Time Needed: 20 minutes

***Prior to the lesson, ask parents about any food allergies.

1. Discuss with students what a seed is.  
2. Ask the kids if they have ever eaten any seeds.  
3. Introduce the materials.  
4. Allow students to sample the seeds that are edible.

**Extensions:**
Math - count and/or classify the seeds into groups based on size or color.
Lesson Title: **Garden Sorting**

Grade Level: Kindergarten  
Time Length: 30 minutes  


**Subjects Addressed:**
- [ ] Reading  
- [ ] Writing  
- [ ] Spelling  
- [ ] Grammar  
- [x] Math  
- [ ] Social Studies  
- [ ] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [ ] Peace Education  
- [ ] Social Skills  
- [ ] Other

**Objectives:**
1. Students will demonstrate different types of sorting.  
2. Students will compare different vegetables and fruits.

**Standards:**
- Math A&F 1.0 - Sort and classify objects.
- NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.
- Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. Various vegetables and/or fruits.

**Activity Directions** Approximate Time Needed: 30 minutes  
*** Grouping can be two large groups, pairs or individual.

1. Hand out several different fruits and/or vegetables for the kids to examine.  
2. The teacher will ask the students what are some of the different ways the produce can be sorted.  
3. The students will then sort the produce by size, color, texture, shape, smell, etc.  
4. The teacher will then cut open some of the produce so the kids can search for seeds, touch, smell, taste if desired.  
5. The class will then talk about the differences between the produce and the different ways it was sorted.
Unit Six:

Food Preparation
Cooking Unit Plan Overview

Grade Level: Kindergarten

Time Length: 1 month

Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Objectives:
1. Students will learn about germs and the importance of washing our hands and produce.
2. Students will read the book, "Growing Vegetable Soup" and discuss how vegetables are nutritious.
3. The class will make a vegetable soup. (Optional)
4. Students will make their own salads.
5. Students will eat a healthy snack made from garden vegetables.
6. Students will experiment with how the taste of a food can be changed by changing its form.
7. Students will make smoothies.
8. Students will make a sneezing bunny to help them learn to cover their mouth while sneezing.
9. Students will make a carrot salad.

Standards:
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
W1.1 - Use letters and phonetically spelled words to write about experiences, stories, people, objects, or events.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
NS2.0 - Students understand and describe simple additions and subtractions.
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
Sci 1b - Students know water can be a liquid or a solid and can be made to change back and forth from one form to the other.
Sci 1c - Students know water left in an open container evaporates but water in a closed container does not.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4b - Describe the properties of common objects
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.

**Assessments:** Students will use good manners while preparing and eating food.

**Culminating Activity:** Students will make a variety of foods to practice their cooking and manners.

---

**Topic Question:** What are some simple ways everyone can be involved in cooking our meals?

**Experiential Activity:** Students will be involved in the cooking of a soup, salad, and/or smoothie.

**Reading Connection:** "Growing Vegetable Soup" by Lois Ehlert. Also can use, "Stone Soup".

**Writing Connection:** Students can write the directions for making either a salad or a soup.

**MI Links:**
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist

**Reflection/Processing:** Students should be able to list the various ways we prepare food, cook food, and use good table manners.

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**Lesson Overviews:**

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wash Our Fruits &amp; Veggies</td>
<td>Students learn about germs and washing.</td>
</tr>
<tr>
<td>2. Growing Vegetable Soup</td>
<td>Students read the book &quot;Growing Vegetable Soup&quot; and then make a class soup.</td>
</tr>
<tr>
<td>3. Salad 'n' Sack</td>
<td>Students make a small salad to eat.</td>
</tr>
<tr>
<td>4. Fruit Smoothies</td>
<td>Students will experience the difference between whole fruit and a smoothie.</td>
</tr>
<tr>
<td>5. Sneezy Bunny</td>
<td>Students will make a sneezing bunny to remind them of their manners.</td>
</tr>
<tr>
<td>6. Carrot Salad with Ants</td>
<td>Students will make a carrot salad.</td>
</tr>
</tbody>
</table>
Lesson Title: **Wash Our Fruits and Veggies**

**Grade Level:** Kindergarten  
**Time Length:** 20 minutes

**Source:** Learning About Plants, Evan-Moor Educational Publishers, p. 67

**Subjects Addressed:**
- [ ] Reading
- [ ] Writing
- [ ] Spelling
- [ ] Grammar
- [X] Math
- [ ] Social Studies
- [X] Science
- [ ] Art/Music
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Other

**Objectives:**
1. Students will learn about germs and the importance of washing our hands and produce.

**Standards:**
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- NS2.0 - Students understand and describe simple additions and subtractions.
- Sci 2c - Students know how to identify major structures of common plants and animals.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.

**Materials Needed:**
1. Fruits and Vegetables
2. Water
3. Soap
4. Large Bowl

---

**Activity Directions**  
Approximate Time Needed: 20 minutes

1. Discuss what germs are with the whole class.
2. Talk about the importance of washing our hands and produce.
3. Introduce the fruits and vegetables and have the children name them.
4. Each student or pair of students will then take one fruit or vegetable to the sink and wash it off.
5. The students will then place their washed produce into the bowl.
6. Students will then wash their own hands.

**Extensions:**

**Science** - Students can use their five senses to describe the produce, compare or sort the objects and identify the major structures of the plants.

**Math** - Students can count the number of produce, practice adding two groups of produce, subtracting the produce, or counting the slices once the produce has been cut.
Lesson Title: **Growing Vegetable Soup**

Grade Level: Kindergarten  
Time Length: 20 - 45 minutes


Subjects Addressed:

- Reading
- Social Studies
- Writing
- Science
- Spelling
- Art/Music
- Grammar
- Physical Education
- Math
- Peace Education

Objectives:
1. Students will read the book, "Growing Vegetable Soup" and discuss how vegetables are nutritious.
2. The class will make a vegetable soup. (Optional)

Standards:
- R1.1 - Identify the front cover, back cover, and title page of a book.
- R1.2 - Follow words from left to right and from top to bottom on the printed page.
- R2.2 - Use pictures and context to make predictions about story content.
- R2.4 - Retell familiar stories.
- Sci 1b - Students know water can be a liquid or a solid and can be made to change back and forth from one to the other.
- Sci 1c - Students know water left in an open container evaporates but water in a closed container does not.
- Sci 4e - Students will communicate observations orally and through drawings.

Materials Needed:
1. "Growing Vegetable Soup" by Lois Ehlert

Optional Materials - Needed only if making the soup
1. Assorted vegetables
2. Seasonings, herbs and stock cubes
3. A large pot or pan
4. Cook utensils
5. Access to a stove range
6. Bowls and spoons for everyone

**Activity Directions**  Approximate Time Needed: 20 minutes - 45 minutes
1. Read "Growing Vegetable Soup". Be sure to talk about print concepts and make story predictions.
2. Students can retell parts of the story to other students.
3. Discuss what is nutritious and why we need to eat healthy. Discuss the value of vegetables.
4. Let the class make suggestions as to which vegetables they would like to include in a class soup.
5. Students can draw their favorite part of the story OR draw the steps involved in making soup.

OPTIONAL: Make the class soup
1. Students can wash the vegetables and the teacher will cut the vegetables.
2. Students can help add the vegetables to the pot while the teacher adds the seasonings and discusses why we need spices.
3. Cook the soup according to the attached recipe.
4. Discuss how water boils and talk about evaporation.
4. Eat the soup.
Lesson Title: **Salad 'n' Sack**

Grade Level: Kindergarten - 2nd grade  
Time Length: 30 - 45 minutes

Source: Teaching Young Children (Learn While Having Fun)

Subjects Addressed:
- [ ] Reading  
- [x] Writing  
- [x] Spelling  
- [x] Grammar  
- [x] Math  
- [ ] Social Studies  
- [ ] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [ ] Peace Education  
- [x] Social Skills  
- [ ] Other

Objectives:
1. Students will make their own salads.
2. Students will eat a healthy snack made from garden vegetables.

Standards:
- W1.1 - Use letters and phonetically spelled words to write about experiences, stories, people, objects, or events.
- NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
- Sci 4e - Students will communicate observations orally and through drawings.

Materials Needed:
1. Salad Greens: lettuce, spinach  
2. Shredded carrots  
3. Cherry tomatoes  
4. Cucumber slices  
5. Croutons  
6. Dressing  
7. Self-close plastic bags  
8. Small plates or bowls and forks

**Activity Directions**  Approximate Time Needed: 30 minutes - 45 minutes
1. Prior to the lesson, put all salad ingredients out on the table.  
2. Students will each receive 1 plastic bag.  
3. Students will select salad ingredients to place into their bag.  
4. Close the bag and shake it to combine the ingredients.  
5. The teacher will then add dressing to the bag.  
6. Close the bags and shake again to combine.
7. Empty the salad into bowls or a plate and enjoy.

Extensions:
Language Arts - The students can use chart paper to write down the directions (use pictures) for making the salad.

Math - Students can chart how many students chose each ingredient, (ie 9 took tomatoes but 2 took cucumbers). Students can also predict which ingredient will be the most popular and compare and contrast the ingredients.
Lesson Title: **Fruit Smoothies**

**Grade Level:** Kindergarten - 2nd grade  
**Time Length:** 30 minutes  

Subjects Addressed:  
- Reading  
- Social Studies  
- Writing  
- Science  
- Spelling  
- Art/Music  
- Grammar  
- Physical Education  
- Math  
- Peace Education  

Objectives:  
1. Students will experiment with how the taste of a food can be changed by changing its form.  
2. Students will make smoothies

Standards:  
Sci 1b - Students know water can be a liquid or a solid and can be made to change back and forth from one form to the other.  
Sci 4e - Students will communicate observations orally and through drawings.

Materials Needed:  
1. Blender  
2. Cups  
3. Cutting board  
4. Knife  
5. 1 pint strawberries, raspberries apricots, or cherries  
6. Bananas  
7. 1 Lemon  
8. 1 tablespoon superfine sugar  
9. 1/2 cup plain yogurt  
10. 2/3 cup milk

**Activity Directions**  
Approximate Time Needed: 30 minutes  
***Check for food allergies first!***  
1. Hull, wash, and dry the strawberries.  
2. Peel and slice the banana and put it into the blender with a squeeze of lemon.  
3. Add strawberries, sugar, yogurt, and milk  
4. Blend for 1 minute until smooth and frothy. Enjoy!  
5. Allow students to sample the smoothie and whole fruits.  
6. Ask them to compare the taste differences and explain why they taste different from each other.
Lesson Title: **Sneezing Bunny**

Grade Level: Kindergarten  
Time Length: 30 minutes


Subjects Addressed:
- □ Reading  
- □ Writing  
- □ Spelling  
- □ Grammar  
- □ Math  
- □ Social Studies  
- □ Science  
- □ Art/Music  
- □ Physical Education  
- □ Peace Education  
- □ Social Skills  
- □ Other

Objectives:
1. Students will make a sneezing bunny to help them learn to cover their mouth while sneezing.

Standards:
none

Materials Needed:
1. Paper plates  
2. Markers or crayons  
3. Construction paper, white and pink  
4. Pipe cleaners  
5. Scissors  
6. Stapler  
7. Tissues

**Activity Directions**  
Approximate Time Needed: 30 minutes
1. Have students make a bunny face on a paper plate.  
2. Students will then make and cut out ears and a paw.  
3. Staple the ears and whiskers (pipe cleaners) onto the plate.  
4. Staple a tissue and the paw to the mouth, making sure the tissue is in between the two, as if the paw is holding the tissue in place.
Lesson Title: **Carrot Salad with Ants**

**Grade Level:** Kindergarten  
**Time Length:** 20 minutes  
**Source:** Killingsworth, M. (1968) Sharing Recipes. Compiled by Mary & Lucy with Love

**Subjects Addressed:**  
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education  
- Social Skills  
- Other

**Objectives:**  
1. Students will make a carrot salad.

**Standards:**  
NS1.2 - Count, recognize, represent, name, and order a number of objects.  
Sci 4a - Students will observe common objects by using the five senses.  
Sci 4b - Describe the properties of common objects

**Materials Needed:**  
1. Grated carrots  
2. 1/2 can Crushed pineapples  
3. Raisins  
4. 1/4 cup Mayonnaise  
5. 1/2 or 1 tbsp. Sugar  
6. Pineapple juice  
7. Measuring cups and spoons  
8. Mixing bowl  
9. Large spoon to mix with

**Activity Directions**  
Approximate Time Needed: 20 minutes  
1. Grate 3-4 carrots and add to bowl  
2. Toss carrots and crushed pineapple  
3. Mix mayonnaise and sugar together  
4. If too dry, add 1/2 to 1 tsp. of pineapple juice  
5. Mix all together and top with raisins  
6. Students can help with making the salad or it can be premade  
7. Each student can describe their salad as they eat it.

**Extension:**  
Math - Count the number of raisins in the student’s salad.
Unit Seven:

Taking Care of the World and All Its People
Protecting the World Unit Plan Overview

Grade Level: Kindergarten
Time Length: 1 month

Subjects Addressed:

- [ ] Reading
- [ ] Writing
- [ ] Spelling
- [ ] Grammar
- [ ] Math
- [ ] Social Studies
- [ ] Science
- [ ] Art
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Newspapers

Objectives:

1. Students will discuss trees and jobs that involve trees.

Standards:

R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
R1.18 - Describe common objects and events in both general and specific language.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

Assessments:

Culminating Activity:

Topic Question: In what ways can we protect the world around us?

Experiential Activity:

Reading Connection:

Writing Connection:

MI Links:

- [ ] Linguistic
- [ ] Logical-Mathematical
- [ ] Visual-Spatial
- [ ] Musical
- [ ] Bodily-Kinesthetic
- [ ] Interpersonal
- [ ] Intrapersonal
- [ ] Naturalist
### Reflection/Processing:

### Lesson Overviews:

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VolunTREErs</td>
<td>Students learn about the value of trees</td>
</tr>
</tbody>
</table>
Lesson Title: **VolunTREErs**

**Grade Level:** Kindergarten  
**Time Length:** 30 - 40 minutes

**Source:**  

Subjects Addressed:  
- Reading  
- Social Studies  
- Writing  
- Science  
- Spelling  
- Art/Music  
- Grammar  
- Physical Education  
- Math  
- Peace Education  
- Other

Objectives:  
1. Students will discuss trees and jobs that involve trees.

Standards:  
R1.1 - Identify the front cover, back cover, and title page of a book.  
R1.2 - Follow words from left to right and from top to bottom on the printed page.  
R2.2 - Use pictures and context to make predictions about story content.  
R2.4 - Retell familiar stories.  
R1.18 - Describe common objects and events in both general and specific language.  
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.  
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.  
Sci 2c - Students know how to identify major structures of common plants and animals.  
Sci 4a - Students will observe common objects by using the five senses.  
Sci 4d - Students will compare and sort common objects by one physical attribute.  
Sci 4e - Students will communicate observations orally and through drawings.  
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

Materials Needed:  
1. "A Tree Can Be ..." by J. Nayer  
2. "Treechie the Teaching Tree" Coloring Book  
3. Paper  
4. Crayons or markers

Activity Directions  
Approximate Time Needed: 30 - 40 minutes

1. Read "A Tree Can Be ..."
2. Discuss how the students feel about trees, any experiences they've had (favorite tree to climb).
3. Talk about the different ways trees help us or the uses for trees.
4. Share "Treechie" with the class. Talk about arborists and urban foresters.
5. Discuss ways to be a "volunTREEr", ways to help their community and environment.

Extensions:
Outdoor Education:
1. Visit some of the trees around campus and discuss their observations.
2. Compare and contrast the different trees on campus.
Unit Eight:

Celebrations
Celebrations Unit Plan Overview

Grade Level: Kindergarten
Time Length: 2 months

Subjects Addressed:
- ✔ Reading
- ✔ Writing
- ☐ Spelling
- ☐ Grammar
- ✔ Math
- ✔ Social Studies
- ☐ Science
- ☐ Art
- ✔ Physical Education
- ✔ Peace Education
- ✔ Social Skills
- ☐ Newspapers

Objectives:
1. Students will use their sense of touch to determine the mystery objects.
2. Students will make a necklace out of carrot slices.
3. Students will paint art pictures using stamps made from vegetables.
4. Students will make a sunflower art project using paint.
5. Students will discuss caterpillars and their habitats.
6. Students will create caterpillars using a variety of materials.
7. Students will hold a garden party.

Standards:
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
LS2.2 - Recite short poems, rhymes, and songs.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

Assessments: none
Culminating Activity: A Garden Party filled with garden songs and knowledge.

Topic Question: How can we celebrate the garden?

Experiential Activity: The Garden Party

Reading Connection: Read "The Very, Hungry Caterpillar" by Eric Carle. Reread favorite stories about the garden

Writing Connection: Students will write a story about a caterpillar.

MI Links:
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist

Reflection/Processing: Reflect on what the students have learned about manners, gardening, and nutrition. Revisit poems and songs from other units.

Lesson Overviews:
Lesson Title | Description |
--- | --- |
1. The Mysterious Feely Box | Students enjoy a sensory box filled with garden items. |
2. Dazzling Carrot Necklace | Students make necklaces out of carrot slices |
3. Veggie Stamping | Students make art from stamps made out of veggies |
4. Sunny Sunflower | Students will make sunflower artwork. |
5. Springtime Creepy Crawlers | Students will make caterpillars from egg cartons. |
6. Garden Party | Students enjoy a garden party to celebrate the garden. |
Lesson Title: The Mysterious Feely Box

Grade Level: Kindergarten  Time Length: 15 minutes to prep

John Wiley & Sons

Subjects Addressed:
- ☐ Reading
- ☐ Writing
- ☐ Spelling
- ☐ Grammar
- ☐ Math
- ☑ Science
- ☐ Social Studies
- ☐ Art/Music
- ☐ Physical Education
- ☐ Peace Education
- ☐ Social Skills
- ☐ Other

Objectives:
1. Students will use their sense of touch to determine the mystery objects.

Standards:
Sci 4a - Students will observe common objects by using the five senses.
Sci 4e - Students will communicate observations orally and through drawings.

Materials Needed:
1. Corrugated cardboard box
2. Utility knife
3. Plain paper to wrap the box
4. Glue and tape
5. Old seed catalogs
6. A cut-off pant leg or sleeve, heavy thread and needle (optional)
7. Things found in a garden: seeds, leaves, branches, fruits, etc.

Activity Directions  Approximate Time Needed: 15 minutes to prep
1. Tape the empty box closed and wrap it with plain paper.
2. Cut a 3 1/2 inch diameter hole out of the center on one side of the box.
3. Decorate all sides of the box with a collage of vegetable and flower pictures.
4. If desired, attach an old pant leg to the hole by sewing through the cardboard with a big needle and heavy thread. This makes the contents more secretive.
5. Fill the box with seeds, leaves, or other garden items.
6. Students will individually place their hand in the box and describe what they feel and try to determine what the objects are.
Lesson Title: **Dazzling Carrot Necklace**

**Grade Level:** Kindergarten  
**Time Length:** 45 minutes - 1 hour

**Source:** Ocone, L & Pranis, E., (1990) The National Gardening Association Guide to Students' Gardening  
John Wiley & Sons

**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education

**Objectives:**
1. Students will make a necklace out of carrot slices.

**Standards:**
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.  
NS1.2 - Count, recognize, represent, name, and order a number of objects.  
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.

**Materials Needed:**
1. Carrots  
2. Heavy thread  
3. Darning needles  
4. Knife

**Activity Directions**  
Approximate Time Needed: 45 minutes - 1 hour
1. Wash the carrots and then slice them about 1/4 inch thick.  
2. Thread your needle long enough to go around a head, plus some extra.  
3. Group students in pairs to work together.  
4. Students will thread carrot slices onto the thread by pushing the needle into the center of each slice.  
5. Once they have strung enough carrots to go around their head, tie the ends together to form a necklace.  
6. Lay your necklace on a piece of paper in a dark place to dry, making sure none of the carrots touch each other. As the carrots harden and dry, they turn into wrinkled beads. The drying process takes about 1 week.
Extensions:
1. Have a year-end Garden Party. Students can dress up and wear their necklaces, sing garden songs, etc.

Math - Count the number of carrot slices on each necklace. Chart results and determine whose necklace has the most, is the longest, the heaviest, the lightest, etc.
Lesson Title: **Veggie Stamping**

Grade Level: Kindergarten - 6th grade  
Time Length: 20-40 minutes

Source: P.B.S. Channel: "A Place of Our Own" on channel 8 on the Time Warner Cable in 2004

Subjects Addressed:
- [ ] Reading  
- [ ] Writing  
- [ ] Spelling  
- [ ] Grammar  
- [ ] Math  
- [ ] Social Studies  
- [ ] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [ ] Peace Education  
- [ ] Social Skills  
- [ ] Other

Objectives:
1. Students will paint art pictures using stamps made from vegetables.

Standards:
none

Materials Needed:
1. Tempera paint in different colors  
2. Carrots & potatoes with cut out shapes  
3. Paper  
4. Carrot leaves

**Activity Directions** Approximate Time Needed: 20-40 minutes

***Cut out shapes on the carrots and potatoes to use as stampers***

1. Give each child a paper  
2. Set out different color paints  
3. Show students how to use the stampers and leaves to make designs  
4. Let the students start painting.

Extensions:
1. Try letting the kids make stationary for their parents. Then they write a letter on the stationary when it is dry.  
2. Display the art during your Garden Party
Lesson Title: **Sunny Sunflower**

Grade Level: Kindergarten  
Time Length: 30 - 40 minutes

Source:  Arts and Crafts for All Seasons, The Mailbox, pg. 91

Subjects Addressed:  
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

Objectives:  
1. Students will make a sunflower from a paper plate and paint.

Standards:  
none

Materials Needed:  
1. 1 paper plate per child, 7" in diameter
2. 1/4 sheet of green construction paper.
3. Yellow and brown tempera paints
4. Pencils and scissors
5. Paintbrushes

**Activity Directions** Approximate Time Needed: 30-40 minutes

1. Pass out materials to the students.
2. Dip the palm of one hand into the yellow paint and paint all around the outer rim of the paper plate.
3. Wash hands and get brown paint and paintbrushes.
4. Take the brown paint and have children dip their fingers and press the finger against the plate. Repeat often.
5. When dry, draw a leaf of construction paper, cut out, and glue the leaf to the back of the plate.

Extensions:
1. Create songs to sing about sunflowers.
2. Present at the garden party.
Lesson Title: **Springtime Creepy Crawlers**

Grade Level: Kindergarten - 3rd grade  
Time Length: 1 hour

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Subjects Addressed:  
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education

Objectives:  
1. Students will discuss caterpillars and their habitats.  
2. Students will create caterpillars using a variety of materials.

Standards:  
R1.1 - Identify the front cover, back cover, and title page of a book.  
R1.2 - Follow words from left to right and from top to bottom on the printed page.  
R2.2 - Use pictures and context to make predictions about story content.  
R2.4 - Retell familiar stories.  
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.  
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.

Materials Needed:  
1. "The Very, Hungry Caterpillar" by Eric Carle  
2. Empty cardboard egg cartons. One dozen size will provide for 2 children.  
3. Paints and paintbrushes, markers and crayons  
4. Scissors  
5. Hole Punch  
6. Pipe cleaners, cut in half  
7. Miscellaneous materials (fabric scraps, yarn, cotton balls, construction paper)  
8. Newspaper

**Activity Directions** Approximate Time Needed: 1 hour  
1. Read "The Very, Hungry Caterpillar" by Eric Carle  
2. The teacher will cut the top from the cartons and discard. Cut the bottom of the carton in half lengthwise, creating two bodies.  
3. Spread newspaper across the craft area.
4. Punch holes in the head and along either side of the body for the antennae and legs of the creepy crawler.
5. The children can then decorate the raised part of their cartons.
6. Wait until dry, and then have the students thread pipe cleaners through the body. Bend the ends or use tape to secure. Make the legs into different shapes if desired.
7. Discuss with the class where caterpillars are found, what they eat, where they live, and what they become!

Extensions:
1. Try turning your caterpillars into puppets and creating a puppet show!

Some Ideas To Use With This Book

STORY SEQUENCE: Provide a long piece of yarn, a hole punch, and patterns of the different foods (apple, pear, plum, strawberry, orange, piece of chocolate cake, ice cream cone, pickle, Swiss cheese, salami, lollipop, piece of cherry pie, sausage link, cupcake, watermelon) which appear in this story. Students will color, cut, and punch a hole in each food. Then they may sequence the story by putting the food on the string as they appear in the story. You may want to have your students do this while you read the story for the second time or you may wish for your students to try this after you have read the story.

PHONICS: Use the patterns of the foods above. Make cards with the beginning letters (a, p, p, s, o, c, i, p, s, l, s, c, w) of the foods. Have students match. To make this more difficult. Place your food patterns in a pocket chart, say a sound, and then pick a student to come up and take one food item that matches the given sound!

MATH: Provide each group of students eight caterpillars of various sizes (make out of construction paper) an 8 index cards for each caterpillar showing the inches of one of the caterpillars. Have the students work together to measure the caterpillars and then match the caterpillar to the correct index card. Walk around the room and check each groups responses. When finished have each student place all the materials from this activity in a ziplock bag. Collect each set and keep for future use.

MATH/GRAPHING: Prepare a graph with the foods the caterpillar ate. Give each student a small sticky note. Have them write their name on the sticky note. Then have the students place their sticky note on the area of the graph that shows their favorite food. When everyone has placed their sticky note on the graph - ask graph questions: What food was chosen the most/least? How many apples were chosen?...

SCIENCE: Use patterns of the life cycle of a butterfly and have students practice sequencing them. (little egg on leaf, little caterpillar on leaf, larger caterpillar on ground, very large caterpillar on big leaf, other leaves nearby have been eaten, caterpillar building a cocoon, caterpillar inside of a cocoon, butterfly emerging from a cocoon, and butterfly flying away)
Lesson Title: **Garden Party**

Grade Level: Kindergarten

Time Length: 45 minutes

Source: none

**Subjects Addressed:**

- ✔ Reading
- ✔ Writing
- ✔ Spelling
- ✔ Grammar
- ✔ Math
- ✔ Social Studies
- ✔ Science
- ✔ Art/Music
- ✔ Physical Education
- ✔ Peace Education
- ✔ Social Skills
- ❏ Other

**Objectives:**

1. Students will enjoy a garden party to celebrate the school year.

**Standards:**

R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
LS2.2 - Recite short poems, rhymes, and songs.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

**Materials Needed:**

Any art projects, song lyrics, etc. that you want to include.
Activity Directions

Approximate Time Needed:
1. Review the stories that you read during the year, poems and songs to include in the party.
2. Take students outside with their art projects.
3. Celebrate by opening the party with singing a planting song.
4. Challenge students to classify garden objects.
5. Show off the art projects from the year.
6. Read your favorite story again.
7. Just have fun!
APPENDIX E

CURRICULUM GUIDE REVIEW SURVEY
Curriculum Guide Review Survey

To answer questions 1-6, please use the following scale

1 2 3 4 5
Not at all A little bit Somewhat Effectively Very Effective

1. How well does the preface explain the design of the guide?  
2. How well does the Guidelines for Creating Lessons explain how to create new lessons?  
3. How well does the unit plan explain the unit?  
4. How well does the lesson template explain each lesson?  
5. How would you describe the quality of each unit?  
6. How would you describe the quality of most of the lessons?

To answer questions 7-10, please use the following scale

1 2 3 4 5
Will not use Will probably not use Might use Will probably use Will definitely use

7. How likely are you to use this curriculum guide or one like it?  
8. How likely are you to encourage others to use this guide?  
9. Based on the directions given in the Guidelines for Creating Lessons, how likely are you to develop new lessons for use in this guide?  
10. How likely are you to use the Lesson template when designing new lessons?

Part 2 - Narrative

1. What is your overall impression of the curriculum guide?

2. What is your favorite unit? Why?

3. What are your 3 favorite lessons? Why?

4. What is the most useful part of the unit plan for you?

5. How feasible are the lessons, units, and timing of lessons for a typical kindergarten classroom?

6. Please share any lesson ideas or suggestions to help make this guide more effective and entertaining?

7. Any comments?
APPENDIX F

REVISED CURRICULUM GUIDE
Preface

This curriculum guide is designed to be used in connection with the Roger Anton Elementary School garden. The guide strives to integrate curriculum areas and infuse excitement for both the teacher and the students while still addressing the many state standards that must be taught. This curriculum guide is a holistic and integrative approach to teaching that I hope you enjoy!

Each unit was specifically designed with the school schedule in mind, allowing for holidays, off track vacations, and testing schedules. The units are as follows:

Unit 1 - August  Introduction to the Garden and Safety Procedures
Unit 2 - September Planting the Seed
Unit 3 - October  Habitats
Unit 4 - December Cultural Food and Celebrations
Unit 5 - January  Nutrition
Unit 6 - February Food Preparation
Unit 7 - April-May Taking Care of the World and All Its People
Unit 8 - June  Celebrations

Units were designed to follow a natural flow curriculum but are able to be taught out of sequence depending on teacher needs. Each unit includes several lessons that address multiple curriculum areas. Most units will have at least one children's literature component, one math lesson, one science lesson, and one fine arts connection. Some units have fewer lessons so as to allow for teachers to include their own favorite lessons or design new lessons.

Lessons were selected based primarily on three main criteria:

4. Excitement/Enjoyment level for the students
5. Ease of preparing and presenting the lesson
6. Ability to address: multiple curriculum areas, peace studies/social skills, and the multiple intelligences.

Although most units include multiple lessons, teachers are encouraged to select three to five of the lessons that best fit their needs. Teachers are also encouraged to adapt lessons as they see fit and write new lessons to be included in the guide.

I hope this guide is exciting to use and fits all of your curricular needs!
Elizabeth Newmeyer
Guidelines for Creating New Lessons

This curriculum guide works best when its lessons are engaging and easy to use. Teachers are encouraged to add their favorite lessons and create new ones in order to make this guide, one worth teaching.

When developing new lessons, here are a few items to consider. Lessons should:

6. Be engaging
7. Be easy to use
8. Address the unit topic and topic question.
9. Address multiple subjects
10. Include a variety of extensions, if possible

Attached, you will find a blank lesson plan format. Please use this form to help you write well rounded and thorough lessons. If lessons are borrowed from a book, internet, or another teacher, be sure to cite the source, giving credit where credit is due.

When listing the standards addressed, consider all possible connections. Life is filled with connections and so too are our standards. Most science lessons can also address math, include a reading or writing component, and a fine arts component. Be thorough when adding standards.

Enjoy writing lessons!
Additional Activities for any grade

Language Arts

Nouns - Name and/or write every noun that is in or around the garden.

Verbs - Students will discuss verbs prior to entering the garden. On the way to the garden begin to name every action you take just to walk to the garden. Once in the garden, students will complete an action (e.g. dig, search, poke, etc) and then name and record each verb.

Adjectives - Name and record as many adjectives as possible. Students can work in teams or individually. Describe the entire garden or just one specific area or raised bed.

Poetry - Allow students to sit in the garden for inspiration to write poetry. Students will write several poems about the garden and then will return to the garden to hold a poetry recital.

Writing - Students can write newspaper articles, short stories, and essays. Persuasive essays can be centered on topics such as the future plantings of our garden or the effects of the garden on the class or school. Summaries can be written about the events that took place in the garden on one specific day or year. Students can research environmental issues.

Reading - Students can read books about gardening or novels that discuss issues such as: weather problems, crop failures, and agriculture based cultures. Examples: Out of the Dust and Green Angel.

Listening and Speaking - Students will need to be able to listen carefully to directions, converse with other students and the teacher, and summarize the directions for the other students.

Math

Measurement/Geometry - Students will be able to measure the garden beds to make accurate scaled pictures or models of the garden. Students can also plan models for future garden beds, and measure the progress of the plants.

Graphing - Students can create charts and graphs based on the height of the plants, the number of the plants that are growing, the number of birds
or butterflies that they observe in the garden on one specific day or over the course of a week or month. Students can study and graph how many students use the garden for meditation and report on what time of day or week the garden is used the most.

**Number Sense** - Students will be able to complete word problems that require the addition, subtraction, multiplication, and division of plants in the garden beds. Once students predict the answer, they will be able to physically count the plants to verify their answer.

**Science**

**Weather** - Students will use the garden weather station to record the weather on a daily basis and make predictions based on the current weather patterns they have recorded. Students will be encouraged to incorporate newspapers to help them research weather across the world.

**Plants** - Students will study and dissect, when necessary, plants to examine the various parts and functions of the plants.

**Compost** - Students will maintain an active compost system and will record the steps the system goes through.

**Environmental Education** - Students can research topics such as the ozone, acid rain, pollution, etc and study the effects on a garden or community.

**Social Studies**

**Communities** - Students will discuss and evaluate the need for gardens as a food source and social activity. They can explore the emotional needs that are met by the garden.

**Ancient Civilizations** - Students will explore the crops and gardening techniques of different cultures. Students can also research any stories or myths based on the ancient gardens.

**California History** - Students will grow flowers and plants that are native to California. Students can also research what animals are native to the various regions of California.

**The Fine Arts**
Art - Students will paint pictures of the garden at various stages of creation and growth or harvest. Students will create and paint birdhouses, birdfeeders, a mosaic birdbath, design and paint benches or the garden beds.

Music - Students can create music that represents the sounds they hear in the garden. Performances can be held in the garden.

Dance - Students will create and perform dances based on the events that take place in the garden such as: plant growth, flower movement, bird and butterfly movements, rain dances, etc.

Theater - Students can write and perform plays based on several different aspects of the garden: growth, creation of the garden, interpersonal conflicts that arise and are resolved in the garden.

Nutrition

Food Safety - Classes will compare and contrast organic foods versus food grown using pesticides. Students will be able to compare the possible effects of pesticides and the prices of each. Students may write a persuasive essay urging the school to either use or not use pesticides.

Nutrition - Students will explore the food pyramid, monitor and record their own eating habits, and will create a 7 day healthy eating plan and reflect on their own nutrition habits.

Food Preparation - Students can create and prepare their own healthy snacks to share with the class. If possible, all of the food will come from the garden.
Unit One:

Introduction to the Garden and Safety Procedures
Garden Introduction Unit Plan Overview

Grade Level: Kindergarten          Time Length: 1 month

Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music/Theater
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Objectives:
1. Children will discuss and make different health and safety rules for the garden.
2. Children will use gardening tools to dig in potting soil, searching for seeds and bugs.
3. Children will make a job chart.
4. Children will discuss sun safety and sun protection.
5. Children will practice gross motor skills by marching and singing.
6. Children will make a family vine and practice counting the family members.

Standards:
Sci 1a - Students know objects can be described in terms of the materials they are made of and their physical properties.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 3b - Students know changes in weather occur from day to day and across seasons, affecting Earth and its inhabitants.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
Math 1.2 - Count, recognize, represent, name, and order a number of objects.
LA R1.6 - Recognize and name all uppercase and lowercase letters of the alphabet.
LA L&S 1.2 - Share information and ideas, speaking audibly in complete, coherent sentences.
LA L&S 2.1 - Describe people, places, things, locations, and actions.
LS L&S 2.2 - Recite short poems, rhymes, and songs.
HSS K1.1 - Follow rules, such as sharing and taking turns, and know the consequences of breaking them.
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

Assessments: Students will be able to identify the jobs needed for the garden, how to dress in the garden, and how to behave in the garden.
Culminating Activity: Students will march in a parade around the garden demonstrating their jobs in the garden and their safety rules/sun protection.

Topic Question: What is a garden?

Experiential Activity: Students will dig in a sensory table filled with soil.

Reading Connection: none

Writing Connection: The teacher will write the student responses.

MI Links:
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Intrapersonal
- Interpersonal
- Naturalist

Reflection/Processing: Students will draw pictures of their favorite part of the garden.

Lesson Overviews:

Lesson Title | Description
---|---
1. Garden Rules | Students will discuss what a garden is and make rules to be used in the garden.
2. Pull out the Potting Soil | Students will dig in a sensory table filled with soil, seeds, and bugs.
3. Garden Jobs | Students will make a job chart of each person's job in the garden.
4. Too Much Sun | Students will talk about sun protection and put the appropriate sun protection on their worksheet.
5. When You’re Walking... | Students will sing a song about the garden while marching.
6. The Family Vine | Students will make a family vine showing their own family members.
Lesson Title: Garden Rules

Grade Level: Kindergarten

Time Length: 1/2 hour - 45 minutes

Source: none

Subjects Addressed:
- [ ] Reading
- [x] Writing
- [ ] Spelling
- [ ] Grammar
- [ ] Math
- [x] Social Studies
- [ ] Science
- [ ] Art/Music
- [ ] Physical Education
- [ ] Peace Education
- [x] Social Skills
- [ ] Other
Objectives:
Students will discuss and make different health and safety rules that will be implemented in their garden setting.

Standards:
HSS K.1 - Follow rules, such as sharing and taking turns, and know the consequences of breaking them.

Materials Needed:
Large paper
Marker

Activity Directions  Approximate Time Needed: 1/2 hour - 45 minutes
1. The class will discuss some of the dangers that can happen in a garden.
2. The class will then suggest rules that can help the classmates stay safe in the garden.
3. The teacher will then write the rules on the large paper to be posted in the classroom or the garden.
4. The children will help draw pictures on the poster of children being safe and using the rules in the garden.

Examples of garden rules:
1. Wear gloves
2. Put tools back where they belong
3. Do not spray others with the water hose
4. Tools are only used for the garden, not for playing swords
5. Walk on the pathways
6. Wash your hands when you are done
7. Be kind to nature and your friends.
Lesson Title: Pull Out the Potting Soil

Grade Level: Kindergarten  Time Length: 1 hour or more


Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

Objectives:
Students will use gardening tools and their hands to dig in potting soil to find seeds and bugs.

Standards:
Sci 1a - Students know objects can be described in terms of the materials they are made of and their physical properties.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
Math 1.2 - Count, recognize, represent, name, and order a number of objects.
LA L&S 1.2 - Share information and ideas, speaking audibly in complete, coherent sentences.
LA L&S 2.1 - Describe people, places, things, locations, and actions.

Materials Needed:
- Shallow tub to put soil in
- Tools such as shovels, spoons, cups
- Plastic bugs
- Big seeds: pumpkin, etc.
- Real bugs: sow bugs or ladybugs

Activity Directions Approximate Time Needed: Keep out for a few days!
1. Pour a bag of potting soil into a large tub or sensory table.
2. Add cups, spoons, and shovels.
3. Hide bugs (plastic and real) and seeds.
Extension Activities:

Peace Education
Discuss with students about how to be kind to bugs. This will allow them to respect life and get over any bug phobias they may have. Make sure to talk about being gentle.

Science
Help students make observations about bug, soil, and seed appearances, behavior, and movements.

PE
Create a bug dance or movement game based on the bug behavior

Art
Draw, paint, cut and paste, etc, the bugs and seeds.

Language Arts
Sound out the names of the bugs or seeds. Discuss predictions of what it/they might turn into. Write the names and predictions. Create a class story about a bug or seed or child who finds one.

Math
Count the legs or spots on the bugs. Figure out how many legs are in the classroom (bugs vs. children).
Lesson Title: **Garden Jobs**

**Grade Level:** Kindergarten - 6th grade  
**Time Length:** 1/2 hour - 45 minutes


**Subjects Addressed:**
- [X] Reading  
- [X] Writing  
- [X] Spelling  
- [X] Grammar  
- [X] Math  
- [X] Social Studies  
- [X] Science  
- [X] Art/Music  
- [X] Physical Education  
- [X] Peace Education  
- [X] Social Skills  
- [ ] Other

**Objectives:**
Students will demonstrate a positive group environment by making a job chart for the garden that will incorporate everyone in the class. Each student will be assigned a specific job.

**Standards:**
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

**Materials Needed:**
Large Paper  
Marker

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**Activity Directions**  
Approximate Time Needed: 1/2 hour - 45 minutes

1. The teacher will discuss with the class about the necessary jobs that need to be done in the garden for the garden to thrive.
2. The class will compile a list of jobs that would be necessary for their specific garden.
3. The teacher will then write down the jobs that are needed on a large piece of paper.
4. The jobs will be given out to every child in the class. (Some jobs may be shared)

**Examples of Jobs:**
1. Watering the plants  
2. Weeding  
3. Picking the ripe vegetables and fruits  
4. Keeping a chart on how tall the produce is growing  
5. Cleaning up garden area  
6. Tool clean up  
7. Weatherman - report on the day's weather
Lesson Title: **Too Much Sun**

Grade Level: Kindergarten  
Time Length: 1/2 hour


Subjects Addressed:
- [ ] Reading  
- [x] Math
- [ ] Writing  
- [x] Social Studies
- [ ] Spelling
- [ ] Science
- [ ] Grammar
- [x] Art/Music
- [ ] Physical Education
- [x] Peace Education
- [ ] Social Skills
- [ ] Other
- [ ] Other

Objectives:
The class will discuss sun safety and then will decide the best choice for sun protection and match it to the corresponding shape on the boy. (see worksheet)

Standards:
- Sci 3b - Students know changes in weather occur from day to day and across seasons, affecting Earth and its inhabitants.
- LA L&S 1.2 - Share information and ideas, speaking audibly in complete, coherent sentences.

Materials Needed:
- "Too Much Sun" worksheet
- Crayons or markers
- Glue sticks or tape
- Additional props are optional: wide-brimmed hat, bottle of sun block, sunglasses

**Activity Directions** Approximate Time Needed: 1/2 hour
1. The teacher will discuss sun safety with the class. Discuss topics such as how too much sun can be harmful and hurt (sunburn).
2. During the discussion, the teacher can share any props with the kids and talk about their purpose.
3. The teacher will then handout the worksheet to the student (precut if necessary).
4. Students will match up the best choice for sun safety to the picture of the boy, corresponding shapes.
5. Glue or tape shapes in place and have the children color their pictures with the glue is dry.
Lesson Title: When You're Walking In The Garden

Grade Level: Kindergarten - 2nd grade  Time Length: 20 - 30 minutes

Source: Adapted from Marjorie Eide's "When you're walking in the forest..." Second Grade, Lake Arrowhead Elementary, Lake Arrowhead, CA. 1987

Subjects Addressed:
- [ ] Reading
- [ ] Writing
- [ ] Spelling
- [x] Grammar
- [ ] Math
- [ ] Social Studies
- [ ] Science
- [ ] Art/Music
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Other

Objectives:
Students will employ functional movement with gross motor skills while marching and singing, "When You're Walking in the Garden."

Standards:
LS L&S 2.2 - Recite short poems, rhymes, and songs.

Materials Needed:
"When You're Walking in the Garden", see attached words.
A large area with lots of room for marching and other movements.

Activity Directions  Approximate Time Needed: 20 - 30 minutes
1. Sing the song through once to the tune of "When you're happy and you know it..." to acquaint students with the lyrics, tune, and tempo.
2. Practice singing the song with the children.
3. Have the students form a circle or line up for marching.
4. Sing the song and march, taking movement cues from the song. For example, walk softly when the lyrics say to, look up and down in the last stanza, and make worms with fingers in the fourth stanza.

Suggestion:
Try using this song to get walk to the garden together.
When You're Walking in the Garden
(Sung to the tune of, "When you're happy and you know it . . .")

When you're walking in the garden, watch your step.
When you're walking in the garden, watch your step.
Watch for plants and things that bloom,
Please be careful, give them room.
When you're walking in the garden, watch your step.

When you're walking in the garden, please take care.
When you're walking in the garden, please take care.
There are bees and birds and bugs,
There are butterflies and slugs.
When you're walking in the garden, please take care.

When you're walking in the garden, please walk soft.
When you're walking in the garden, please walk soft.
There are earthworms down below,
And they help you plant and sow.
When you're walking in the garden, please walk soft.

When you're walking in the garden, please slow down.
When you're walking in the garden, please slow down.
Just look up and then look down,
There is nature all around.
When you're walking in the garden, please slow down.
Lesson Title: **The Family Vine**

**Grade Level:** Kindergarten

**Time Length:** 30 minutes

**Source:** Patricia Couch

**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

**Objectives:**
Children will make a family vine and practice counting the family members.

**Standards:**
- Math 1.2 - Count, recognize, represent, name, and order a number of objects.
- LA R1.6 - Recognize and name all uppercase and lowercase letters of the alphabet.
- LA L&S 1.2 - Share information and ideas, speaking audibly in complete, coherent sentences.

**Materials Needed:**
- Green construction paper
- Pattern for the vine and leaves (attached)
- Glue
- Names of the children's family members

**Activity Directions**
Approximate Time Needed: 30 minutes

1. Teacher will ahead of time cut out lots of leaves and vines.
2. Children will then decorate and glue the leaves on the vine.
3. Teacher will write the names of the child's family members on each leaf.
4. The Family Vine will be placed on a bulletin board.
5. Students will practice counting how many leaves are on the vine.

**Suggestion:**
Rather than using green construction paper, use white so the kids can color them and then when they count them, they can chart how many red leaves, green leaves, etc.
Unit Two:

Planting the Seed
Planting The Seed Unit Plan Overview

Grade Level: Kindergarten

Time Length: 1 month or more

Subjects Addressed:

- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Newpapers

Objectives:

1. Students will help plant a mixed-salad container garden.
2. Students will help design small scarecrows to place in the garden or around the classroom.
3. Students will pretend to be a produce vendor, purchasing/selling produce to each other.
4. Students will demonstrate a finger play after hearing the story "Bunny and The Great Carrot Race".
5. Students will classify different vegetables and group them by name.
6. Students will listen to and discuss the story "The Carrot Seed" while eating carrot sticks.
7. Students will experiment with which type of soil allows carrot seeds to grow best.
8. Students will listen to the book, "The Ugly Vegetables" and make labels for the garden plants.
9. The students will use adjectives to describe a word of their choosing to make "word flowers".
10. Students will count throughout the book, the different vegetables mentioned.
11. Students will identify which vegetable was seen the most during the story.
12. Students will grow grass in an egg shell and decorate the project to look like a person.
13. Students will sing planting songs while either doing hand motions or planting seeds.

Standards:

R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
R1.18 - Describe common objects and events in both general and specific language.
LS2.2 - Recite short poems, rhymes, and songs.
Math A&F 1.0 - Sort and classify objects.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
SDAP1.1 - Pose information questions; collect data; and record the results using objects,
pictures, and picture graphs.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

Assessments: Students will be able to describe the value of gardening and explain the steps of planting a seed.

Culminating Activity: Students will create a class garden either inside the class or out and decorate it.

Topic Question: What seeds do we want to plant?

Experiential Activity: Students will plant a variety of seeds and tend to their gardens over time.

Reading Connection: Bunny and the Great Carrot Race by Liane Payne, The Ugly Vegetables by Grace Lin, The Carrot Seed by Ruth Krauss

Writing Connection: none

MI Links:
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist

Reflection/Processing:

Lesson Overviews:

Lesson Title | Description
--- | ---
1. Mixed-Salad Basket | The class will create and care for a salad garden container.
2. Scarecrow in Your Garden | The students will create a variety of scarecrows for their garden.
3. Buying Produce  This is a dramatic play center that lets kids pretend to buy/sell produce.

4. Bunny and the Great . .  Students listen to the story and perform a simple fingerplay.

5. Counting Veggies  The students discuss vegetables and count the veggies from the story Bunny and the Great Carrot Race.

6. The Carrot Seed  This story is about a child who grows carrots so the students eat carrots as they listen to and discuss the story.

7. How Does Your Carrot . .  In this lesson, students will plant carrot seeds in two types of soil to determine which soil lets plants grow best.

8. The Ugly Vegetables  Students will listen to the story "The Ugly Vegetables" and make labels for their own plants.

9. Word Garden  This is a really cute bulletin board idea that teaches students to describe objects.

10. The Hairy Egghead  In this lesson, students will grow their own version of a chia pet.

11. Planting Time  This is a song about planting plants

12. This is How We Plant . .  Another song about planting.
Lesson Title: **Mixed-Salad Basket**

Grade Level: Kindergarten  
Time Length: 30 minutes to plant


Subjects Addressed:
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education  
- Social Skills  
- Other

Objectives:
1. Students will help plant a mixed-salad container garden.

Standards:
Sci 2c - Students know how to identify major structures of common plants and animals.

Materials Needed:
1. Medium sized container  
2. Plastic shopping bag large enough to line bottom of the container  
3. Soil and compost  
4. A variety of lettuce seeds or seedlings  
5. Seeds for other mixed greens: spinach, arugula, or mustard  
6. Nasturtium seeds

Activity Directions  Approximate Time Needed: 30 minutes to plant

***The teacher will do the majority of the work with student help.
1. Line the basket with the plastic bag and fill with soil and compost.
2. Sprinkle seeds for mixed greens and lettuce on top of the soil. Cover them very lightly with soil.
3. Because nasturtiums do not like to be moved, plant the seeds directly in your container. The seeds should be covered well with soil.
4. Place the container in a spot that gets some afternoon shade.
5. Spray the surface of the soil with warm water ever day until the seeds sprout.
6. When the new seedlings are about 1 inch high, thin them to about 3-4 inches apart.
7. Water when the soil feels dry.
Lesson Title: **Scarecrow in Your Garden**

**Grade Level:** Kindergarten  
**Time Length:** 30 minutes - 1 hour


**Subjects Addressed:**
- [x] Reading
- [x] Social Studies
- [ ] Writing
- [x] Science
- [ ] Spelling
- [x] Art/Music
- [ ] Grammar
- [x] Physical Education
- [ ] Math
- [ ] Peace Education
- [ ] Other
- [ ] Other

**Objectives:**
1. Students will help design small scarecrows to place in the garden or around the classroom.

**Standards:**
LS2.2 - Recite short poems, rhymes, and songs.  
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

**Materials Needed:**
1. Variety of old children's clothes  
2. Plastic bags

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**Activity Directions**  
Approximate Time Needed: 30 minutes - 1 hour

1. The teacher will introduce the concept of a scarecrow to the class though discussion and a few poems or songs about scarecrows.
2. Students will work in teams to make their own scarecrow.

**Scarecrow Directions:**
1. Use old pants, an old shirt, an old hat, and gloves to make your scarecrow.
2. Stuff the pants, shirt and gloves with plastic bags.
3. Use a plastic bag to make a head and face.
4. Plant your scarecrow around the classroom or the garden.

**Extensions:**
Math - Count the number of scarecrows the class has made

Visit [http://www.theteachersroom.com/scarecrowunit.htm](http://www.theteachersroom.com/scarecrowunit.htm) for more ideas.
**Scarecrow Songs & Poems**

Source: [http://www.theteachersroom.com/scarecrowunit.htm](http://www.theteachersroom.com/scarecrowunit.htm)

**Scarecrow, Scarecrow**

*Tune: Twinkle, Twinkle*

Scarecrow, scarecrow turn around.
Scarecrow, scarecrow touch the ground.
Stand up tall and blink your eyes.
Raise your hands up to the sky.
Clap your hands,
then tap your knees.
Turn around and tap your feet.

Scarecrow, scarecrow touch your toes.
Scarecrow, scarecrow tap your nose.
Swing your arms so very slow,
Now real fast to scare the crows!
Touch your head, jump up and down.
Now sit down without a sound.

**I'm a Little Scarecrow**

*Tune: I'm a Little Teapot*

I'm a little scarecrow,
Raggedy and worn.
I wear a hat,
And a shirt that's torn.
When the crows come,
I wave and shout,
"Away from my garden ----
Get on out!"

**The Scarecrow**

Scarecrow standing in the field
On a bright and sunny day,
Don't forget to do your job.
Scare the hungry crows away!

**The Scarecrow in the Field**

The scarecrow in the field,
The scarecrow in the field,
Hi Ho! It's harvest time,
The scarecrow in the field.
The scarecrow picks the ________

Have the children think of fall words that would be appropriate (pumpkin, crow, corn, leaf etc)

**Scarecrows**

*Tune: Sing a Song of Sixpence*

We're the farmer's scarecrows
We scare away the birds,
We keep the farmer's corn safe
Without any words.
But when Halloween comes
We jump out of the ground
And we scare the boys and girls
When they come walking 'round.

**The Floppy Scarecrow**

The Floppy, floppy scarecrow
Guards his fields all day.
He waves his floppy, floppy hands
To scare the crows away!

Repeat and replace hands with arms, toes, etc

**Five Black Crows**

*Tune: Five Green and Speckled Frogs*

Five crows all shiny black,
Sat on a scarecrow's back
Eating some most delicious corn
"Caw! Caw!"
Scarecrow winked and shouted, "Boo!"
Scared a crow and away he flew
Now there are four black shiny crows.
Five Little Scarecrows
Five little scarecrows
by the old barn door,
One went home and then there were four.
Four little scarecrows
by the old oak tree
One went home and then there were three
Three little scarecrows
with nothing to do,
One went home and then there were two.
Two little scarecrows
out in the sun,
One went home and then there was one.
One little scarecrow all alone through the day,
He scared the crows and they all flew away.

Have You Ever Seen A Scarecrow?
*Tune: Have You Ever Seen A Lassie?
Have you ever seen
a scarecrow,
a scarecrow?
Have you ever seen a scarecrow
With ten hungry birds?
Ten birds, ten birds,
Ten wing-flapping birds.
Have you ever seen a scarecrow
With ten hungry birds?

I'm A Scarecrow
*Tune: "Frere Jacques"
I'm a Scarecrow,
I'm a Scarecrow
( stand with arms out)
Standing in the corn,
Standing in the Corn
(continue)
Scare the crows away,
Scare the crows away
(Push arms out as if to scare the crows away)
That's my job, That's my job (arms out again)

Choose one child to be the scarecrow and stand in front
of the group. Choose 10 crows - I give these children
laminated crow pictures. Sing the song and have the
children act it out. Repeat the second verse (replacing
the red number word with the appropriate number word)
until all of the birds have been scared away.
Lesson Title: Buying Produce

Grade Level: Kindergarten

Time Length: 15 minutes to prepare


Subjects Addressed:

- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

Objectives:
1. Students will pretend to be a produce vendor, purchasing/selling produce to each other.

Standards:
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

Materials Needed:
1. Artificial flowers
2. Artificial produce
3. Play money
4. Baskets to put produce inside of
5. Apron (optional)

Activity Directions Approximate Time Needed: 15 minutes to prep
1. Discuss gardens and the food and plants that come from them with the children prior to setting up this dramatic play center.
2. Place all materials in the dramatic play center so they can pretend to be the gardener, seller or buyer of the food and flowers.
Lesson Title: **Bunny and the Great Carrot Race**

**Grade Level:** Kindergarten  
**Time Length:** 15-30 minutes


**Subjects Addressed:**
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education  
- Other

**Objectives:**
1. Students will listen to the story "Bunny and The Great Carrot Race".  
2. Children will perform a fingerplay.

**Standards:**
- R1.1 - Identify the front cover, back cover, and title page of a book.  
- R1.2 - Follow words from left to right and from top to bottom on the printed page.  
- R2.2 - Use pictures and context to make predictions about story content.  
- LS2.2 - Recite short poems, rhymes, and songs.

**Materials Needed:**
"Bunny and The Great Carrot Race" by Liane Payne

**Activity Directions**  
Approximate Time Needed: 15-30 minutes  
1. The teacher will read the story aloud to the class.  
2. The class will discuss gardens and what plants need to grow.  
3. The children will then learn and perform the fingerplay about a garden.

**Fingerplay**
This is my garden (hold out palm as if garden was on hand)  
I'll rake it with care (rake hand with fingers from other hand)  
And then some flower seeds (pretend to drop seeds in palm)  
I'll plant in there  
The sun will shine (put hands in circle over head)  
And the rain will fall (trickle fingers downwards)  
And my garden will blossom  
And grow up tall (stand tall with arms up in the air)
Lesson Title: *Counting Veggies*

Grade Level: Kindergarten  
Time Length: 15-30 minutes


Subjects Addressed:
- [x] Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education

Objectives:
1. Students will classify different vegetables and group them by name.
2. Students will count throughout the book, the different vegetables mentioned.
3. Students will identify which vegetable was seen the most during the story.

Standards:
Math A&F 1.0 - Sort and classify objects.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less than the other.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.

Materials Needed:
1. Pre-made veggie chart  
2. Markers

Activity Directions  
Approximate Time Needed: 15-30 minutes
1. Discuss with the class what a vegetable is and name the different vegetables the students know.
2. The teacher will make a chart of the different veggies seen in the book.
3. The teacher will read the story aloud to the class.
4. The class will keep track of how many times they see each veggie.
5. Discuss which had the most and the least.
Lesson Title: **The Carrot Seed**

Grade Level: Kindergarten

Source: "The Carrot Seed" by Ruth Krauss

Time Length: 30 - 40 minutes

**Subjects Addressed:**
- Reading
- Social Studies
- Writing
- Science
- Spelling
- Art/Music
- Grammar
- Physical Education
- Social Skills
- Math
- Peace Education

**Objectives:**
1. The children will listen to the story "The Carrot Seed" and discuss the story.

**Standards:**
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.

**Materials Needed:**
1. "The Carrot Seed" by Ruth Krauss
2. Small paper plates
3. Carrot sticks
4. Peanut butter and/or Ranch dressing

**Activity Directions** Approximate Time Needed: 30 - 40 minutes
1. The teacher will read the book, "The Carrot Seed".
2. The class will explain the story to their neighbors.
3. The teacher will then talk about the moral of the story.
4. Selected student helpers can pass out the carrot sticks, peanut butter and/or ranch dressing to eat.

**Extensions:**
Math
1. Students can count the number of carrot sticks at the table.
2. Students can predict how many bites it will take them to eat their carrot stick and then count how many bites they can actually take.
3. The teacher can graph the predictions and compare and contrast the predictions to the actual results.

Social Skills
1. The teacher can discuss table etiquette.
Lesson Title: **How Does Your Carrot Grow?**

**Grade Level:** Kindergarten - 3rd grade  
**Time Length:** 30 minutes

**Source:** Science Wizardry for Kids by Margaret Kenda & Phyllis S. Williams  
"The Carrot Seed" by Ruth Krauss

**Subjects Addressed:**
- Reading
- Social Studies
- Writing
- Science
- Spelling
- Art/Music
- Grammar
- Physical Education
- Math
- Peace Education
- Other

**Objectives:**
1. The students will plant carrot seeds in two different kinds of soil.

**Standards:**
Sci 2c - Students know how to identify major structures of common plants and animals.  
Sci 4a - Students will observe common objects by using the five senses.  
Sci 4d - Students will compare and sort common objects by one physical attribute.  
Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. "The Carrot Seed" by Ruth Krauss  
2. Plastic cups  
3. Two different kinds of soil  
4. Carrot seeds  
5. Water

**Activity Directions** Approximate Time Needed: 30 minutes with extra help
1. Read "The Carrot Seed" to children.  
2. Hand out two plastic cups to each child or each team of 2 children.  
3. Hand out carrot seeds.  
4. Hand out the two different kinds of soil (or prefilled the cups before starting the activity).  
5. Instruct students to plant their carrot seeds and cover with soil.  
6. Help students water their carrots.  
7. Discuss with students about the types of soil and ask them to predict which cup will sprout first and why.  
8. Chart the students responses and progress of their plants over time.

Soils to choose from:  
Potting soil, Peat moss, Gardening soil, Compost from a compost pile, Sand, or Clay soil
Lesson Title: **The Ugly Vegetables**

**Grade Level:** Kindergarten  
**Time Length:** 30-40 minutes

**Source:** "The Ugly Vegetables" by Grace Lin

**Subjects Addressed:**
- [ ] Reading  
- [ ] Writing  
- [x] Spelling  
- [ ] Grammar  
- [ ] Math  
- [ ] Social Studies  
- [ ] Science  
- [ ] Art/Music  
- [x] Physical Education  
- [ ] Social Skills  
- [ ] Other  
- [ ] Peace Education

**Objectives:**
1. Children will listen to the book, "The Ugly Vegetables".
2. Students will make labels for their garden plants.

**Standards:**
R1.1 - Identify the front cover, back cover, and title page of a book.  
R1.2 - Follow words from left to right and from top to bottom on the printed page.  
R2.2 - Use pictures and context to make predictions about story content.  
R2.4 - Retell familiar stories.

**Materials Needed:**
1. Pre-cut rectangle paper  
2. Color crayons or markers  
3. Craft sticks  
4. Glue

**Activity Directions**  
Approximate Time Needed: 30-40 minutes
1. The teacher will read the book, "The Ugly Vegetables" by Grace Lin.  
2. The students will explain the story to their partners.  
3. The children will then make labels for their own garden plants.
Lesson Title: **Word Garden**

**Grade Level:** Kindergarten - 3rd grade  
**Time Length:** 30-45 minutes


**Subjects Addressed:**
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education

**Objectives:**
1. Students will pick a subject and then describe the subject.
2. Students will make "word flowers" with the subjects and adjectives they have chosen.

**Standards:**
R1.18 - Describe common objects and events in both general and specific language.

**Materials Needed:**
1. Different colors of construction paper cut into petal shapes.
2. Green construction paper or tag board cut into leaf shapes and long rectangles for stems.
3. Yellow construction paper or tag board cut into large circles.
4. Glue or tape
5. A bold marker

**Activity Directions**  
**Approximate Time Needed:** 30-45 minutes

1. Instruct students to pick a subject (noun), like bug, cloud, seed, etc.
2. Write the subject in the center of the yellow circle.
3. Ask the students to describe the subject with adjectives, adverbs, or verbs (Cloud = white, fluffy, floats, etc. Ideally 5-7 words)
4. Write the describing words on five petals and two leaves, depending on the number of describing words.
5. Have students paste or tape the petals to their yellow "subject" circles, adding the stems and leaves, to create their word flower.
6. Hang flowers in a row to make a garden of words.
Lesson Title: **The Hairy Egghead**

**Grade Level:** K-6  
**Time Length:** 30 minutes

**Source:** Crafts for Young Children, Evan-Moor EMC 720

**Subjects Addressed:**
- [x] Reading  
- [ ] Social Studies  
- [ ] Social Skills  
- [x] Writing  
- [x] Science  
- [ ] Other  
- [x] Spelling  
- [x] Art/Music  
- [x] Physical Education  
- [x] Grammar  
- [x] Peace Education  
- [ ] Math  
- [x] Social Studies  
- [x] Science  
- [ ] Physical Education  
- [ ] Peace Education  
- [x] Art/Music  
- [x] Social Skills  
- [ ] Other

**Objectives:**
1. Students will grow grass in an egg shell and decorate the project to look like a person.

**Standards:**
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.  
Sci 4a - Students will observe common objects by using the five senses.  
Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. Empty plastic egg shell half  
2. Potting soil  
3. Toilet paper rolls  
4. Grass seed  
5. Construction paper scraps  
6. Permanent markers for face  
7. Colored marking pens  
8. 4" construction paper squares

**Activity Directions**  
Approximate Time Needed: 30 minutes 
1. Pass out the toilet paper rolls and let students decorate it like a person (doesn't matter if it is decorated like a man, woman, or child).  
2. Each child will get half an egg and fill it with soil.  
3. Each student will then add grass seeds and cover them with a bit more dirt.  
4. Add a little water. Water it when needed.

**Extensions:**
Science: Use real egg shells and not fake ones. Discuss how egg shells have calcium in them and why that is important to the soil.
Math: Chart on a daily basis the progress of the grass growth. Chart number of grass blades or grass height.
Language Arts: Write short stories about a city filled with "hairy egghead people". Read aloud to the class.

Peace Education: Discuss the many uses of grass. Talk about the responsibility to care for plants or animals.
Lesson Title: **Planting Time**

Grade Level: Kindergarten  
Time Length: 10-20 minutes


Subjects Addressed:

- [ ] Reading
- [ ] Writing
- [ ] Spelling
- [ ] Grammar
- [ ] Math
- [ ] Science
- [ ] Art/Music
- [ ] Physical Education
- [ ] Social Studies
- [ ] Social Skills
- [ ] Other

Objectives:
1. Students will sing the song "Planting Time".

Standards:
LS2.2 - Recite short poems, rhymes, and songs.

Materials Needed:
None

**Activity Directions**  Approximate Time Needed: 10-20 minutes

1. Sing the song once for the students to hear the song and see the hand motions.
2. Practice hand motions and then sing the song together several times through.

**Planting Time**
Sung to: "Row, Row, Row Your Boat"

Dig, dig, dig the earth  
(make digging motions)

Then you plant your seeds  
(pretend to drop seeds)

A gentle rain  
(flutter fingers down)

And bright sunshine  
(circle arms above head)

Will help your flowers grow  
(hold one arm parallel to the ground and move the other arm up behind it with fingers extended to represent a flower growing)
Lesson Title: **This is How We Plant the Seed**

Grade Level: Kindergarten - 1st  
Time Length: 5-15 minutes

Source: Patricia Couch

**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

**Objectives:**
1. Students will sing a planting song while either doing hand motions or planting seeds.

**Standards:**
LS2.2 - Recite short poems, rhymes, and songs.

**Materials Needed:**
Planting materials if desired

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**Activity Directions**  
Approximate Time Needed: 5-15 minutes

1. This song is sung to the tune of "This is how to brush our teeth"
2. Students will first listen to the song while mimicking the hand motions.
3. Then students can join in the singing.

"This is How You Plant the Seed"
This is how we plant the seed
Plant the seed
Plant the seed
This is how we plant the seed
On planting day

This is how we water the seed
Water the seed
Water the seed
This is how we water the seed
Every other day

This is how we watch it grow
Watch it grow
Watch it grow
This is how we watch it grow
Each and every day
Unit Three:

Habitats
Habitats Unit Plan Overview

Grade Level: Kindergarten
Time Length: 1 month

Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Objectives:
1. Students will read the story "Inch By Inch"
2. Students will measure themselves and graph their heights.
3. Students will construct a worm home and observe a worm in that habitat.
4. Students will discuss habitats of common garden creatures.
5. Students will match each animal to its best indoor home.

Standards:
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
M&G 1.1 - Compare the length, weight, and capacity of objects by making direct comparisons with reference objects.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.

Assessments: Students will be able to explain what a worm needs to survive and describe his home.

Culminating Activity: Students will build a worm home and observe a worm in that habitat.

Topic Question: Where do we live? Where do other things live?
Experiential Activity: Students will build a habitat for a worm
Reading Connection: Students will read the story "Inch by Inch" by Leo Lionni

Writing Connection: Students can help the teacher write a story about a creature and his home.

MI Links:

- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist

Reflection/Processing: Students will be able to reflect on what living creatures need for survival.

Lesson Overviews:

Lesson Title | Description
---|---
1. Inch By Inch | This is a great story about a worm who measures things.
2. How Tall Are You? | Measure students' height on an "inchworm" graph and make inchworm rulers.
3. Make Friends with a Worm | Make a home for worms so the students can observe and explore a worm.
4. Find Me A Home | Kids will explore habitats and humane treatment of garden creatures.
Lesson Title: **Inch By Inch**

**Grade Level:** Kindergarten - 2nd grade  
**Time Length:** 30 - 45 minutes  

**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Other

**Objectives:**
1. Students will read the story "Inch By Inch" by Leo Lionni

**Standards:**
- R1.1 - Identify the front cover, back cover, and title page of a book.  
- R1.2 - Follow words from left to right and from top to bottom on the printed page.  
- R2.2 - Use pictures and context to make predictions about story content.  
- R2.4 - Retell familiar stories.

**Materials Needed:**
1. "Inch by Inch" by Leo Lionni  
2. Poster paper  
3. Markers  
4. Thick light green yarn (4-inch strands)  
5. Movable eyes

**Activity Directions**  
Approximate Time Needed: 30 minutes - 45 minutes

Prior to the lesson  
1. Cut yarn into 4 inch strands. Enough for each student or team to have one.  
2. Glue tiny movable eyes to one end to make an inchworm.

The Lesson  
1. Ask students if they know how long an inch is. Record answers.  
2. Read the story "Inch by Inch" asking for story predictions along the way.  
3. Ask students to summarize the story for their neighbors.  
4. Pass out yarn inchworms  
5. Ask students to use their inchworm to measure common items in the classroom.  
6. Record results.
Lesson Title: **How Tall Are You?**

**Grade Level:** Kindergarten  
**Time Length:** 45 minutes - 1 hour


**Subjects Addressed:**  
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education

**Objectives:**
1. Students will measure themselves and graph their heights.

**Standards:**
M&G 1.1 - Compare the length, weight, and capacity of objects by making direct comparisons with reference objects.

**Materials Needed:**
1. Crayons or markers  
2. Glue stick or tape  
3. Copies of name tags, graph sheet, and inchworm ruler (attached)

**Activity Directions**  
**Approximate Time Needed:** 45 minutes - 1 hour

**Before the lesson:**
1. Copy, cut, and color the measuring graph. Construct and tape to a wall. Laminate for future use.
2. Copy, cut, and color inchworm measuring tape. Tape or glue lengths together, making it long enough to measure the students. This will be the classroom tape.
3. Copy and cut out name tags.
4. Copy and cut "Today I am ... tall" cards.
5. Copy, cut and tape together inchworm rulers.

**Lesson:**
1. Students can color their name tag. Either the teacher or helper will write their name on their tag.
2. In pairs, the students can take turns measuring each other by standing with their back to the graph, and directly attaching the name tag to the graph.
3. Students may also take turns measuring with the tape.
4. Record name, height, and date on the "Today I am ... tall" cards. Students may color their card.
5. Pass out inchworm rulers and allow students to color them. Laminate them if desired.
6. Repeat throughout the year so the kids can compare their growth as the year progresses.
Lesson Title: **Make Friends with a Worm**

**Grade Level:** K - 2  
**Time Length:** 30 minutes or more

Tennessee: Incentive Publishing Inc. p. 166

**Subjects Addressed:**
- [ ] Reading  
- [ ] Writing  
- [ ] Spelling  
- [x] Grammar  
- [ ] Math  
- [ ] Social Studies  
- [ ] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [x] Peace Education  
- [ ] Other

**Objectives:**
1. Students will construct a worm home and observe a worm in that habitat.

**Standards:**
Sci 2c - Students know how to identify major structures of common plants and animals.  
Sci 4a - Students will observe common objects by using the five senses.  
Sci 4e - Students will communicate observations orally and through drawings.  
NS1.2 - Count, recognize, represent, name, and order a number of objects.

**Materials Needed:**
1. Worms  
2. Glass jar or old aquarium  
3. Worm food: lettuce, dead leaves, grass clippings, bits of table food  
4. Black paper  
5. Tape  
6. Soil, sand, dead leaves  
7. Magnifying lens  
8. Water  
9. Drawing paper and pencils

**Activity Directions**  
Approximate Time Needed: 30 minutes or more

***The children can build the worm house or it can be built previously.

Building the House
1. Each team of students will start with a glass container and add layers of soil, dead leaves and sand.  
2. Sprinkle water on each layer.  
3. Cover the outside of the container with dark paper so the worms will come close to the glass.  
4. Keep the paper on at all times unless observing the worms.
5. Add worms
6. Keep the container covered by punch small holes in the lid for air.
7. Feed small pieces of lettuce, dead leaves, grass clippings, or bits of table food. Take uneaten food out so it doesn’t spoil.
8. Lay the food on top of the soil and keep the soil moist by sprinkling on a little water every day.

Observing the Worms
1. Students can watch the worms move around the dirt.
2. Students can take the worms out and use a magnifying lens to find the setae (worm’s feet)
3. Watch the worms squeeze and contract their muscles.
4. Draw a picture of how the earthworm looks when they move.
5. Try to find the worm’s head, eyes, ears?? Does it have any?
6. Count worm segments.
7. Measure the worms
8. Experiment: Worms feel vibrations. Try playing music or tapping on the ground to see if the worms come to the surface.
Lesson Title: **Find Me A Home**

**Grade Level:** Kindergarten - 2nd grade  
**Time Length:** 20 minutes


**Subjects Addressed:**
- [ ] Reading  
- [ ] Writing  
- [x] Spelling  
- [ ] Grammar  
- [ ] Math  
- [x] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [ ] Peace Education  
- [ ] Social Studies  
- [ ] Social Skills  
- [ ] Other

**Objectives:**
1. Students will discuss habitats of common garden creatures.  
2. Students will match each animal to its best indoor home.

**Standards:**
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.

**Materials Needed:**
1. "Find Me A Home" worksheet  
2. Crayons or markers  
3. Scissors (optional)  
4. Glue or tape

**Activity Directions**  
**Approximate Time Needed:** 20 minutes

1. The teacher will discuss what creatures we find in a garden.  
2. Let students suggest what all creatures need if they are brought inside to be studied (food, water, shelter, air)  
3. Talk about the different homes found on the worksheet.  
4. Using the worksheet, have students color, cut, and glue the garden critters into their appropriate homes.

**Extensions:**
Science - Build small enclosures and bring creatures in for the day to be studied and then release them. (worms, ants, pill bugs, ladybugs, etc.)

Language Arts - Students can select one critter and his home to write a story about.

Art - Students can illustrate their stories.
Critter Home Information
Two liter plastic bottle home - should include soil and a cupful of water - can house a butterfly, ant, or snail.
Jar home - should include a branch, gravel, and water - can house butterfly, lizard, ant, or snake.
Milk carton home - should include oatmeal and a slice of potato - can house mealworms or isopods.
Plastic shoebox/aquarium home - should include water and a rock - can house fish, tadpole, or turtle.
Unit Four:

Cultural Food and Celebrations
Cultural Celebrations Unit Plan Overview

Grade Level: Kindergarten

Time Length:

Subjects Addressed:
- [x] Reading
- [x] Writing
- [ ] Spelling
- [ ] Grammar
- [x] Math
- [x] Social Studies
- [ ] Science
- [ ] Art
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Newspapers

Objectives:
1. Students will bring a vegetable from their family heritage.
2. The class will write a poem about the vegetables.

Standards:
Math A&F 1.0 - Sort and classify objects.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
LS2.2 - Recite short poems, rhymes, and songs.
HSS K1 - Follow rules, such as sharing and taking turns, and know the consequences of breaking them.

Assessments:

Culminating Activity:

Topic Question: What foods do we use for our celebrations?

Experiential Activity:

Reading Connection: How Groundhog's Garden Grew by Lynne Cherry

Writing Connection: The class will write a poem about the vegetables from their heritage.

MI Links:
- [x] Linguistic
- [ ] Logical-Mathematical
- [ ] Visual-Spatial
- [ ] Musical
- [ ] Bodily-Kinesthetic
- [x] Interpersonal
- [ ] Intrapersonal
- [ ] Naturalist

Reflection/Processing:

Lesson Overviews:

Lesson Title | Description
-------------|----------------
1. Vegetable Salad | Students bring a vegetable from their heritage to school.

221
Lesson Title: Vegetable Salad

Grade Level: Kindergarten - 3rd grade
Time Length: 30 minutes

Source: Diffily, D., Sassman, C. Fun Filled 5- to 10-Minute Social Studies Activities for Young Learners (Grades PreK-1), p. 9

Subjects Addressed:
- [x] Reading
- [x] Social Studies
- [ ] Writing
- [ ] Science
- [ ] Spelling
- [ ] Art/Music
- [ ] Grammar
- [ ] Physical Education
- [ ] Math
- [ ] Peace Education
- [ ] Social Skills
- [ ] Other

Objectives:
1. Students will bring a vegetable from their family heritage.
2. The class will write a poem about the vegetables.

Standards:
- Math A&F 1.0 - Sort and classify objects.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- LS2.2 - Recite short poems, rhymes, and songs.
- HSS K1 - Follow rules, such as sharing and taking turns, and know the consequences of breaking them.

Materials Needed:
1. Plastic knife (for teacher only)
2. Vegetables brought to class from home from each student
3. Flip chart paper
4. Markers

Activity Directions Approximate Time Needed: 30 minutes
***Send home a letter a week in advance that this activity will be taking place, and if there is a vegetable that the child is allergic to, to please note.

1. Have the students bring their chosen vegetable to class.
2. Students will talk about their vegetable and why they brought it.
3. Together on flip chart paper, write a poem. Be sure to mention the vegetable and who brought it.
4. Practice reading the poem throughout the day.
5. If desired, make a salad from the vegetables for the class to try.

Extensions:
Math: 1. Count the number of vegetables that were brought. 2. Sort and classify the objects by color, by size, or by family.
Unit Five:

Nutrition
Nutrition Unit Plan Overview

Grade Level: Kindergarten

Time Length: 1 month

Subjects Addressed:

- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Objectives:
1. Students will be able to recite the song, "I'm a Little Apple".
2. Students will learn that common foods may be served in a variety of ways.
3. Students will predict how many peas are in a pod.
4. Students will determine which objects are heavy or light.
5. Students will recognize that some of our food comes from seeds, and is edible.
6. Students will demonstrate different types of sorting.
7. Students will compare different vegetables and fruits.

Standards:
- Math A&F 1.0 - Sort and classify objects.
- NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- NS 3.1 - Recognize when an estimate is reasonable.
- Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.
- Sci 4e - Students will communicate observations orally and through drawings.

Assessments:

Culminating Activity:

- Topic Question: What foods are good for us?
- Experiential Activity:
- Reading Connection: How Groundhog's Garden Grew by Lynne Cherry
- Writing Connection:

MI Links:
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist
Reflection/Processing:

Lesson Overviews:

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I'm A Little Apple</td>
<td>Students will learn about apples and sing an apple song.</td>
</tr>
<tr>
<td>2. Peas in a Pod</td>
<td>Students will make predictions about how many peas are in a pod.</td>
</tr>
<tr>
<td>3. Light and Heavy</td>
<td>Students compare vegetables based on their weight.</td>
</tr>
<tr>
<td>4. Seeds to Eat</td>
<td>Students will learn about seeds that are edible.</td>
</tr>
<tr>
<td>5. Garden Sorting</td>
<td>Students will use produce to sort, compare, and describe.</td>
</tr>
</tbody>
</table>
Lesson Title: **I'm A Little Apple**

**Grade Level:** Kindergarten  
**Time Length:** 30 minutes


**Subjects Addressed:**
- [ ] Reading  
- [ ] Social Studies  
- [ ] Writing  
- [ ] Science  
- [ ] Spelling  
- [ ] Art/Music  
- [ ] Grammar  
- [ ] Physical Education  
- [x] Math  
- [ ] Peace Education  
- [ ] Social Skills  
- [ ] Other

**Objectives:**
1. Students will be able to recite the song, "I'm a Little Apple".
2. Students will learn that common foods may be served in a variety of ways.

**Standards:**
- Math A&F 1.0 - Sort and classify objects.
- NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.
- Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. Apples of various sizes and colors (some cut, some whole)
2. Apple sauce
3. Dried apple chips

**Activity Directions** Approximate Time Needed: 30 minutes
1. The teacher will sing the song first so the kids learn the words and tune.
2. Students join in.
3. Discuss the various ways we might see apples (store, trees)
4. Discuss the different forms an apple can take (apple sauce, apple slices, pie, apple chips)
5. Enjoy a snack of apple products.

**Lyrics**

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226
Tune of: "I'm a Little Teapot"
I'm a little apple, short and round
I make a crunchy, munchy sound.
If you bite into me, you will see
I'm delicious as can be!

Extensions:
1. Visit Oak Glen to pick apples
2. Take a fieldtrip to Riley's Farm in Oak Glen to learn about apples
3. Sort the apples by color, taste, shape, size, etc.
4. Count the apples
Lesson Title: **Peas in a Pod**

**Grade Level:** Kindergarten  
**Time Length:** 20 minutes  
**Source:** Grace Granados at Renu Hope Foundation (2003)

**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

**Objectives:**  
1. Students will predict how many peas are in a pod.

**Standards:**  
NS 3.1 - Recognize when an estimate is reasonable.

**Materials Needed:**  
1. Pea Pods

**Activity Directions**  
Approximate Time Needed: 20 minutes  
1. Students will predict how many peas are in one pod.  
2. Children (with help as needed) will open the pods.  
3. Students will count the peas in their pods to see if their prediction was correct.
Lesson Title: Light and Heavy

Grade Level: Kindergarten
Time Length: 30 minutes
Source: Month by Month Preschool Almanac, Scholastic, p. 98

Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education

Objectives:
1. Children will determine which objects are heavy or light

Standards:
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.

Materials Needed:
1. Vegetables or fruits

Activity Directions Approximate Time Needed: 30 minutes
1. Explain the difference between light and heavy.
2. As the teacher presents each vegetable, discuss and name it. Do not tell if it is light or heavy.
3. Group students in groups of 3-4
4. Each group gets four objects.
5. The teacher will call the name of two objects.
6. Have one student in the group hold up to objects and identify which is heavier or lighter.
7. Switch until every student in the team holds those two objects.
8. Have a discussion to hear student answers and tell them which one does weigh more.
9. Continue with different combinations of objects.
10. Try having students use a scale to judge the weight of each object.
Lesson Title: **Seeds to Eat**

**Grade Level:** Kindergarten  
**Time Length:** 20 minutes


**Subjects Addressed:**  
☐ Reading  
☐ Writing  
☐ Spelling  
☐ Grammar  
☒ Math  
☐ Social Studies  
☐ Science  
☐ Art/Music  
☐ Physical Education  
☐ Peace Education  
☐ Social Skills  
☐ Other

**Objectives:**  
1. Students will recognize that some of our food comes from seeds, and is edible.

**Standards:**  
Math A&F 1.0 - Sort and classify objects.  
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.  
NS1.2 - Count, recognize, represent, name, and order a number of objects.

**Materials Needed:**  
1. Corn on the cob  
2. Wheat (flour)  
3. Peas in the pod  
4. Green Beans  
5. Shelled Peanuts  
6. Dried pumpkin or sunflower seeds  
7. Plates

**Activity Directions**  
Approximate Time Needed: 20 minutes

***Prior to the lesson, ask parents about any food allergies.

1. Discuss with students what a seed is.  
2. Ask the kids if they have ever eaten any seeds.  
3. Introduce the materials.  
4. Allow students to sample the seeds that are edible.

**Extensions:**  
Math - count and/or classify the seeds into groups based on size or color.
Lesson Title: **Garden Sorting**

Grade Level: Kindergarten  Time Length: 30 minutes


Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar  
- Math  
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

Objectives:
1. Students will demonstrate different types of sorting.
2. Students will compare different vegetables and fruits.

Standards:
- Math A&F 1.0 - Sort and classify objects.
- NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.
- Sci 4e - Students will communicate observations orally and through drawings.

Materials Needed:
1. Various vegetables and/or fruits.

**Activity Directions**  Approximate Time Needed: 30 minutes

*** Grouping can be two large groups, pairs or individual.

1. Hand out several different fruits and/or vegetables for the kids to examine.
2. The teacher will ask the students what are some of the different ways the produce can be sorted.
3. The students will then sort the produce by size, color, texture, shape, smell, etc.
4. The teacher will then cut open some of the produce so the kids can search for seeds, touch, smell, taste if desired.
5. The class will then talk about the differences between the produce and the different ways it was sorted.
Unit Six:

Food Preparation
Cooking Unit Plan Overview

Grade Level: Kindergarten

Subjects Addressed:
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art
- Physical Education
- Peace Education
- Social Skills
- Newspapers

Time Length: 1 month

Objectives:
1. Students will learn about germs and the importance of washing our hands and produce.
2. Students will read the book, "Growing Vegetable Soup" and discuss how vegetables are nutritious.
3. The class will make a vegetable soup. (Optional)
4. Students will make their own salads.
5. Students will eat a healthy snack made from garden vegetables.
6. Students will experiment with how the taste of a food can be changed by changing its form.
7. Students will make smoothies.
8. Students will make a sneezing bunny to help them learn to cover their mouth while sneezing.
9. Students will make a carrot salad.

Standards:
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
W1.1 - Use letters and phonetically spelled words to write about experiences, stories, people, objects, or events.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
NS2.0 - Students understand and describe simple additions and subtractions.
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
Sci 1b - Students know water can be a liquid or a solid and can be made to change back and forth from one to the other.
Sci 1c - Students know water left in an open container evaporates but water in a closed container does not.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4b - Describe the properties of common objects
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.

Assessments: Students will use good manners while preparing and eating food.

Culminating Activity: Students will make a variety of foods to practice their cooking and manners.

Topic Question: What are some simple ways everyone can be involved in cooking our meals?

Experiential Activity: Students will be involved in the cooking of a soup, salad, and/or smoothie.

Reading Connection: "Growing Vegetable Soup" by Lois Ehlert. Also can use, "Stone Soup".

Writing Connection: Students can write the directions for making either a salad or a soup.

MI Links:
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Interpersonal
- Intrapersonal
- Naturalist

Reflection/Processing: Students should be able to list the various ways we prepare food, cook food, and use good table manners.

Lesson Overviews:

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wash Our Fruits &amp; Veggies</td>
<td>Students learn about germs and washing.</td>
</tr>
<tr>
<td>2. Growing Vegetable Soup</td>
<td>Students read the book &quot;Growing Vegetable Soup&quot; and then make a class soup.</td>
</tr>
<tr>
<td>3. Salad 'n' Sack</td>
<td>Students make a small salad to eat.</td>
</tr>
<tr>
<td>4. Fruit Smoothies</td>
<td>Students will experience the difference between whole fruit and a smoothie.</td>
</tr>
<tr>
<td>5. Sneezy Bunny</td>
<td>Students will make a sneezing bunny to remind them of their manners.</td>
</tr>
<tr>
<td>6. Carrot Salad with Ants</td>
<td>Students will make a carrot salad.</td>
</tr>
</tbody>
</table>

234
Lesson Title: **Wash Our Fruits and Veggies**

**Grade Level:** Kindergarten  
**Time Length:** 20 minutes  
**Source:** Learning About Plants, Evan-Moor Educational Publishers, p. 67

**Subjects Addressed:**  
- [X] Reading  
- [ ] Writing  
- [X] Spelling  
- [ ] Grammar  
- [X] Math  
- [X] Social Studies  
- [ ] Science  
- [ ] Art/Music  
- [ ] Physical Education  
- [X] Peace Education  
- [ ] Social Skills  
- [ ] Other

**Objectives:**  
1. Students will learn about germs and the importance of washing our hands and produce.

**Standards:**  
NS1.2 - Count, recognize, represent, name, and order a number of objects.  
NS2.0 - Students understand and describe simple additions and subtractions.  
Sci 2c - Students know how to identify major structures of common plants and animals.  
Sci 4a - Students will observe common objects by using the five senses.  
Sci 4d - Students will compare and sort common objects by one physical attribute.

**Materials Needed:**  
1. Fruits and Vegetables  
2. Water  
3. Soap  
4. Large Bowl

---

**Activity Directions**  
*Approximate Time Needed: 20 minutes*

1. Discuss what germs are with the whole class.  
2. Talk about the importance of washing our hands and produce.  
3. Introduce the fruits and vegetables and have the children name them.  
4. Each student or pair of students will then take one fruit or vegetable to the sink and wash it off.  
5. The students will then place their washed produce into the bowl.  
6. Students will then wash their own hands.

**Extensions:**  
Science - Students can use their five senses to describe the produce, compare or sort the objects and identify the major structures of the plants.

Math - Students can count the number of produce, practice adding two groups of produce, subtracting the produce, or counting the slices once the produce has been cut.
Lesson Title: *Growing Vegetable Soup*

**Grade Level:** Kindergarten  
**Time Length:** 20 - 45 minutes  

**Subjects Addressed:**
- Reading  
- Social Studies  
- Writing  
- Science  
- Spelling  
- Art/Music  
- Grammar  
- Physical Education  
- Math  
- Peace Education  
- Social Skills  
- Other  

**Objectives:**
1. Students will read the book, "Growing Vegetable Soup" and discuss how vegetables are nutritious.  
2. The class will make a vegetable soup. (Optional)

**Standards:**
- R1.1 - Identify the front cover, back cover, and title page of a book.  
- R1.2 - Follow words from left to right and from top to bottom on the printed page.  
- R2.2 - Use pictures and context to make predictions about story content.  
- R2.4 - Retell familiar stories.  
- Sci 1b - Students know water can be a liquid or a solid and can be made to change back and forth from one from to the other.  
- Sci 1c - Students know water left in an open container evaporates but water in a closed container does not.  
- Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. "Growing Vegetable Soup" by Lois Ehlert
2. Assorted vegetables
3. Seasonings, herbs and stock cubes
4. A large pot or pan
5. Cook utensils
6. Access to a stove range
7. Bowls and spoons for everyone

**Activity Directions** Approximate Time Needed: 20 minutes - 45 minutes  
1. Read "Growing Vegetable Soup". Be sure to talk about print concepts and make story predictions.
2. Students can retell parts of the story to other students.
3. Discuss what is nutritious and why we need to eat healthy. Discuss the value of vegetables.
4. Let the class make suggestions as to which vegetables they would like to include in a class soup.
5. Students can draw their favorite part of the story OR draw the steps involved in making soup.

OPTIONAL: Make the class soup
1. Students can wash the vegetables and the teacher will cut the vegetables.
2. Students can help add the vegetables to the pot while the teacher adds the seasonings and discusses why we need spices.
3. Cook the soup according to the attached recipe.
4. Discuss how water boils and talk about evaporation.
4. Eat the soup.
Lesson Title: **Salad 'n' Sack**

**Grade Level:** Kindergarten - 2nd grade  
**Time Length:** 30 - 45 minutes

**Source:** Teaching Young Children (Learn While Having Fun)

**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education
- Social Skills
- Other

**Objectives:**
1. Students will make their own salads.
2. Students will eat a healthy snack made from garden vegetables.

**Standards:**
W1.1 - Use letters and phonetically spelled words to write about experiences, stories, people, objects, or events.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. Salad Greens: lettuce, spinach
2. Shredded carrots
3. Cherry tomatoes
4. Cucumber slices
5. Croutons
6. Dressing
7. Self-close plastic bags
8. Small plates or bowls and forks

**Activity Directions**  Approximate Time Needed: 30 minutes - 45 minutes
1. Prior to the lesson, put all salad ingredients out on the table.
2. Students will each receive 1 plastic bag.
3. Students will select salad ingredients to place into their bag.
4. Close the bag and shake it to combine the ingredients.
5. The teacher will then add dressing to the bag.
6. Close the bags and shake again to combine.
7. Empty the salad into bowls or a plate and enjoy.

Extensions:
Language Arts - The students can use chart paper to write down the directions (use pictures) for making the salad.

Math - Students can chart how many students chose each ingredient. (i.e. 9 took tomatoes but 2 took cucumbers). Students can also predict which ingredient will be the most popular and compare and contrast the ingredients.
Lesson Title: **Fruit Smoothies**

**Grade Level:** Kindergarten - 2nd grade  
**Time Length:** 30 minutes


**Subjects Addressed:**
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education  
- Social Skills  
- Other

**Objectives:**
1. Students will experiment with how the taste of a food can be changed by changing it's form.  
2. Students will make smoothies

**Standards:**
Sci 1b - Students know water can be a liquid or a solid and can be made to change back and forth from one from to the other.  
Sci 4e - Students will communicate observations orally and through drawings.

**Materials Needed:**
1. Blender  
2. Cups  
3. Cutting board  
4. Knife  
5. 1 pint strawberries, raspberries apricots, or cherries  
6. Bananas  
7. 1 Lemon  
8. 1 tablespoon superfine sugar  
9. 1/2 cup plain yogurt  
10. 2/3 cup milk

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**Activity Directions**
**Approximate Time Needed:** 30 minutes

***Check for food allergies first!***
1. Hull, wash, and dry the strawberries.  
2. Peel and slice the banana and put it into the blender with a squeeze of lemon.  
3. Add strawberries, sugar, yogurt, and milk  
4. Blend for 1 minute until smooth and frothy. Enjoy!  
5. Allow students to sample the smoothie and whole fruits.  
6. Ask them to compare the taste differences and explain why they taste different from each other.
Lesson Title: **Sneezing Bunny**

**Grade Level:** Kindergarten  
**Time Length:** 30 minutes  

**Subjects Addressed:**  
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education  
- Social Skills  
- Other

**Objectives:**  
1. Students will make a sneezing bunny to help them learn to cover their mouth while sneezing.

**Standards:**  
none

**Materials Needed:**  
1. Paper plates  
2. Markers or crayons  
3. Construction paper, white and pink  
4. Pipe cleaners  
5. Scissors  
6. Stapler  
7. Tissues

**Activity Directions**  
**Approximate Time Needed:** 30 minutes  
1. Have students make a bunny face on a paper plate.  
2. Students will then make and cut out ears and a paw.  
3. Staple the ears and whiskers (pipe cleaners) onto the plate.  
4. Staple a tissue and the paw to the mouth, making sure the tissue is in between the two, as if the paw is holding the tissue in place.
Lesson Title: **Carrot Salad with Ants**

**Grade Level:** Kindergarten  
**Time Length:** 20 minutes

**Source:** Killingsworth, M. (1968) Sharing Recipes. Compiled by Mary & Lucy with Love

**Subject Addresses:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education

**Objectives:**
1. Students will make a carrot salad.

**Standards:**
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4b - Describe the properties of common objects

**Materials Needed:**
1. Grated carrots
2. 1/2 can Crushed pineapples
3. Raisins
4. 1/4 cup Mayonnaise
5. 1/2 or 1 tbsp. Sugar
6. Pineapple juice
7. Measuring cups and spoons
8. Mixing bowl
9. Large spoon to mix with

**Activity Directions**  
Approximate Time Needed: 20 minutes
1. Grate 3-4 carrots and add to bowl
2. Toss carrots and crushed pineapple
3. Mix mayonnaise and sugar together
4. If too dry, add 1/2 to 1 tsp. of pineapple juice
5. Mix all together and top with raisins
6. Students can help with making the salad or it can be premade
7. Each student can describe their salad as they eat it.

**Extension:**
- Math - Count the number of raisins in the student's salad.
Unit Seven:

Taking Care of the World and All Its People
Protecting the World Unit Plan Overview

Grade Level: Kindergarten

Time Length: 1 month

Subjects Addressed:
- X Reading
- X Social Studies
- X Science
- X Art
- X Math
- X Physical Education
- X Peace Education
- X Social Skills
- X Newspapers

Objectives:
1. Students will discuss trees and jobs that involve trees.

Standards:
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
R1.18 - Describe common objects and events in both general and specific language.
Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

Assessments:

Culminating Activity:

Topic Question: In what ways can we protect the world around us?

Experiential Activity:

Reading Connection: The Great Kapok Tree by Lynne Cherry

Writing Connection:

MI Links:
- X Linguistic
- X Logical-Mathematical
- X Visual-Spatial
- X Musical
- X Bodily-Kinesthetic
- X Interpersonal
- X Intrapersonal
- X Naturalist

244
Reflection/Processing:

### Lesson Overviews:

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VolunTREErs</td>
<td>Students learn about the value of trees</td>
</tr>
</tbody>
</table>
Lesson Title: **VolunTREErs**

**Grade Level:** Kindergarten  
**Time Length:** 30 - 40 minutes

**Source:**  

**Subjects Addressed:**
- [x] Reading  
- [x] Social Studies  
- [x] Science  
- [x] Art/Music  
- [x] Physical Education  
- [x] Peace Education

**Objectives:**
1. Students will discuss trees and jobs that involve trees.

**Standards:**
R1.1 - Identify the front cover, back cover, and title page of a book.  
R1.2 - Follow words from left to right and from top to bottom on the printed page.  
R2.2 - Use pictures and context to make predictions about story content.  
R2.4 - Retell familiar stories.  
R1.18 - Describe common objects and events in both general and specific language.  
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Sci 4a - Students will observe common objects by using the five senses.  
Sci 4d - Students will compare and sort common objects by one physical attribute.  
Sci 4e - Students will communicate observations orally and through drawings.  
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

**Materials Needed:**
1. "A Tree Can Be..." by J. Nayer  
2. "Treechie the Teaching Tree" Coloring Book  
3. Paper  
4. Crayons or markers

**Activity Directions**  
Approximate Time Needed: 30 - 40 minutes  
1. Read "A Tree Can Be..."
2. Discuss how the students feel about trees, any experiences they've had (favorite tree to climb).
3. Talk about the different ways trees help us or the uses for trees.
4. Share "Treechie" with the class. Talk about arborists and urban foresters.
5. Discuss ways to be a "volunTREEr", ways to help their community and environment.

Extensions:
Outdoor Education:
1. Visit some of the trees around campus and discuss their observations.
2. Compare and contrast the different trees on campus.
Unit Eight:

Celebrations
### Celebrations Unit Plan Overview

<table>
<thead>
<tr>
<th>Grade Level: Kindergarten</th>
<th>Time Length: 2 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjects Addressed:</strong></td>
<td></td>
</tr>
<tr>
<td>☒ Reading</td>
<td>☒ Math</td>
</tr>
<tr>
<td>☒ Writing</td>
<td>☒ Social Studies</td>
</tr>
<tr>
<td>☒ Spelling</td>
<td>☒ Science</td>
</tr>
<tr>
<td>☒ Grammar</td>
<td>☒ Art</td>
</tr>
<tr>
<td>☒ Physical Education</td>
<td>☒ Peace Education</td>
</tr>
<tr>
<td>➡️ Social Skills</td>
<td>❌ Newspapers</td>
</tr>
</tbody>
</table>

**Objectives:**

1. Students will use their sense of touch to determine the mystery objects.
2. Students will make a necklace out of carrot slices.
3. Students will paint art pictures using stamps made from vegetables.
4. Students will make a sunflower art project using paint.
5. Students will discuss caterpillars and their habitats.
6. Students will create caterpillars using a variety of materials.
7. Students will hold a garden party.

**Standards:**

- R1.1 - Identify the front cover, back cover, and title page of a book.
- R1.2 - Follow words from left to right and from top to bottom on the printed page.
- R2.2 - Use pictures and context to make predictions about story content.
- R2.4 - Retell familiar stories.
- LS2.2 - Recite short poems, rhymes, and songs.
- NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
- NS1.2 - Count, recognize, represent, name, and order a number of objects.
- SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
- Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.
- Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.
- Sci 2c - Students know how to identify major structures of common plants and animals.
- Sci 4a - Students will observe common objects by using the five senses.
- Sci 4d - Students will compare and sort common objects by one physical attribute.
- Sci 4e - Students will communicate observations orally and through drawings.
- HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.
- HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

**Assessments:** none
**Culminating Activity:** A Garden Party filled with garden songs and knowledge.

**Topic Question:** How can we celebrate the garden?

**Experiential Activity:** The Garden Party

**Reading Connection:** Read "The Very, Hungry Caterpillar" by Eric Carle. Reread favorite stories about the garden

**Writing Connection:** Students will write a story about a caterpillar.

**MI Links:**
- Linguistic
- Logical-Mathematical
- Visual-Spatial
- Musical
- Bodily-Kinesthetic
- Intrapersonal
- Naturalist
- Interpersonal

**Reflection/Processing:** Reflect on what the students have learned about manners, gardening, and nutrition. Revisit poems and songs from other units.

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**Lesson Overviews:**

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1. The Mysterious Feely Box</td>
<td>Students enjoy a sensory box filled with garden items.</td>
</tr>
<tr>
<td>2. Dazzling Carrot Necklace</td>
<td>Students make necklaces out of carrot slices</td>
</tr>
<tr>
<td>3. Veggie Stamping</td>
<td>Students make art from stamps made out of veggies</td>
</tr>
<tr>
<td>4. Sunny Sunflower</td>
<td>Students will make sunflower artwork.</td>
</tr>
<tr>
<td>5. Springtime Creepy Crawlers</td>
<td>Students will make caterpillars from egg cartons.</td>
</tr>
<tr>
<td>6. Garden Party</td>
<td>Students enjoy a garden party to celebrate the garden.</td>
</tr>
</tbody>
</table>

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250
Lesson Title: The Mysterious Feely Box

Grade Level: Kindergarten

Time Length: 15 minutes to prep

John Wiley & Sons

Subjects Addressed:

- [ ] Reading
- [ ] Writing
- [X] Spelling
- [X] Grammar
- [ ] Math
- [ ] Social Studies
- [X] Science
- [ ] Art/Music
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Other

Objectives:
1. Students will use their sense of touch to determine the mystery objects.

Standards:
Sci 4a - Students will observe common objects by using the five senses.
Sci 4e - Students will communicate observations orally and through drawings.

Materials Needed:
1. Corrugated cardboard box
2. Utility knife
3. Plain paper to wrap the box
4. Glue and tape
5. Old seed catalogs
6. A cut-off pant leg or sleeve, heavy thread and needle (optional)
7. Things found in a garden: seeds, leaves, branches, fruits, etc.

Activity Directions

Approximate Time Needed: 15 minutes to prep

1. Tape the empty box closed and wrap it with plain paper.
2. Cut a 3 1/2 inch diameter hole out of the center on one side of the box.
3. Decorate all sides of the box with a collage of vegetable and flower pictures.
4. If desired, attach an old pant leg to the hole by sewing through the cardboard with a big needle and heavy thread. This makes the contents more secretive.
5. Fill the box with seeds, leaves, or other garden items.
6. Students will individually place their hand in the box and describe what they feel and try to determine what the objects are.
Lesson Title: **Dazzling Carrot Necklace**

**Grade Level:** Kindergarten  
**Time Length:** 45 minutes - 1 hour

**Source:** Ocone, L & Pranis, E., (1990) The National Gardening Association Guide to Students' Gardening  
John Wiley & Sons

**Subjects Addressed:**
- [ ] Reading
- [ ] Writing
- [ ] Spelling
- [X] Grammar
- [X] Math
- [ ] Social Studies
- [ ] Science
- [ ] Art/Music
- [ ] Physical Education
- [ ] Peace Education
- [ ] Social Skills
- [ ] Other

**Objectives:**
1. Students will make a necklace out of carrot slices.

**Standards:**
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
NS1.2 - Count, recognize, represent, name, and order a number of objects.
SDAP1.1 - Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.

**Materials Needed:**
1. Carrots
2. Heavy thread
3. Darning needles
4. Knife

**Activity Directions**  
Approximate Time Needed: 45 minutes - 1 hour
1. Wash the carrots and then slice them about 1/4 inch thick.
2. Thread your needle long enough to go around a head, plus some extra.
3. Group students in pairs to work together.
4. Students will thread carrot slices onto the thread by pushing the needle into the center of each slice.
5. Once they have strung enough carrots to go around their head, tie the ends together to form a necklace.
6. Lay your necklace on a piece of paper in a dark place to dry, making sure none of the carrots touch each other. As the carrots harden and dry, they turn into wrinkled beads. The drying process takes about 1 week.
Extensions:
1. Have a year-end Garden Party. Students can dress up and wear their necklaces, sing garden songs, etc.

Math - Count the number of carrot slices on each necklace. Chart results and determine whose necklace has the most, is the longest, the heaviest, the lightest, etc.
Lesson Title: **Veggie Stamping**

**Grade Level:** Kindergarten - 6th grade  
**Time Length:** 20-40 minutes

**Source:** P.B.S.  
**Channel:** "A Place of Our Own" on channel 8 on the Time Warner Cable in 2004

**Subjects Addressed:**
- Reading
- Writing
- Spelling
- Grammar
- Math
- Social Studies
- Science
- Art/Music
- Physical Education
- Peace Education

**Objectives:**
1. Students will paint art pictures using stamps made from vegetables.

**Standards:**
none

**Materials Needed:**
1. Tempera paint in different colors
2. Carrots & potatoes with cut out shapes
3. Paper
4. Carrot leaves

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**Activity Directions**  
Approximate Time Needed: 20-40 minutes

***Cut out shapes on the carrots and potatoes to use as stampers***

1. Give each child a paper
2. Set out different color paints
3. Show students how to use the stampers and leaves to make designs
4. Let the students start painting.

**Extensions:**
1. Try letting the kids make stationary for their parents. Then they write a letter on the stationary when it is dry.
2. Display the art during your Garden Party
Lesson Title: Sunny Sunflower

Grade Level: Kindergarten  Time Length: 30 - 40 minutes

Source: Arts and Crafts for All Seasons, The Mailbox, pg. 91

Subjects Addressed:

- Reading  Social Studies
- Writing  Science
- Spelling  Art/Music
- Grammar  Physical Education
- Math  Peace Education

Objectives:
1. Students will make a sunflower from a paper plate and paint.

Standards:
none

Materials Needed:
1. 1 paper plate per child, 7" in diameter
2. 1/4 sheet of green construction paper.
3. Yellow and brown tempera paints
4. Pencils and scissors
5. Paintbrushes

Activity Directions  Approximate Time Needed: 30-40 minutes
1. Pass out materials to the students.
2. Dip the palm of one hand into the yellow paint and paint all around the outer rim of the paper plate.
3. Wash hands and get brown paint and paintbrushes.
4. Take the brown paint and have children dip their fingers and press the finger against the plate. Repeat often.
5. When dry, draw a leaf of construction paper, cut out, and glue the leaf to the back of the plate.

Extensions:
1. Create songs to sing about sunflowers.
2. Present at the garden party.
Lesson Title: **Springtime Creepy Crawlers**

**Grade Level:** Kindergarten - 3rd grade  
**Time Length:** 1 hour

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**Subjects Addressed:**
- Reading  
- Writing  
- Spelling  
- Grammar  
- Math  
- Social Studies  
- Science  
- Art/Music  
- Physical Education  
- Peace Education

**Objectives:**
1. Students will discuss caterpillars and their habitats.  
2. Students will create caterpillars using a variety of materials.

**Standards:**
- R1.1 - Identify the front cover, back cover, and title page of a book.  
- R1.2 - Follow words from left to right and from top to bottom on the printed page.  
- R2.2 - Use pictures and context to make predictions about story content.  
- R2.4 - Retell familiar stories.  
- Sci 2a - Students know to observe and describe similarities and differences in the appearance and behavior of plants and animals.  
- Sci 2b - Students know stories sometimes give plants and animals attributes they do not really have.

**Materials Needed:**
1. "The Very, Hungry Caterpillar" by Eric Carle  
2. Empty cardboard egg cartons. One dozen size will provide for 2 children.  
3. Paints and paintbrushes, markers and crayons  
4. Scissors  
5. Hole Punch  
6. Pipe cleaners, cut in half  
7. Miscellaneous materials (fabric scraps, yarn, cotton balls, construction paper)  
8. Newspaper

**Activity Directions**  
Approximate Time Needed: 1 hour  
1. Read "The Very, Hungry Caterpillar" by Eric Carle  
2. The teacher will cut the top from the cartons and discard. Cut the bottom of the carton in half lengthwise, creating two bodies.  
3. Spread newspaper across the craft area.
4. Punch holes in the head and along either side of the body for the antennae and legs of the creepy crawler.
5. The children can then decorate the raised part of their cartons.
6. Wait until dry, then have the students thread pipe cleaners through the body. Bend the ends or use tape to secure. Make the legs into different shapes if desired.
7. Discuss with the class where caterpillars are found, what they eat, where they live, and what they become!

Extensions:
1. Try turning your caterpillars into puppets and creating a puppet show!

Some Ideas To Use With This Book

STORY SEQUENCE: Provide a long piece of yarn, a hole punch, and patterns of the different foods (apple, pear, plum, strawberry, orange, piece of chocolate cake, ice cream cone, pickle, Swiss cheese, salami, lollipop, piece of cherry pie, sausage link, cupcake, watermelon) which appear in this story. Students will color, cut, and punch a hole in each food. Then they may sequence the story by putting the food on the string as they appear in the story. You may want to have your students do this while you read the story for the second time or you may wish for your students to try this after you have read the story.

PHONICS: Use the patterns of the foods above. Make cards with the beginning letters (a, p, s, o, c, i, p, s, l, s, c, w) of the foods. Have students match. To make this more difficult. Place your food patterns in a pocket chart, say a sound, and then pick a student to come up and take one food item that matches the given sound!

MATH: Provide each group of students eight caterpillars of various sizes (make out of construction paper) on 8 index cards for each caterpillar showing the inches of one of the caterpillars. Have the students work together to measure the caterpillars and then match the caterpillar to the correct index card. Walk around the room and check each groups responses. When finished have each student place all the materials from this activity in a ziplock bag. Collect each set and keep for future use.

MATH/GRAFING: Prepare a graph with the foods the caterpillar ate. Give each student a small sticky note. Have them write their name on the sticky note. Then have the students place their sticky note on the area of the graph that shows their favorite food. When everyone has placed their sticky note on the graph - ask graph questions: What food was chosen the most/least? How many apples were chosen?...

SCIENCE: Use patterns of the life cycle of a butterfly and have students practice sequencing them. (little egg on leaf, little caterpillar on leaf, larger caterpillar on ground, very large caterpillar on big leaf, other leaves nearby have been eaten, caterpillar building a cocoon, caterpillar inside of a cocoon, butterfly emerging from a cocoon, and butterfly flying away)
Lesson Title: **Garden Party**

Grade Level: Kindergarten                Time Length: 45 minutes
Source: none

Subjects Addressed:

- ☒ Reading
- ☒ Writing
- ☒ Spelling
- ☐ Grammar
- ☒ Math
- ☒ Social Studies
- ☒ Science
- ☒ Art/Music
- ☒ Physical Education
- ☒ Peace Education
- ☐ Social Skills
- ☐ Other

Objectives:
1. Students will enjoy a garden party to celebrate the school year.

Standards:
R1.1 - Identify the front cover, back cover, and title page of a book.
R1.2 - Follow words from left to right and from top to bottom on the printed page.
R2.2 - Use pictures and context to make predictions about story content.
R2.4 - Retell familiar stories.
LS2.2 - Recite short poems, rhymes, and songs.
NS1.1 - Compare two or more sets of objects and identify which set is equal to, more than, or less.
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Sci 2c - Students know how to identify major structures of common plants and animals.
Sci 4a - Students will observe common objects by using the five senses.
Sci 4d - Students will compare and sort common objects by one physical attribute.
Sci 4e - Students will communicate observations orally and through drawings.
HSS K3 - Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.
HSS K6.3 - Understand how people lived in earlier times and how their lives would be different today.

Materials Needed:
Any art projects, song lyrics, etc. that you want to include.
Activity Directions Approximate Time Needed:
1. Review the stories that you read during the year, poems and songs to include in the party.
2. Take students outside with their art projects.
3. Celebrate by opening the party with singing a planting song.
4. Challenge students to classify garden objects.
5. Show off the art projects from the year.
6. Read your favorite story again.
7. Just have fun!
REFERENCES


Holly, Diana, personal communication, November 14, 2005


