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Using trade books for language arts skills instruction and environmental education

Lisa Jo Mattsson

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USING TRADE BOOKS FOR
LANGUAGE ARTS SKILLS INSTRUCTION
AND
ENVIRONMENTAL EDUCATION

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: Environmental Education

by
Lisa Jo Mattsson
June 1997
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June 1997
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Date
Jun 9, 1997
ABSTRACT

This project provides middle school teachers with instructional direction and hands-on methods to incorporate an environmentally-oriented trade book, Bird Watch (1990) by Jane Yolen, into their language arts curriculum. Bird Watch is a collection of sixteen poems which describe a variety of birds, their habitats, and activities.

After reading Bird Watch, students begin with language arts activities which reinforce reading and writing skills. Students also participate in several environmental education activities, selected from Project Learning Tree, Project WILD, and Project WILD Aquatic Education Activity Guide. These activities reinforce environmental themes, such as natural habitat, water quality and conservation, and diversity, found within Bird Watch.
ACKNOWLEDGEMENTS

To my mother, Karen, and my father, Richard, whose encouragement has helped me to be everything I could be,

To Dr. Darleen Stoner, whose love and concern for the environment has helped me to see, and

To my husband, Kalon, whose love and never ending help has helped me continue on daily.
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INTRODUCTION


One stormy night, Rachel sat alone in her dorm room, worrying over her decision. Hoping to calm herself, she reached for a book of poems. As the wind howled outside the windows, Rachel turned to Alfred Tennyson’s poem “Locksley Hall”... The hero in the poem doesn’t know what to do either.... The wild beauty of the words, “...roaring seaward, and I go,” echoed in her mind. (p. 19)

Although Rachel Carson did decide that night to become a biologist, through her books such as The Sea Around Us (1954) and Silent Spring (1962), millions of people discovered the new concept of ecology and the dangers of pesticides (as cited in Kudlinski, 1988). Just as Carson was inspired by a piece of literature, literature continues to inspire people today. Using literature in the classroom for education has many benefits.

Children’s literature, also called trade books, can provide a resource to reinforce language arts skills and environmental knowledge. Teachers can attain a number of curricular goals in a variety of content areas using children’s literature. Many trade books have a linguistic advantage over textbooks as children’s literature uses narrative form to convey important concepts, themes, and vocabulary. “The generally high interest value of trade
books can help motivate children to learn content as well as to read” (Armbruster, 1991, p. 324). Trade books afford opportunities for reading proficiency in many content areas.

Children are motivated to read trade books for aesthetic and textual elements. Often, children learn through vicarious experiences while reading trade books. Children are naturally interested in reading about environmental situations found within trade books. Teachers can reinforce important scientific concepts which are found within trade books. Linking language arts skills (such as drawing conclusions and determining cause and effect) with environmental learning can magnify the students’ learning immensely (Bristor, 1994). Infusing environmental education throughout the school curriculum prevents it from becoming another added class to the curriculum.

This project offers middle school teachers with instructional direction to incorporate an environmentally-oriented children’s book of poetry, *Bird Watch* (1990) by Jane Yolen. By concentrating on language arts skills and environmental education, any teacher can utilize these multi-disciplinary activities as a whole or by particular selection. The activities encourage active participation by students who construct knowledge through learning. Trade books open many doors. It is hoped that teachers will continue to link language arts activities with other environmental trade books after seeing the value of these learning experiences for students.
This review of the literature first defines and justifies the value and use of teaching with trade books, including advantages and obstacles in using children's literature in language arts and environmental education. Second, constructivism is defined and its relation to the use of trade books in language arts and environmental education is reviewed. Finally, various teaching strategies are examined, including direct instruction and hands-on methods.

Teaching with trade books

Using children's literature, also called trade books, to reinforce language arts and environmental knowledge offers teachers a valuable resource for attaining a number of curricular goals. Trade books are defined by Armbruster (1991) as "books intended for general readership that are sold in bookstores and found in libraries" (p. 324). Trade books span across all genres of literature: autobiography, diaries, fiction, nonfiction, poetry, reports of discoveries, and science fiction. Students can learn from reading all genres, which in turn, can reinforce and enrich content area learning (Armbruster, 1991).

Why use trade books in the curriculum? Throughout time, children have listened to the art of storytelling; trade books are a written extension of this art form. For a variety reasons, "many children enjoy reading and listening
to stories" (O'Brien & Stoner, 1987, p. 15). Most trade books have aesthetically appealing elements which entice children. Aesthetic elements provide readers with new ways of seeing nature, new avenues of using narrative forms, and new insights into books. Crook and Lehman (1990) asserted that "nonfiction books contain an aesthetic dimension that goes beyond the mere presentation of facts" (p. 22). Many students are captivated by the ability to make connections between facts in the reading and real-life concepts. Responding to trade books may "help students develop thinking skills as they relate their personal stories and ideas about who they are to what they are reading" (Koeller, 1996, p. 101).

Some students who display at-risk characteristics, such as a lack of sense of responsibility, would benefit from language arts/science instruction using trade books. It is well known that standard instructional patterns have not been successful with at-risk students (Stoner, 1990) as these students are "often deficient in basic skills and find school boring and intimidating....even gifted students can be considered at-risk due to boredom" (p. 65). Many of today's children, filled with apathy and depression, feel "the tendency to simply opt out....[and feel that] is easier to leave the problems to someone else, especially if one is convinced that his or her actions will not make a difference or that solving the problem is someone else's responsibility" (Bardwell, 1991, pp. 5-6). Children need to read trade books
which "inspire 'at-risk' students to become 'at-promise' students" (Daisey, 1994b, p. 172).

Teachers can capture the interests of their students when choosing trade books or they can allow students to choose their own books which may increase motivation. Many researchers have concluded that interest in what is being studied is important to motivation and success (as reviewed by Mandlebaum, Lightbourne, & VandenBroek, 1994). Motivation to read trade books can take many forms. Children become enthused with literature when they are "engaged in the content of the book, and are drawn to its detailed illustrations, photographs, paintings, woodcuts, or diagrams" (Crook & Lehman, 1990, p. 22). Many different contextual or visual elements make trade books interesting to children.

While the physical and aesthetic elements of a book motivates some readers, the lure of vicarious experiences hooks other readers. The inside jacket covers of books provide children a synopsis of the setting, characters, and drama about to unfold. "Trade books afford students introductions to people and ideas which they may not know otherwise" (Daisey, 1994a, p. 130). Vicarious experiences are crucial in creating specific type of knowledge. For an example in environmental education, children may learn about kapok trees, their natural habitat and the interrelationships among animals living in the trees, through children's literature. In general, "trade books often help children understand and appreciate the environment by portraying
cause-effect relationships, presenting vivid descriptions and accurate pictures, and providing vicarious experiences” (O’Brien & Stoner, 1987, p. 15). Children’s literature selections provide a context for developing motivation, interest, and success in learning content-related concepts. Most importantly, children need practice reading, and trade books afford the opportunity to reinforce reading proficiency. In accordance with Armbruster (1991), “finally, the generally high interest value of trade books can help motivate children to learn the content as well as to read” (p. 324).

Trade books have many advantages over textbooks. Daisey (1994a) asserted that trade books, unlike adopted textbooks, do not have a captive audience. Egan’s study (as cited in Daisey, 1994b) indicated that “trade book authors know how to capitalize on a human interest angle, thereby reembedding knowledge in an emotional and imaginative context from which typical textbooks so uncreatively remove it” (p. 130). The prose of trade books and textbooks differs greatly in style and content. Armbruster (1991) asserted that there are “countless high quality trade books...that have prose that is generally clear and engaging, and the content has a richness and depth that is often missing in textbooks” (p. 324). On the other hand, poor quality prose in textbooks may interfere with students’ abilities to learn concepts. Major concepts in textbooks may not be thoroughly explained, but as O’Brien and Stoner (1987) stated, “Children’s literature can
help provide clear explanations of important concepts, often in narrative form" (p. 15). Science can be intimidating to students, with its vocabulary requirements, complex themes, and concepts. The direct explanations and/or examples found in trade books often ease students' concerns. An advantage popular trade books have is the ability to "present difficult subjects in an intriguing manner without being oversimplistic" (Crook & Lehman, 1990, p. 22). The prose of trade books provides different linguistic presentations of content area information; children benefit immensely from this difference. As emerging readers and writers, children must be exposed to new types of interesting narrative to become more aware of "different types of language in their own reading, writing, listening, and speaking (Danielson, 1990, p. 224). Teachers can use students' interests in trade books to supplement content area curriculum.

Trade books provide the flexibility content area teachers need to meet students' reading abilities and to create follow-up activities. As Crook and Lehman (1990) asserted, "Unlike textbooks, which are designed to provide appropriate content for all children at a given grade level, trade books are diverse in subject matter and depth of coverage and are appropriate for a wide range of reading abilities" (p. 22). A valuable educational resource exists in the myriad of trade books that pique children's interests and reading abilities, which is reflected in the following statement by Armbruster (1991):
Trade books may be the best means available to provide for individual student differences. A variety of trade books ensures that more able readers will be challenged, while less able readers will still be able to find reading material appropriate for their levels. (p. 324)

Children's literature provides the flexibility which allows teachers to strengthen important concepts found within their curriculum. Literature supplies "a basis for follow up activities that reinforce and expand upon the book's meaning" (O'Brien & Stoner, 1987, p. 15). Using various teaching materials can enhance literature-based instruction. Crook and Lehman (1990) asserted that teachers "need to realize the importance of thorough unit planning...[and] preparing a topic with a variety of materials can enhance a teacher's interest and teaching ability" (p. 22). Teachers can use literature-based instruction to maximize student learning if specific objectives and activities to achieve those objectives are determined. Mandlebaum et al. (1994) suggested that "through careful analysis of student attainment of identified goals and objectives, the teacher can select activities to enhance learning and make specific adaptations to meet students' needs" (p. 134). Trade books can meet teachers' needs to reach a variety of goals and objectives in their content area. Teachers should take advantage of students' interests in the variety of language in trade books, student's motivations in the ability to choose their own book, and vicarious experiences found within trade books when developing literature-based instruction.
Several obstacles exist to integrating trade books into the language arts and environmental education curriculum. Some teachers prefer using a textbook with supplemental teaching materials and reproducibles. Other teachers "feel reluctant to make trade books an integral part of a unit because they fear working without the structure of a textbook" (Crook & Lehman, 1990, p. 22). As Daisey (1990a) stated, trade books "do not come imprisoned in boxes and kits, nor do they have 'teacher-proof' manuals" (p. 131). Teachers who are unsure of which books to include in their content area program should consult published annotated bibliographies such as Recommended Readings in Literature: Kindergarten through Grade Eight, published by the California Department of Education (1990), or "Outstanding Science Trade Books for Children," published monthly in the Science and Children journal. A recent annotated guide to Newberry and Caldecott Award-winning books, published by the Association for Library Services to Children (1994), is titled The Newberry and Caldecott Awards: A guide to the Medal and Honor Books-1994 Edition (as cited in Moss & Noden, 1995).

Conversely, teachers who have selected a book but are unsure if it is an effective resource to teach science concepts should consult Mayer's (1995) checklist which poses important questions to ask when evaluating a potential resource for science classroom use.

Many content-area teachers contend that they are ill-prepared to teach reading and should focus on teaching the
contents of a given text (Dickson, 1995). Teachers concerned about taking time away from content area teaching to reinforce skills should note the results Drake, Hemphill, and Chappell (1996) found, "that skills are important things to teach, and criteria must be made explicit if students are expected to execute them....[and] time spent on nonscientific activities is not wasted" (p. 39). Armbruster's research (1993) showed that reading and writing in the content-areas greatly enhance students' ability to comprehend and process information in expository text (as cited in Dickson, 1995). Teachers who are aware of the non-science elements of environmental education can introduce this field of study even if they do not have a language arts background. Through training, teachers can be taught the need for non-science environmental education (Simmons, 1989). Conversely, many teachers believe science teachers to be the envoys of environmental education. Mirka (1973) attributed this to teachers' lack of knowledge and confidence in the area of natural science which acts as one of the barriers to teaching environmental education. Teachers often feel "intimidated by the term 'environmental education' and feel unequipped to teach the subject due to a lack of information about what environmental education is and how to teach it" (O'Brien & Stoner, 1987, 14). Intrinsically, environmental education offers a motivating and relevant content. Cross curricular themes are reinforced in a wide array of environmental education curriculum guides "which provide materials and
methods conducive to interdisciplinary infusion, different learning styles and cooperative learning groups" (Stoner, 1990, p. 65). Teachers in Stoner's (1990) study concluded that environmental education materials are ideal for the middle school concept of using themes or topics to teach across the curriculum. Infusing environmental education throughout the school curriculum prevents it from becoming, as Simmons (1989) stated:

...another add-on to the curriculum, another subject that needs to be fit into an already overburdened schedule. Rather it only takes a little extra time to use environmental issues and concerns to teach skill and concepts within the normal scope and sequence of subject areas. (p. 15)

Despite the reservations some teachers have toward literature-based language arts/environmental education, trade books offer many solutions to the problems they are facing daily.

Trade books and constructivism

Children sit in classrooms with a complex set of assumptions about the way the natural world works (Miller, Steiner, & Larson, 1996). Constructivists believe that knowledge is the result of individual constructions of reality. From their perspective, learning occurs through the continual creation of rules and hypotheses to explain what is observed. "Constructivism describes an internal psychological process...[and] in this process is continuously checking new information against old rules, revising the
rules when discrepancies appear, and reaching new understandings, or constructs of reality" (Brooks, 1990, p. 68). Learning appears to involve constructing knowledge. Students cannot be viewed as passive recipients of information or other people's interpretations (Daisey, 1994a). Constructivist studies, according to Robertson, (1994) provide strong empirical support to counter this "blank slate" perspective on the learner and on learning. "The term construct emphasizes the understanding that these categories exist in our thinking because they have been constructed or framed in meaning as discrete entities by researchers attempting to make some sense of, for example, students' understandings of phenomena" (Robertson, 1994, p. 23). "Many times, a child's existing knowledge base—which typically includes many inaccuracies—and his or her new experiences will conflict. Researchers have termed these damaged understandings 'naive conceptions,' 'misconceptions,' or 'preconceptions'" (Miller et al., 1996, p. 24). Misconceptions refer to the theories students have generated to explain various phenomena, behaviors, interactions—theories that are wrong from the adult perspective (Brooks, 1990). Although their thinking may be creative, it may be based on faulty assumptions, lack of information, or incorrect data. As Anderson and Pearson (1984) stated, the teaching task is to help students to actively construct meaning by integrating new information from a text with their background knowledge (as cited in Daisey, 1994b, p. 170).
Both language arts and environmental education involve processes of interactive-constructive critical thinking and reasoning skills such as "establishing plans, drawing conclusions, evaluating sources, evaluating understanding, forming hypotheses, describing patterns, making inferences, engaging prior knowledge, comparing and contrasting, finding the relative importance of information, generalizing, and so on" (as cited in Dickson, 1995, p. 192). As Miller et al. stated, "by using children's literature as an integrative teaching strategy, [teachers] can offer students the chance to work through a needed conceptual change and to achieve a deeper understanding of scientific concepts" (as cited in Miller et al.). Trade books are a vehicle to incorporate reading skills, writing skills, and environmental education and allow students opportunities to construct meaning out of new information. According to Dickson (1995), who calls trade books as real books:

"Real books" provide relevant, interesting, and intellectually provocative material for students' enjoyment and, more importantly, understanding.... When children are faced with new and unfamiliar information, they can construct meaning by using a variety of strategies. These strategies can be best learned in areas that allow them to construct meaning by using the text, prior knowledge, and purpose. The content-area subjects are where they actually encounter meaningful information. (p. 192)

Using a variety of materials allows students to study a topic in greater depth and/or breadth, correct misconceptions, and construct meaningful understandings.
Teaching methods

Whole language instruction places teachers and learners at the center of the instructional process. It connects teachers and learners to different kinds of content through exploration of integrated thematic units (Moss & Noden, 1995). "The use of themes across the curriculum areas adds meaning and purpose" (Stoner, 1990, p. 79). Thematic teaching has the potential for bringing more authentic or meaningful reading activities to the classroom. Direct instruction offers the structure for students to learn efficiently and effectively. Crook and Lehman (1990) asserted that direct instruction "stresses the importance of an academic focus, pupil-engaged time-on-task, close teacher monitoring, and corrective feedback" (p. 22). Joyce (1986) reviewed and explained the phases of direct instruction as

- The teacher prepares students by giving background information, uncovering the rationale, and establishing the set.
- The teacher models the skill so students know exactly what to do.
- The teacher structures initial practice.
- The teacher monitors student performance and provides feedback.
- The teacher establishes guidelines for extended practice, especially practice to facilitate transfer. (as cited in Crook & Lehman, 1990, pp. 22-23)

The inclusion of guided practice, the specification of identifiable goals and objectives, and the use of teacher-directed activities to attain these goals can enhance the instructional potential of literature-based methods
Language arts skills and environmental education themes from trade books can be reinforced with teaching strategies, such as guided practice and hands-on experiences. Reading strategies, such as graphic organizers and classification diagrams help students visually construct relationships among words and concepts (Bristor, 1994). "When children are exposed to books with new and different words, their knowledge of new words is expanded by the context of the story and the concepts illustrated" (Danielson, 1990, p. 220). Comprehension can be fostered through the use of graphic organizers which displays a reader's reconstruction of key text concepts (Bean, 1995). Klesius and Klesius (1989) reported on how "discussion categorization and frequent writing opportunities are also beneficial, providing a breadth of experiences with new words" (as cited in Danielson, p. 220). Another effective comprehension and writing strategy is the Know--Want to Know--Learned (KWL) chart. Students state what they "know" at the beginning of a lesson or thematic unit, then suggest what they want to know about the theme through questioning, and restate what they learned at the end of the lesson or unit (Gee & Olsen, 1992; Miller et al., 1996). Children record information on a worksheet to reinforce their reading, discussions, note-taking and research activities. As Bristor's (1994) study reported, reading/language arts skills-based objectives can be taught within science curriculum as:
They were naturally embedded within the science text.... Identifying the main idea, using context clues to determine word meanings, identifying cause and effect, punctuation, capitalizations, and other reading/language arts skills were more relevant and motivating when conducted in the context of meaningful activities and purposeful reading. (p. 33)

Writing skills, typically seen as the domain of the language arts teacher, can be taught across the content areas. Trade books play a special role in bridging language arts and science instruction. "Readers are often inspired to write about literature they enjoy....Both prose and poetry are ways of reacting to reading by writing" (Koeller, 1996, p. 101). Students are able to imagine the plight of a bird during stormy weather, write a short story about their imagined experience, and draw a picture depicting a moment from the storm with the particular bird they have chosen to visualize. "Sharing visual images may help students relate their own experiences to the text as well as build new images based on their classmates’ experiences" (Gee & Olson, 1992, p. 14). Also, students’ poetry can demonstrate knowledge of science concepts as well as command of specific language arts skills. "Concrete poetry allows children to visualize words in new ways" (Sandel, 1990, p. 212). Language arts teachers can use concrete poetry as a vehicle to express important environmental concepts found within trade books. Likewise, science teachers can reinforce important concepts introduced by the trade book using an interesting and thought-provoking form of poetry.
Direct instruction is an effective way of incorporating trade books into the science and language arts curriculum. There are endless possibilities and reasons to integrate trade books, language arts skills, and environmental education. As Moss and Noden (1995) stated, with the help of high-quality trade books, teachers and students can explore and experiment with many kinds of literature, and literacy learning can be linked with life experiences, thereby expanding students' in depth understanding of a wide range of topics and heightening the probability of creating students who love literature and become lifelong readers. (p. 726)
GOALS AND OBJECTIVES

The goal of this project was to create a literature-based, thematic unit for middle school grades using environmentally-related children’s literature. The purpose of the unit was to assist children in reinforcing language arts skills, developing descriptive and creative writing skills, and fostering environmental awareness, attitudes, knowledge, and responsible action.

This goal was achieved in the following manner:

1. Develop a thematic unit covering language arts basic skills such as using the dictionary, similes and metaphors. Descriptive and creative writing skills included clustering, short story, research and tabled information, and concrete poetry. Environmental themes included natural habitat, water quality and conservation, and diversity and were reinforced through role-playing, research, observation of plot for analysis of interrelationships, journal writing, simulated migration, and simulated field trip. An environmentally-related children’s book was selected to incorporate language arts skills and writing activities. The unit also included contemporary environmental education activities to reinforce environmental themes found within the children’s literature.
2. Have reviewed by a colleague of the writer and advisor.

3. Field test these activities in the writer’s and a colleague’s classroom. Modifications were made to some of the lessons.
DESIGN OF PROJECT

The thematic unit includes language arts skills, writing activities, and environmental education activities to introduce students to and reinforce concepts found within the environmentally-oriented trade book, *Bird Watch*, by Jane Yolen (1990). Areas of focus include natural habitat, water quality and conservation, and diversity. Curricular areas include science; social studies; language arts, including basic skills, writing, and poetry; mathematics; physical education; art; health; home economics; industrial arts.

A diverse array of curriculum guides relating to language arts and environmental education were obtained and reviewed for relevance to the use of language and environmental themes within *Bird Watch*. Most of the language arts basic skills and writing activities were modified from their original source.

Six environmental activities were adapted from curriculum guides available through workshops. Two activities were selected from each of the following curriculum guides: *Project Learning Tree* (American Forest Foundation, 1994), *Project WILD* (Western Regional Environmental Education Council, 1992), and *Project WILD: Aquatic* (Western Regional Environmental Education Council, 1987).

Numerous children's trade books were perused by the
writer for their ability to convey language arts concepts and environmental themes. *Bird Watch* is a collection of poems which describe a variety of birds, their habitats, and activities. Lessons for appropriate cross-curricular activities were selected to reinforce and to extend language arts and environmental themes in children's literature.

The unit consists of lesson plans to be used in conjunction with *Bird Watch*. Listed within are goals, objectives, and strategies for the middle school teacher to reinforce language arts basic skills, writing skills, and environmental education. The individual lesson plans include background information and instructions for the basic skills, writing, and environmental activities.

The lesson plans, list of curricular guides from which the lesson were taken, and audio selections appear in the appendixes.
RESULTS

The writer field tested the unit in her seventh grade English and history classroom and a colleague's seventh and eighth grade classroom. The field test data was used to modify the final lessons of the unit.

Students preferred the hands-on activities, and enjoyed the environmental education lessons, especially since the content deviated from the seventh grade core curriculum. Numerous students enjoyed leaving the traditional classroom for the out-of-doors classroom when participating in the environmental education activities. Both groups of students did not initially have a high level of environmental awareness and there appeared to be changes in attitude and willingness to take action. During the "Are Vacant Lots Vacant?" presentations, one group of students displayed their letter to the city of Victorville which urged the preservation and care of the desert habitat near the front of our school. Students seemed to be able to empathize with wildlife during the Stormy Weather simulated field trip. After physically migrating themselves in an activity, students' comments indicated that they understood the value of habitat for migratory birds. One student commented, "I never imagined all the stuff that birds went through flying from Mexico to Canada." On the environmental education exit survey, approximately 78% of the students agreed with the statement, "I would like to take a field trip in March to
the Big Bear Bald Eagle Reserve to participate in the annual
counting of the migratory flock of bald eagles."

Some students favored the language arts activities
incorporating Bird Watch and environmental education.
Several creative assignments were favored by students: Stormy
Weather Short Story, accompanying illustration, and various
forms of poetry. Students enjoyed exploring how trade books
added to their education.
Teachers have many concerns when considering including environmental education into the curriculum. Monroe and Cappaert (1994) suggested the reasons to be: time spent on non-instructional routines, behavior management, and social activity. Most of the remaining time is committed to core disciplines: math, language arts, social studies, science, health, and physical education. Special disciplines take up "extra" time: art, home economics, and music. Many teachers see environmental education as another subject to add to their curriculum.

The project has addressed these concerns, combining children's environmentally-oriented literature with language arts basic skills, writing, and environmental education activities. The curriculum developed is cross-curricular and thematic to reinforce and to extend language arts and environmental themes in children's literature. Contained within the lessons are all necessary background information and instructions for the basic skills, writing, and environmental activities.

Throughout the school year, many teachers focus on similar objectives to the ones described in this project. After reading Bird Watch, the curriculum can assist teachers in strengthening basic skills, writing skills, and reinforcing environmental themes as a unit or separately from
the rest. Accordingly, the unit can aid in lessons and activities from which a teacher may choose to add to their curriculum.
APPENDIX A

LANGUAGE ARTS

ACTIVITIES FOR

BIRD WATCH
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## LANGUAGE ARTS ACTIVITIES

for *Bird Watch*

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KNOW—WANT TO KNOW—LEARNED CHART (KWL CHART)

PURPOSE: Students will organize prior knowledge, questions, and newly learned information on a chart.

OBJECTIVE: To state knowledge about birds before reading Bird Watch, to write questions students expect to answer as they read about birds, and to review learned material after the Bird Watch unit.


STRATEGY: Students begin Bird Watch unit by brainstorming and writing down what they know about birds and their habitats. Then, they develop questions they expect to answer after reading Bird Watch. Finally, students review the poems along with additional resources to restate what they learned at the end of the unit.

INSTRUMENT OF MEASURE: Students' completed KWL Chart at the end of the Bird Watch unit.

ACTIVITY:
• At the beginning of the Bird Watch unit, hand out the KWL Charts.
• Ask students to state what they know about birds and their habitats. Students should spend several minutes brainstorming and writing down answers in the "What I Know" column.
• Before reading the book or beginning the research project, have students brainstorm about what they want to know about birds and write questions they expect to answer as students progress through the unit. These questions go in the "What I Want To Know" column.
• After reading Bird Watch and finishing the research project, students recapitulate that they learned from the poems and additional learning resources.
## KWL Chart

<table>
<thead>
<tr>
<th>WHAT I KNOW</th>
<th>WHAT I WANT TO KNOW</th>
<th>WHAT I LEARNED</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

29
WORD CLASSIFICATION: *Bird Watch*

PURPOSE: Students will use classification skills to group words.

OBJECTIVE: To classify words into groups with common characteristics.


STRATEGY: Students read a list of words to introduce them to *Bird Watch*, and classify them into groups with common characteristics.

INSTRUMENT OF MEASURE: Accurate groupings of words must be monitored.

ACTIVITY:

- Distribute worksheet to students to introduce some of the words from *Bird Watch*.
- Challenge students to find as many ways as they can to classify the words into groups with common elements or characteristics.
- Inform students they may use any word in more than one group.
WORD CLASSIFICATION: Bird Watch

The words below are from the book of poetry, Bird Watch. Study them and find as many ways as you can to classify them into groups with common characteristics. You may use any word in more than one group. Two examples have been done for you.

1. rainbow  
2. palisade  
3. noble  
4. harvest  
5. raucous  
6. accepts  
7. eagerly  
8. gambler  
9. frantic  
10. seeds  
11. feeder  
12. beggar  
13. furrows  
14. applause  
15. honks  
16. insects  
17. squawk  
18. hover  
19. diligent  
20. maple  

adjectives

21. besieged  
22. conversations  
23. pine  
24. functional  
25. competent  
26. subtle  
27. plumage  
28. mallard  
29. beautiful  
30. fleeting  
31. jackhammer  
32. scattered  
33. bicycle  
34. practical  
35. homeward  
36. inelegant  
37. refract  
38. marbleized  
39. farmland  
40. arena

3-syllable words

41. calligraphy  
42. wellsight  
43. classical  
44. showy  
45. half-nelson  
46. hummingbird  
47. punctuation  
48. brilliant  
49. salutation  
50. Oklahoma  
51. eavesdropping  
52. nestlings  
53. geological  
54. fragile  
55. solitary  
56. ratatatatat  
57. metamorphosis  
58. capable  
59. pencil-line  
60. glade

6, 44, 53, 57

2, 7, 19, 24, 25, 29, 34, 37, 43, 59

<table>
<thead>
<tr>
<th>adjectives</th>
<th>3-syllable words</th>
</tr>
</thead>
<tbody>
<tr>
<td>besieged</td>
<td>calligraphy</td>
</tr>
<tr>
<td>conversations</td>
<td>wellsight</td>
</tr>
<tr>
<td>pine</td>
<td>classical</td>
</tr>
<tr>
<td>functional</td>
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<td>competent</td>
<td>half-nelson</td>
</tr>
<tr>
<td>subtle</td>
<td>hummingbird</td>
</tr>
<tr>
<td>plumage</td>
<td>punctuation</td>
</tr>
<tr>
<td>mallard</td>
<td>brilliant</td>
</tr>
<tr>
<td>beautiful</td>
<td>salutation</td>
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<tr>
<td>fleeting</td>
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</tr>
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<td>jackhammer</td>
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</tr>
<tr>
<td>bicycle</td>
<td>geological</td>
</tr>
<tr>
<td>practical</td>
<td>fragile</td>
</tr>
<tr>
<td>homeward</td>
<td>solitary</td>
</tr>
<tr>
<td>inelegant</td>
<td>ratatatatat</td>
</tr>
<tr>
<td>refract</td>
<td>metamorphosis</td>
</tr>
<tr>
<td>marbleized</td>
<td>capable</td>
</tr>
<tr>
<td>farmland</td>
<td>pencil-line</td>
</tr>
<tr>
<td>arena</td>
<td>glade</td>
</tr>
</tbody>
</table>
USING THE DICTIONARY

PURPOSE: Students will demonstrate understanding the parts of the dictionary and correct pronunciation of words.

OBJECTIVE: To write answers relating to words from the book, *Bird Watch*.

STRATEGY: Students respond to five exercises on using the dictionary: guide words, definition, syllabification, alphabetical order, and pronunciation.

INSTRUMENT OF MEASURE: Students' correct responses for dictionary answers and accurate pronunciation of seven words.

ACTIVITY:

- Distribute dictionaries to students.
- Discuss the parts of the dictionary needed in completing the worksheet. Use a page from the dictionary as a model. Review examples of guide words, definition, syllabification, alphabetical order, and pronunciation.
- Have students record their answers on the worksheet.
- Have students individually pronounce the words for the teacher.
USING THE DICTIONARY

Directions: Complete the following sections using a dictionary to check your answers.

1. Circle the pair of guide words that would be listed on the page where these words are found:
   - raccoon  -rabbit--razor
   - race--reach
   - habitat  -habitation--haggard
   - haberdasher--halcyon

2. Look up these words and write the definition for each on the line.
   - plumage
   - subtle
   - palisade

3. Divide these words into syllables using a dot to separate each one.
   - mallard
   - salutation
   - calligraphy

4. Rewrite each list of four words in alphabetical order.
   1. solitary
   2. salutation
   3. besieged
   4. subtle
   1. furrows
   2. refracting
   3. diligent
   4. palisade

5. Pronounce these words for the teacher.
   - ke-hohl
   - faz
   - skip-ər
   - swamp
   - mir-ər
   - her-on
   - rid-əl
USING THE DICTIONARY: ANSWER KEY

Directions: Complete the following sections using a dictionary to check your answers.

1. Circle the pair of guide words that would be listed on the page where these words are found:
   raccoon -rabbit--razor
   -race--reach
   habitat -habitation--haggard
   -haberdasher--halcyon

2. Look up these words and write the definition for each on the line.
   plumage _ the feathers of a bird
   subtle _ fine or delicate in meaning
   palisade _ a cliff

3. Divide these words into syllables using a dot to separate each one.
   mallard _ mal.lard
   salutation _ sal.u.ta.tion
   calligraphy _ cal.li.g.ra.phy

4. Rewrite each list of four words in alphabetical order.
   1. solitary _ besieged _ 1. furrows _ diligent _
   2. salutation _ salutation _ 2. refracting _ furrows _
   3. besieged _ solitary _ 3. diligent _ palisade _
   4. subtle _ subtle _ 4. palisade _ refracting _

5. Pronounce these words for the teacher.
   □ ke-hohl (keyhole)
   □ faz (faze)
   □ skip-3r (skipper)
   □ swamp (swamp)
   □ mir-3r (mirror)
   □ her-3n (heron)
   □ rid-3l (riddle)
DESIGN A DICTIONARY PAGE

PURPOSE: Students will demonstrate dictionary skills by selecting words from a given list and writing dictionary entries for those words.

OBJECTIVE: To write dictionary entries for seven of the eleven vocabulary words from Bird Watch in the appropriate dictionary form with an illustration of one of the words.

STRATEGY: Students select seven words to write complete dictionary entries on the worksheet, including an illustration of one of the words.

INSTRUMENT OF MEASURE: Students will complete seven appropriate dictionary entries, including all the parts used in a dictionary page, such as main entry word, pronunciation, definition, illustration (for one of the words), and part of speech.

ACTIVITY:

• Have students select seven words from the vocabulary list for the dictionary page.

• Distribute dictionaries and worksheets to students.

• Discuss main entry word, pronunciation, part of speech, definition, and illustration using a page from the dictionary as a model.

• Refer to the worksheet example.

• Have students share dictionary entries and their illustrations of an entry.
DESIGN A DICTIONARY PAGE

Directions: Select seven of the eleven vocabulary words for your dictionary page. Complete the worksheet by including the parts used in a dictionary page, such as the main entry word, pronunciation, definition, illustration (for one of the words), and part of speech.

<table>
<thead>
<tr>
<th>solitary</th>
<th>palisade</th>
</tr>
</thead>
<tbody>
<tr>
<td>besiege</td>
<td>furrow</td>
</tr>
<tr>
<td>calligraphy</td>
<td>subtle</td>
</tr>
<tr>
<td>salutation</td>
<td>ligament</td>
</tr>
<tr>
<td>plumage</td>
<td>refracting</td>
</tr>
<tr>
<td>diligent</td>
<td></td>
</tr>
</tbody>
</table>

besiege (bi sej) vt. 1. to surround with armed forces 2. a. to press with requests 2. b. to overwhelm

illustration title:
CHOOSING AMONG RESOURCES AND Bird Watch

PURPOSE: Students will identify resource materials as sources of information.

OBJECTIVE: To identify types of resource materials from a chart.


STRATEGY: Students evaluate sentences and choose the correct resource material from the chart.

INSTRUMENT OF MEASURE: Students' correct resource material choices.

ACTIVITY:

- Ask students where would they find local news? What about the call of the Great Blue Heron? Or the location of Telluride? (newspaper, field guide, and atlas)
- Discuss several resource materials found in the library:
  - Almanac: yearly publication of important descriptions, statistics, and information on many different subjects.
  - Dictionary: definitions, pronunciations, parts of speech.
  - Encyclopedia: in-depth information about topics, listed in alphabetic order.
  - Field Guide: in-depth information about specific animals, including physical characteristics, habitat, and migration.
  - Atlas: maps, highways, location of places and geographical information.
  - Newspaper: daily/weekly information on a local, regional, or national level.
- Distribute the worksheet and answer any questions.
CHOOSING AMONG RESOURCES AND Bird Watch

As you are learning about the library, you will find out about several kinds of resource materials. It is important to know the kind of information you can find in each resource book. Study the chart.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Kind of Information Given</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almanac</td>
<td>yearly publication of important descriptions, statistics, and information on different subjects</td>
</tr>
<tr>
<td>Dictionary</td>
<td>definitions, pronunciations, parts of speech</td>
</tr>
<tr>
<td>Encyclopedia</td>
<td>in-depth information about topics, listed in alphabetical order</td>
</tr>
<tr>
<td>Field Guide</td>
<td>in-depth information about animals, including physical characteristics, habitat, migration, and call</td>
</tr>
<tr>
<td>Atlas</td>
<td>maps, highways, location of places and geographical information</td>
</tr>
<tr>
<td>Thesaurus</td>
<td>synonyms/antonyms</td>
</tr>
<tr>
<td>Newspaper</td>
<td>daily/weekly information on a local, regional, or national level</td>
</tr>
</tbody>
</table>

Complete the sentences below with one of the resources from the chart.
1. “How do you define the word ‘palisade’?” ___________________________________________
2. “What were the number of swallows that returned to San Juan Capistrano last year?” ___________________________________________
3. “Where do you find the call of a turkey?” ___________________________________________
4. “I need a word that means changing.” ___________________________________________
5. “Which Canadian province borders Montana?” _______________________________________
6. “How much farmland was lost to erosion last year?” ___________________________________________________________
7. “I’m reading an editorial on illegal bird trading.” ________________________________________________
8. “I need to research information on birds.” ________________________________________________
As you are learning about the library, you will find out about several kinds of resource materials. It is important to know the kind of information you can find in each resource book. Study the chart.

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Complete the sentences below with one of the resources from the chart.

1. “How do you define the word ‘palisade’?” Dictionary

2. “What were the number of swallows that returned to San Juan Capistrano last year?” Almanac

3. “Where do you find the call of a turkey?” Field guide

4. “I need a word that means changing.” Thesaurus

5. “Which Canadian province borders Montana?” Atlas

6. “How much farmland was lost to erosion last year?” Almanac

7. “I’m reading an editorial on illegal bird trading.” Newspaper

RESEARCH CHART for Bird Watch

PURPOSE: Students will learn about specific physical characteristics associated with birds.

OBJECTIVE: To research and chart information gathered about birds chosen from the book, Bird Watch.

STRATEGY: Students write facts concerning the appearance, foods, habitat, migration, and call of specified birds.

INSTRUMENT OF MEASURE: Completion of research chart, with attention drawn to the accuracy of details.

ACTIVITY:

• Decide and discuss criteria for appearance, foods, habitat, migration, and bird call.

• Ask students for different resource materials used to research information concerning birds. Sources include encyclopedia, dictionary, and field guides. Some libraries have resource materials located electronically on CD ROM.

• Students have a week to complete the research of various characteristics.
## RESEARCH CHART FOR Bird Watch

Directions: over the next week, research each bird and fill in the various characteristics. Use resources materials such as the encyclopedia, dictionary, field guides, and CD ROM.

<table>
<thead>
<tr>
<th>Name of bird</th>
<th>Appearance</th>
<th>Foods</th>
<th>Habitat</th>
<th>Migration</th>
<th>Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada Geese</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mallard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodpecker</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great Blue Heron</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Killdeer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goldfinch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barn Swallow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruby-Throated Hummingbird</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Bird Watch SYNONYMS/ANTONYMS

PURPOSE: Students will demonstrate knowledge of synonyms and antonyms through a series of exercises.

OBJECTIVE: To identify synonyms and antonyms in four different exercises.

STRATEGY: Students demonstrate knowledge of synonyms by drawing a line from a word to its synonym, and also underlining the synonym pairs in a set of sentences. Students demonstrate knowledge of antonyms by choosing the antonym from the box and writing it on the line, and also circling the letter of the antonym.

INSTRUMENT OF MEASURE: Students must draw lines, circles, and write correct answers legibly on the worksheet.

ACTIVITY:

• Distribute worksheets to students.
• Discuss the definitions of synonyms and antonyms.
• Demonstrate examples of synonyms and antonyms.
  For example,
  - eager is similar to the word anxious;
  - eager is opposite of the word inactive.

• Elicit examples from the students and monitor for accuracy.
• Have students record their answers on the worksheet.


Bird Watch SYNONYMS/ANTONYMS

Synonyms are words that have similar meanings. Antonyms are words that have opposite or nearly opposite meanings.

A. Draw a line from the word on the left to its synonym on the right. Then choose a word from the box that is the antonym and write it on the line under “Antonym.”

1. calligraphy — groove
2. palisade — handwriting
3. besiege — obscure
4. furrow — attack
5. solitary — cliff
6. subtle — busy
7. salutation — bend
8. plumage — alone
9. refract — feathering
10. diligent — greeting

SYNONYM

ANTONYM

B. Underline the synonym pairs in each set of sentences.

11. The pioneers worked hard. They were diligent at razing the land.

12. The palisade stopped abruptly. No vegetation grew on the cliff.

C. Find the antonym to each underlined word. Circle its letter.

13. When the mother arrived at the nest, the fledglings were eager.
   a. anxious    b. keen    c. inactive

14. The bicycle was a practical investment for the messenger.
   a. useful    b. unrealistic    c. wise
**Bird Watch SYNONYMS/ANTONYMS**

Synonyms are words that have similar meanings. Antonyms are words that have opposite or nearly opposite meanings.

A. Draw a line from the word on the left to its synonym on the right. Then choose a word from the box that is the antonym and write it on the line under “Antonym.”

<table>
<thead>
<tr>
<th>straight</th>
<th>retreat</th>
<th>together</th>
<th>flat</th>
<th>obvious</th>
</tr>
</thead>
<tbody>
<tr>
<td>goodbye</td>
<td>hair</td>
<td>idle</td>
<td>delta</td>
<td>typing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>SYNONYM</th>
<th>ANTONYM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>calligraphy</td>
<td>groove</td>
</tr>
<tr>
<td>2.</td>
<td>palisade</td>
<td>handwriting</td>
</tr>
<tr>
<td>3.</td>
<td>besiege</td>
<td>obscure</td>
</tr>
<tr>
<td>4.</td>
<td>furrow</td>
<td>attack</td>
</tr>
<tr>
<td>5.</td>
<td>solitary</td>
<td>cliff</td>
</tr>
<tr>
<td>6.</td>
<td>subtle</td>
<td>busy</td>
</tr>
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<td>7.</td>
<td>salutation</td>
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<td>8.</td>
<td>plumage</td>
<td>alone</td>
</tr>
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<td>9.</td>
<td>refract</td>
<td>feathering</td>
</tr>
<tr>
<td>10.</td>
<td>diligent</td>
<td>greeting</td>
</tr>
</tbody>
</table>

B. Underline the synonym pairs in each set of sentences.

11. The pioneers worked **hard**. They were **diligent** at razing the land.

12. The **palisade** stopped abruptly. No vegetation grew on the **cliff**.

C. Find the antonym to each underlined word. Circle its letter.

13. When the mother arrived at the nest, the fledglings were **eager**.
   a. anxious  b. keen  c. inactive

14. The bicycle was a **practical** investment for the messenger.
   a. useful  b. unrealistic  c. wise
PURPOSE: Students will demonstrate knowledge of synonyms through process of elimination.

OBJECTIVE: To analyze synonym choices and eliminate one word from the list of possible synonym choices.

STRATEGY: Students read a vocabulary term from *Bird Watch* and eliminate one of the three choices of possible synonyms next to the term.

INSTRUMENT OF MEASURE: Students' eliminated synonym responses must be crossed out, leaving only two synonyms remaining.

ACTIVITY:
- Distribute thesauruses and worksheets to students.
- Discuss the definition of synonyms and the purpose of a thesaurus.
- Review specific worksheet directions with the students.

EXTENSION:
- Allow students to choose new words from *Bird Watch* to create a synonym list.
Bird Watch SYNONYMS

The book of poetry, Bird Watch, is full of useful vocabulary. You already know many of these words. You have also seen synonyms for these words in other pieces of literature. Other words on the list you may not recognize but they are in the thesaurus provided for you. Look under the main word to see if an unfamiliar word is listed as a possible synonym.

Look at the word on the left. Then read the group of three words on the right and cross out the word which is not a synonym for the word on the left. Look up the word on the left if you encounter an unfamiliar word on the right side; it may be listed as a possible synonym.

<table>
<thead>
<tr>
<th>SYNONYMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. spare extra insufficient excess</td>
</tr>
<tr>
<td>2. conversation dialogue colloquy monologue</td>
</tr>
<tr>
<td>3. raucous inharmonious cacophonous pleasing</td>
</tr>
<tr>
<td>4. dusk dawn nightfall twilight</td>
</tr>
<tr>
<td>5. crumple crinkle decay ruffle</td>
</tr>
<tr>
<td>6. solitary alone hermit cluster</td>
</tr>
<tr>
<td>7. against proponent opponent counter</td>
</tr>
<tr>
<td>8. besiege attack beset retreat</td>
</tr>
<tr>
<td>9. unfinished concluded uncompleted fragmented</td>
</tr>
<tr>
<td>10. motionless stagnate petrified progress</td>
</tr>
<tr>
<td>11. palisade delta cliff precipice</td>
</tr>
<tr>
<td>12. furrow groove level ridge</td>
</tr>
<tr>
<td>13. eavesdropped monitored questioned listened</td>
</tr>
<tr>
<td>14. drawl drone enunciate intone</td>
</tr>
<tr>
<td>15. frantic collected distraught frenzied</td>
</tr>
<tr>
<td>16. eager anxious keen inactive</td>
</tr>
<tr>
<td>17. refracting bending straightening distorting</td>
</tr>
<tr>
<td>18. plumage hair feathering down</td>
</tr>
<tr>
<td>19. hover poise resolution vacillate</td>
</tr>
<tr>
<td>20. scatter dissipate disseminate assemble</td>
</tr>
</tbody>
</table>

46
Bird Watch SYNONYMS

The book of poetry, *Bird Watch*, is full of useful vocabulary. You already know many of these words. You have also seen synonyms for these words in other pieces of literature. Other words on the list you may not recognize but they are in the thesaurus provided for you. Look under the main word to see if an unfamiliar word is listed as a possible synonym.

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| 1. spare | extra | insufficient | excess |
| 2. conversation | dialogue | colloquy | monologue |
| 3. raucous | inharmonious | cacophonous | pleasing |
| 4. dusk | dawn | nightfall | twilight |
| 5. crumple | crinkle | decay | ruffle |
| 6. solitary | alone | hermit | cluster |
| 7. against | proponent | opponent | counter |
| 8. besiege | attack | beset | retreat |
| 9. unfinished | uncompleted | fragmented | progress |
| 10. motionless | stagnate | petrified | precipice |
| 11. palisade | delta | cliff | precipice |
| 12. furrow | groove | level | ridge |
| 13. eavesdropped | monitored | questioned | listened |
| 14. drawl | drone | enunciate | intone |
| 15. frantic | collected | distraught | frenzied |
| 16. eager | anxious | keen | inactive |
| 17. refracting | bending | straightening | distorting |
| 18. plumage | hair | feathering | down |
| 19. hover | poise | resolution | vacillate |
| 20. scatter | dissipate | disseminate | assemble |
INTRODUCTION TO FIGURATIVE LANGUAGE

PURPOSE: Students will transfer the skill of using vivid examples for overused expressions.

OBJECTIVE: To write creative examples of commonly used expressions.


STRATEGY: Students write eleven new, colorful replacements for the given colorless replacements: "dry as your mouth after eating peanut butter" or "strong as Space Shuttle jets."

Encourage students to bring little to these sayings by creating new colorful replacements to bring life to these sayings by creating new.

Activity:

• Share examples of overused expressions with the class, such as "dry as a bone," or "strong as an ox."

• Distribute worksheets and allow students ample time to finish writing creative examples of figurative language.

INSTRUMENT OF MEASURE: Examples of new expressions must retain the key ideas from the original and have a new example.

STRATEGY: Students write eleven new, colorful replacements for the given expressions. Writing a connection to the given expressions.


OBJECTIVE: To write creative examples of commonly used expressions.

PURPOSE: Students will transfer the skill of using vivid examples for overused expressions.
INTRODUCTION TO FIGURATIVE LANGUAGE

Figurative language is a writer's use of words or expressions that have a meaning separate from the actual meaning of each word.

Read these overused expressions. Think of colorful, vivid replacements for those expressions and write them on the line. A sample answer is done for you.

1. dry as a bone
   dry as your mouth after eating peanut butter

2. smelling like a rose

3. it was raining cats and dogs

4. a fair weather friend

5. a snake in the grass

6. light as a feather

7. chicken-hearted

8. cold as ice

9. cat's got your tongue

10. strong as an ox

11. free as a bird
THE FIGURATIVE LANGUAGE OF Bird Watch.

PURPOSE: Students will demonstrate understanding of metaphor, simile, and personification.

OBJECTIVE: To identify examples of personification, simile, and metaphor found within quotations from Bird Watch.

STRATEGY: Students read examples of figurative language from Bird Watch and underline the metaphor or simile in ten sentences, and circle the personification in three other sentences.

INSTRUMENT OF MEASURE: Students underline the things being compared (metaphor or simile). They circle the animal being personified and underline the human qualities or actions given to it.

ACTIVITY:

· Discuss figurative language:
  metaphor: a word or phrase is used in place of another to suggest a likeness or analogy between the them (as in "the ship plows the sea.")
  simile: comparing two unlike things that is often introduced by like or as (as in "cheeks like roses.")
  personification: representation of a thing or animal as a person (as in "the friendly smile of the hyena.")

· Elicit examples of personification, metaphor, and simile from the students.

· Distribute worksheets and explain that the examples are quotations from Bird Watch.
THE FIGURATIVE LANGUAGE OF Bird Watch.

Authors, such as Jane Yolen, use figurative language to create vivid images. Good images are important because they are unusual. Similes and metaphors make dramatic comparisons between things that are not usually thought of as alike. Similes are often introduced by the words like or as. A metaphor is when a word or phrase is used in place of another word to suggest a likeness. Personification shows animals and things as having human characteristics.

A. Each of these sentences has a metaphor or simile in it. Underline the two things being compared. A sample sentence is completed for you.

1. "The killdeer walked the rows, brown heads nodding over their striped bibs like satisfied farmers counting the harvest."

2. "A hummingbird over a flower's invitation."

3. "As puffed up as a tag-team wrestler, [the robin] hops around the arena of our lawn."

4. "But frantic as a pup, a swallow follows at my diligent heels."

5. "The corn stalks thrust through the crumpled earth like posts in a deserted palisade."

6. "Finding a worm, [the robin] slips a half-nelson on its slim wriggle."
7. "It flew up from the dried grass into the window glass and, surprised by the hard air, fell back against the land."

8. "Starlings are the half notes, finches the quarters, and hummingbirds, as brief grace notes, hover on the edges of a tune." (There are three metaphors in this example.)

9. "He turns up at my feeder in his winter wings, shabby as a beggar on a city street."

10. "Along the wires, like scattered notes on lines of music, sit a row of birds."

B. In *Bird Watch*, personification shows animals as having human characteristics. Circle the animal being personified in each quotation. Underline the human qualities or actions given to it. Some quotations have more than one example of personification.

11. "From the lake laughs the last joke of a solitary loon."

12. "One pull, two, three, and the worm is up, and then down for the count, down [the robin's] winning throat. He bobs his head for my applause, then looks for another worm."

13. "Now scientists say that a person can know where a bird comes from by the sound of its crow. Maybe one of mine had a Southern drawl. Maybe one was a Yankee with a Boston call."
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THE FIGURATIVE LANGUAGE OF "Woodpecker"

PURPOSE: Students will develop the skills to identify the comparative elements found within similes and metaphors.

OBJECTIVE: To write the behaviors and qualities which are being compared in similes and metaphors.

STRATEGY: Students analyze the quality of the woodpecker’s behavior and identify what the quality is being compared to.

INSTRUMENT OF MEASURE: Completion of "Woodpecker" worksheet, including specific identification of the woodpecker’s behavior and the compared quality.

ACTIVITY:

- Discuss with students the figure of speech known as similes which use the words like or as to convey a comparison.
- Give examples of common similes (as hungry as a bear, as sly as a fox, he flies like the wind) and explain the qualities of each simile which are being compared.
- Have students give examples of their similes (created or remembered). Review the qualities being compared.
- Students finish the "Woodpecker" worksheet in cooperative teams.
THE FIGURATIVE LANGUAGE OF "Woodpecker"

Directions: The following similes, using like or as, are found in Jane Yolen's poem, "Woodpecker" from Bird Watch. In this exercise, first write down the quality of the woodpecker's behavior which is being described. Then, identify what the quality is being compared to.

Example: His swift ratatatatat is as casual as a jackhammer on a city street.
A. Quality: Casual, normal feeding behavior.
B. Comparison: Using a noisy jackhammer on a city street.

HIS SWIFT RATATATATAT IS...

1. as thorough as an oil drill on an Oklahoma well site.
A. Quality
B. Comparison

2. as fine as a needle in a record groove.
A. Quality
B. Comparison

3. as cleansing as a dentist's probe in a mouthful of cavities.
A. Quality
B. Comparison

4. as final as a park attendant's stick on a lawn of litter.
A. Quality
B. Comparison

Directions: The following sentence contains the metaphor of the poem. A metaphor is when one thing becomes another, without using like or as. Can you figure out what words are being used in place of the bird's behavior and/or what the behavior is likened to?

"He finishes his work/ on the maple tree,/ then wings off again to the pine,/ leaving his punctuation/ along the woody line."
Directions: The following similes, using like or as, are found in Jane Yolen’s poem, “Woodpecker” from *Bird Watch*. In this exercise, first write down the quality of the woodpecker’s behavior which is being described. Then, identify what the quality is being compared to.

Example: His swift ratatatatat is as casual as a jackhammer on a city street.
A. Quality: Casual, normal feeding behavior.
B. Comparison: Like using a noisy jackhammer on a city street.

HIS SWIFT RATATATAT AT IS...

1. as thorough as an oil drill on an Oklahoma well site.
   A. Quality: Being thorough, or very complete.
   B. Comparison: Like drilling oil on an Oklahoma well site.

2. as fine as a needle in a record groove.
   A. Quality: Fine (keen or sharp, as a tool).
   B. Comparison: Like a sharp needle in the groove of a record album.

3. as cleansing as a dentist’s probe in a mouthful of cavities.
   A. Quality: Cleansing (to thoroughly clean).
   B. Comparison: Like a dentist’s probe cleaning a mouthful of cavities.

4. as final as a park attendant’s stick on a lawn of litter.
   A. Quality: Final (a conclusive or decisive ending).
   B. Comparison: Litter being stuck onto the stick of a park attendant.

Directions: The following sentence contains the metaphor of the poem. A metaphor is when one thing becomes another, without using like or as. Can you figure out what words are being used in place of the bird’s behavior and/or what the behavior is likened to?

“He finishes his work/ on the maple tree,/ then wings off again to the pine,/ leaving his punctuation/ along the woody line.”

The word “work” is being used for a bird’s search for food. Searching for food leaves a “punctuation line,” which are really marks in the tree.
CONCRETE POETRY

PURPOSE: Students will generalize that humans and wildlife share environments and experience some of the same natural phenomena.

OBJECTIVE: To write poetry in three concrete forms about things in nature.


INSTRUMENT OF MEASURE: Presentation and discussion of concrete poems, and grade completions of the poem, including ability to follow three concrete poetry formats.

ACTIVITY:

• Ask students to list ways of how we communicate, being sure to include "writing," "drawings," or "pictures" to the list if students do not.

• Ask students to discuss the oldest forms of writing: cuneiform and hieroglyphics. How is this writing different from ours? Is there a way we could communicate more in our writing?

• Introduce each type of concrete poetry using the worksheet. Ask if anyone has thought of an example. Put each example on the board as students suggest them.

• Discuss each example and type of concrete poem. Ask if anyone has thought of another example. Put each example on the board and ask students to tell the type or form.

• Have students write two examples of each type using something in the natural environment as a topic.
CONCRETE POETRY

TYPE 1: VISUAL: Today, you will try a new form of communication which expresses more than either writing or drawing; it is called the visual form of concrete poetry. The visual form simply makes a statement, but by the arrangement of words, directs the reader towards a particular frame of reference.

Example-Type 1: Visual

1. Habitats are good things to keep around
2. Comets capture our imagination....

TYPE 2: STORY: The story form of concrete poetry makes a statement about the action of some thing or person and by its visual arrangement, completes the action and reveals an ending.

Example- Type 2: Story

1. Mature Mandelion Seeds Floating for the Breeze
2. Agilamonster
TYPE 3: FACTUAL: The factual form of concrete poetry is the expression of a common idea, fact, or image by use of the spatial, or place-on-the-page relationship between words. This form is the most abstract of the three forms of concrete poetry.

Example- Type 3: Factual

1. Habitat = Life

2. Birds fly over land and water *

* Birds fly over land and water.
Bird Watch CONCEPT WEB

PURPOSE: Students will add related concepts to a graphic organizer known as a cluster diagram.

OBJECTIVE: To write bird names, key concepts, new vocabulary, and supporting details to the cluster diagram.

STRATEGY: Students use a categorization system to gather information about various science concepts and poetic uses of language.

INSTRUMENT OF MEASURE: Students’ notes on important words (as defined in the objectives) and completed concept web are evaluated as a display of his/her reconstruction of concepts within the book, Bird Watch.

ACTIVITY:

• At the bottom of the worksheet, write down various bird names, key ideas, science words, examples of poetic use of language, new vocabulary, and interesting details from the book, Bird Watch.

• Discuss science concepts (natural habitat, water quality, and diversity) found within the book.

• Discuss poetic uses of language (simile, metaphor, alliteration) found within the book.

• Have students draw the web on the board.

• Fill out a master example for the students to follow with their predetermined information.

• Have students individually choose a poem and fill out a concept web.

EXTENSIONS:

• Refer to the web and build upon for class discussions.

• Allow students to ask meaningful questions arising from reflections on the web.
Directions: Read the poem, "Storm Bringer," in Bird Watch. As you read, take notes on key words, new or important vocabulary words, specific details, or examples of poetic language. Write the poem's name, "Storm Bringer" in the middle circle. Use your notes to fill in the circles. The single circles are for words or ideas from the poem which stand alone (such as a single concept or a vocabulary word). In contrast, words or ideas with several circles coming off one another must have ideas which relate back to each word and trace back to the poem.
Bird Watch CONCEPT WEB

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ENVIRONMENTAL ABUSES

PURPOSE: Students will understand environmental abuse and practice basic reading skills.

OBJECTIVE: To demonstrate the use of basic reading skills by focusing on environmental abuse.


STRATEGY: Students read a paragraph and answer the reading skills problem listed.

INSTRUMENT OF MEASURE: Students' correct answers to the five exercises of word attack and comprehension skills.

ACTIVITY:

• Ask students to read the following paragraph and to answer the reading skill problems listed.

• Discuss definitions of such terms as context clues, noting details, drawing conclusions, blends, and compound words.
ENVIRONMENTAL ABUSES

Directions: Read the following paragraph and answer the reading skill problems listed.

HOW DO PEOPLE ABUSE THE ENVIRONMENT?

Have you seen people suffering when the city is covered with smog? Have you wondered why the weather person warns people to stay indoors during smog alerts? Have you seen brushland or forest land destroyed by war? Have you seen a landscape spoiled by junkyards, billboards, and wrecked cars? Have you seen waterways polluted with sewage or industrial waste? Conditions that make life uncomfortable, dangerous, or unhealthy are ABUSES. What are some abuses of our environment?

1. Word Attack Skills:
   Context Clues—After reading this paragraph, write a definition for the word, abuses.

2. Comprehension Skills:
   Noting Details—Make a list of all of the abuses mentioned in the paragraph. Try to add three more abuses of your environment.

3. Comprehension Skills:
   Drawing Conclusions—How does smog make life unhealthy or uncomfortable? Do junkyards, billboards, and wrecked cars make life uncomfortable, dangerous, or unhealthy? Why? Can you add another category to the abuses that could fit junkyards better?

4. Word Attack Skills:
   Blends—Make a list of all of the words in the paragraph that contain blends. The word may begin or end with a blend or have a blend in the middle—underline the blend. (smog....)

5. Word Attack Skills:
   Compound Words—There are four compound words in the paragraph.

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List the compound words. Draw a line under each part that is a word. (land scape)
ENVIROMENTAL ABUSES: ANSWER KEY

Directions: Read the following paragraph and answer the reading skill problems listed.

HOW DO PEOPLE ABUSE THE ENVIRONMENT?

Have you seen people suffering when the city is covered with smog? Have you wondered why the weather person warns people to stay indoors during smog alerts? Have you seen brushland or forest land destroyed by war? Have you seen a landscape spoiled by junkyards, billboards, and wrecked cars? Have you seen waterways polluted with sewage or industrial waste? Conditions that make life uncomfortable, dangerous, or unhealthy are ABUSES. What are some abuses of our environment?

1. Word Attack Skills:

- **Context Clues**—definition for abuses: Conditions that make life uncomfortable, dangerous, or unhealthy are abuses.

2. Comprehension Skills:

- **Noting Details**—smog, destruction of habitat during war, and human-generated forms of pollution: junkyards, billboards, wrecked cars, sewage, and industrial waste.

3. Comprehension Skills:

- **Drawing Conclusions**—Students' answers may vary.

4. Word Attack Skills:

- **Blends**—smog, people, suffering, weather, warns, stay, brushland, forest, destroyed, landscape, spoiled, wrecked, industrial, waste, that, uncomfortable, dangerous, unhealthy, environment.

5. Word Attack Skills:

- **Compound Words**—landscape, junk yards, billboard, waterway.
A BIRD'S POINT OF VIEW

PURPOSE: Students will practice communicating feelings, ideas, and moods about nature.

OBJECTIVE: To write answers from another's point of view.


STRATEGY: Students imagine being a bird in order to view nature from an unusual and particular point of view.

INSTRUMENT OF MEASURE: Students finish a sense chart with answers from the bird's point of view.

ACTIVITY:

• Discuss with students how you recognize the different senses and ask the following background questions:

1. How do you know the color of my dress is blue? (sight)
2. How do you know chocolate candy is sweet? (taste)
3. How do you know tissue is soft? (feel)
4. How do you know a dog is barking? (hear)
5. How do you know your mother is cooking bacon in the morning if you do not see it? (smell)

• Make a "feel" chart on the chalkboard containing the following words: fuzzy, soft, hard, sticky, rough, smooth, long, and short. Ask each child to select an object or animal that a bird might encounter that fits the words from the feel chart. For example, something fuzzy could be a fuzzy, striped caterpillar that lives...
on tomato plants. A soft object a bird might encounter is the downy feathers on its underside.

- Have students share the object and ask them to further describe the object; i.e., fuzzy as what? As sticky as what?

- Take your class outdoors to utilize their senses for environmental observation.

- Ask each child to identify three objects and tell what sense the bird might use. For example, bark on a tree. Can birds hear the bark? Can they see the bark? Can they smell the bark? Can they taste the bark?
"FEEL" CHART EXAMPLE: ACTUAL STUDENT ANSWERS MAY VARY

<table>
<thead>
<tr>
<th>FUZZY</th>
<th>SOFT</th>
<th>HARD</th>
<th>STICKY</th>
<th>ROUGH</th>
<th>SMOOTH</th>
<th>LONG</th>
<th>SHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>down</td>
<td>grass</td>
<td>twig</td>
<td>sap</td>
<td>bark</td>
<td>still</td>
<td>fallen tree</td>
<td>warm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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INTRODUCTION TO CAUSE/EFFECT

PURPOSE: Students will understand cause and effect statements.

OBJECTIVE: To identify cause and effect relationship among sentences.


STRATEGY: Students analyze cause and effect statements, identifying them by underlining and also by writing because or therefore to finish the sentence.

INSTRUMENT OF MEASURE: Students’ must identify the cause and its logical effect.

ACTIVITY:

- Distribute worksheets and read cause and effect definitions and examples.
- Ask students for examples of cause and effect statements and/or relationships.
- Identify the use of because or therefore when students are giving their examples.
- On the worksheet, students write the number of the cause next to its logical effect for seven sentences.
- Also, students write either because or therefore to finish six sentences.
INTRODUCTION TO CAUSE/EFFECT

A cause is what makes something happen. What happens is an effect. Notice how the cause and effect are related below:

Cause: He didn’t pay attention in class. Effect: He failed the test.

He didn’t pay attention in class; therefore, he failed the test.

or Because he didn’t pay attention in class, he failed the test.

Writers show cause and effect by using signal words like therefore and because. Notice that ‘because’ introduces the cause while ‘therefore’ introduces the effect.

A. Write the number of the cause next to its logical effect.

1. The volcano erupted. ___ a. He has a no-accident record.
2. John didn’t drive carefully. ___ b. People who breathed it died.
3. Mario saved a lot of money. ___ c. He got into an accident.
4. Poisonous gas came from the volcano. ___ d. He is going to borrow money from his brother.
5. Jasmine bought a new car. ___ e. The city was destroyed.
7. John spent all of his salary. ___ g. Her friends wanted a ride.

B. Write either because or therefore to finish the sentence.

8. Fatima went to see the doctor __________ she was very sick.
9. It was a sunny day; __________, many people were at the beach.
10. That store is expensive; __________, I can’t afford to shop.
11. He had an upset stomach __________ he ate dinner too fast.
12. Not much sunlight comes in our front window __________ there are many shade trees in our front yard.
13. Spider webs are very strong; __________, even large insects can get entangled in them.
INTRODUCTION TO CAUSE/EFFECT: ANSWER KEY

A cause is what makes something happen. What happens is an effect. Notice how the cause and effect are related below:

Cause: He didn’t pay attention in class. Effect: He failed the test.

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4. Poisonous gas came from the volcano. 7 d. He is going to borrow money from his brother.
5. Jasmine bought a new car. 1 e. The city was destroyed.
6. Miguel drives very carefully. 3 f. He bought a new house.
7. John spent all of his salary. 5 g. Her friends wanted a ride.

B. Write either because or therefore to finish the sentence.

8. Fatima went to see the doctor because she was very sick.
9. It was a sunny day; therefore, many people were at the beach.
10. That store is expensive; therefore, I can’t afford to shop.
11. He had an upset stomach because he ate dinner too fast.
12. Not much sunlight comes in our front window because there are many shade trees in our front yard.
13. Spider webs are very strong; therefore, even large insects can get entangled in them.
Bird Watch CAUSES AND EFFECTS

PURPOSE: Students will demonstrate understanding of cause and effect.

OBJECTIVE: To determine which effect is linked to a specific cause, as both are quoted from (or based on) the book, Bird Watch.

STRATEGY: Students read example of causes and effects and match the effect with the cause on the left.

INSTRUMENT OF MEASURE: Students must write the correct letter of the effect to the left of its cause.

ACTIVITY:

- Ask students to define cause (something that makes something happen) and effect (what happens due to that something).
- Explain that almost all of these examples of causes and effects are quotations from Bird Watch. Only two causal statements were created to match with effect quotations.
- Distribute the worksheets and review directions carefully so students know how and where to write their answers.
Bird Watch CAUSES AND EFFECTS

The following quotations are from the book, Bird Watch by Jane Yolen. Several causes (events or actions) appear on the left side. Their matching effects (results) appear on the right. After reading the causes and effects, match them up by writing the letter of the effect next to the cause quotation.

____ 1. the old tom strutted./Fanning out his bordered tail and quick-stepping...called to his hens. A. A swallow follows/at my diligent heels/and eagerly accepts my kicked-up meals.
____ 2. The cardinal is brightly colored in winter. B. We went home instead and tasted the supermarket tom.
____ 3. The goldfinch,/little gambler,/ has spent his summer color. C. Over the mirror/The noble swan slides.
____ 4. They flew right off/With such raucous cries. D. The woodpecker wings off again/to the pine.
____ 5. I don't know what bugs/My feet kick up/as I cross the meadow. E. A brilliant blot on winter's page.
____ 6. Cold weather drives humans and animals to seek shelter. F. They shattered the blue/of the morning skies.
____ 7. Her competent, practical,/hard-working feet/crank out one more mile. G. He turns up/at my feeder/in his winter wings,/shabby as a beggar/on a city street.
____ 8. But the winter birds sit,/fattened and glowing from sunflower seeds/on the feeders/in our yard. H. I ran outside/and watched the beat/under its golden/featherskin/flicker once, twice, before it died.
____ 9. It flew up from the dried grass/into the window glass/ and, surprised by the hard air/fell back against the land. I. The winter finches stay long, long/past the turning of the year.
____ 10. A woodpecker finishes his work/on the maple tree. J. Winter silences us all.
Bird Watch CAUSES AND EFFECTS: ANSWER KEY

The following quotations are from the book, Bird Watch by Jane Yolen. Several causes (events or actions) appear on the left side. Their matching effects (results) appear on the right. After reading the causes and effects, match them up by writing the letter of the effect next to the cause quotation.

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_E_ 2. The cardinal is brightly colored in winter.

_G_ 3. The goldfinch,/little gambler,/ has spent his summer color.

_F_ 4. They flew right off/With such raucous cries.

_A_ 5. I don't know what bugs/My feet kick up/as I cross the meadow.

_J_ 6. Cold weather drives humans and animals to seek shelter.

_C_ 7. Her competent, practical,/ hard-working feet/crank out one more mile.

_I_ 8. But the winter birds sit,/ fattened and glowing from sunflower seeds/on the feeders/in our yard.

_H_ 9. It flew up from the dried grass/ into the window glass/ and, surprised by the hard air/fell back against the land.

_D_ 10. A woodpecker finishes his work/ on the maple tree.

A. A swallow follows/at my diligent heels/and eagerly accepts my kicked-up meals.

B. We went home instead and tasted the supermarket tom.

C. Over the mirror/The noble swan slides.

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F. They shattered the blue/of the morning skies.

G. He turns up/at my feeder/in his winter wings,/shabby as a beggar/on a city street.

H. I ran outside/and watched the beat/under its golden/featherskin/flicker once, twice, before it died.

I. The winter finches stay long, long/past the turning of the year.

J. Winter silences us all.
NATURAL DISASTERS/HABITAT DESTROYERS

PURPOSE: Students will generalize that humans and wildlife share environments and experience some of the same phenomena.

OBJECTIVE: To determine how natural disasters affect habitats and wildlife.


STRATEGY: In cooperative pairs, students evaluate natural disaster descriptions and determine the habitat and wildlife affected by the disaster.

INSTRUMENT OF MEASURE: Students are on task during their paired off time by brainstorming for answers. One worksheet is completed for both students’ grades.

ACTIVITY:

- Ask students to describe natural disasters which affect humans and wildlife. A student can list these examples on the board.
- Discuss how these disasters affect people, wildlife, and habitats.
- Distribute the worksheet and pair students off (based on the teacher’s preference.)
- Students must identify the type of natural disaster, name the habitat affected and list several (up to seven) examples of wildlife which would be affected by the natural disaster.
- Students determine which person writes the answers and one worksheet is collected for both students’ grades.
- Group discussion follows completion of worksheets.
NATURAL DISASTERS/HABITAT DESTROYERS

Many cities, such as Pompeii and Vesuvius in the Mediterranean Sea and Koumi, Japan, have been destroyed by natural disasters. These are examples of the power nature has over humans and wildlife. Habitats, such as the Everglades, various reef formations, and prairie lands, can also be destroyed by natural disasters. The list below describes natural disasters which can result in extensive destruction.

Volcanic eruption: caused when the molten rock under the earth pushes up and breaks the earth's crust, forming what looks like a mountain. Hot, fiery ash falls all around, and lava flows from the volcano, destroying everything in its path. Earthquakes and tidal waves can be triggered by volcanic eruptions.

Earthquake: A violent shaking of the earth caused when plates of land move against, into, or away from each other. Earthquakes can trigger tidal waves.

Tidal waves: An unusually big, fast-moving, and destructive wave which destroys coastal areas when it hits the shore. A tidal wave can result in extensive flooding of coastal areas.

Flood: The covering of usually dry land with water caused by extensive rain, a shift in water distribution, or tidal wave.

Hurricane: A violent and extensive storm which develops in tropical regions accompanied by strong winds and plentiful rain. A hurricane can cause flooding.

From the descriptions, decide which natural disaster occurred and write its name. Then identify the type of habitat and wildlife affected by the disaster.

1. It was a dry fall and the corn stalks thrust through the crumpled earth. The farmland felt besieged...and then the killdeer came, by ones and twos. After they left, it rained, and rained.
Identify disaster, habitat, and animals affected by the disaster.

2. The people in the village below had always thought they were living at the foot of a mountain until that grim day when the mountain exploded.

3. The government has ordered the removal of all small boats from coastal waters. Winds have begun to pick up and the storm is expected to hit in a few hours.

4. I woke up to the sound of pictures falling off walls. I rushed to my window to see what was happening outside and saw the desert ground cracking up before my eyes.

5. It started to rain two weeks ago and hasn't stopped. The river began to rise rapidly, and people living on the coast at the mouth of the river are being evacuated.

6. No one realized that the earthquake was so strong because it took place on the ocean floor. Consequently, as many as fifty people were drowned when the water hit the beach.
NATURAL DISASTERS/HABITAT DESTROYERS: ANSWER KEY

From the descriptions, decide which natural disaster occurred and write its name. Then identify the type of habitat and wildlife affected by the disaster.

1. It was a dry fall and the corn stalks thrust through the crumpled earth. The farmland felt besieged...and then the killdeer came, by ones and twos. After they left, it rained, and rained.

   Flood, farmland habitat, prairie animals will vary.

2. The people in the village below had always thought they were living at the foot of a mountain until that grim day when the mountain exploded.

   Volcano, mountain habitat, mountain animals will vary.

3. The government has ordered the removal of all small boats from coastal waters. Winds have begun to pick up and the storm is expected to hit in a few hours.

   Hurricane, coastal habitat, animals should include marine varieties.

4. I woke up to the sound of pictures falling off walls. I rushed to my window to see what was happening outside and saw the desert ground cracking up before my eyes.

   Earthquake, desert habitat, native desert animals may vary.

5. It started to rain two weeks ago and hasn't stopped. The river began to rise rapidly, and people living on the coast at the mouth of the river are being evacuated.

   Flood, river/coastal habitat, marine, freshwater, and land animals may vary.

6. No one realized that the earthquake was so strong because it took place on the ocean floor. Consequently, as many as fifty people were drowned when the water hit the beach.

   Tidal wave, marine and coastal habitat, marine, freshwater, and land animals may vary.
STORY ELEMENTS

PURPOSE: Students will understand and appreciate a story by focusing on its elements.

OBJECTIVE: To write a story using elements such as the plot; including conflict, turning point, and resolution; the setting; and the theme.

STRATEGY: Students read a story introduction and continue the story based on a series of questions.

INSTRUMENT OF MEASURE: Students’ answers must reflect knowledge of plot, setting, and theme.

ACTIVITY:

- Review the following story elements:
  - **Setting** = the time and place in which a story happens.
  - **Plot** = the events of a story, including the conflict, the turning point, and the resolution.
  - **Theme** = the point that the author is trying to make; the story’s message.

- Discuss examples of story elements using commonly known stories such as “The Hunchback of Notre Dame,” “Romeo and Juliet,” also known as “West Side Story,” or “The Adventures of Huck Finn.”

- Distribute the worksheets and inform students they will be the author of the story on the page. This means that everyone’s story will be different.
Once upon a time, two travelers found themselves in a fierce storm. Their horses struggled and fought against the wind, rain, and mud. The travelers knew that if they didn’t find shelter soon, they would drown or die of hypothermia, a dropping of the body’s temperature. Suddenly the traveler in front shouted and pointed to a spot a little to the left of the trail.

1. Continue the story. Tell briefly what the traveler saw and what happened next.

2. Imagine that the travelers find an injured Great Blue Heron. Describe this meeting and the bird’s injuries.

3. The travelers meet a human character. Describe this new character.
4. The new character transports the two travelers and the bird to another time and place. Describe the new setting and the turning point of your story.

____________________________________________________________________

____________________________________________________________________

5. In the resolution of the conflict, the travelers learn a valuable lesson. Describe the lesson and tell how they learned it.

____________________________________________________________________

____________________________________________________________________

6. Reread your answers on the worksheet. What is the theme of the story you have written? Write the theme.

____________________________________________________________________

____________________________________________________________________

7. In light of the entire story, what is the title? Write it below.

____________________________________________________________________
“STORMY WEATHER” SHORT STORY

PURPOSE: Students will generalize that humans and wildlife share environments and experience some of the same natural phenomena.

OBJECTIVE: To write a short story based on their “Stormy Weather” simulated field trip.


STRATEGY: Students choose one of the birds found in Bird Watch, to visualize during the “Stormy Weather” simulated field trip.

INSTRUMENT OF MEASURE: Presentation of final copy of short story to the class, and grade completion of the story, including the ability to follow short story elements and format.

ACTIVITY:

• In this lesson, students will learn how to write a composition of several paragraphs that explains a bird’s experiences during stormy weather.
• Prepare for this activity by completing the “Stormy Weather” simulated field trip found in Project WILD Activity Guide, pp. 26-28. Use the simulated experience as background information for developing students’ short stories.
• Bird Watch bird list is found following the short story lesson.
"Stormy Weather" SHORT STORY

PREWRITING: To gather information for the composition, read the questions in the following list. Write out the answers as your prewriting notes.

☐ Title: What is the story’s title? Does the title suggest the story’s subject or theme?

☐ Setting: What are the time and place of the story? What moods are created by the setting (before, during, and after the storm)? How does the setting determine the action or conflict of the story?

☐ Point of View: Is the story written from the first person or third-person point of view? If there is one, is the narrator limited or omniscient?

☐ Central Conflict: What is the central conflict, or struggle, of the story? How does the external conflict, between a bird and nature, manifest itself?

☐ Plot: What are the major events of the story? What happens in the introduction? What is the beginning incident? What happens during the development? How is the central conflict resolved, or ended? What, if anything, happens after the resolution?

☐ Special Plot Devices: Does the story make use of foreshadowing or flashbacks? Is the story suspenseful? If so, what expectations on the part of the reader create this suspense? Does the story have a surprise ending?

☐ Characterization: Who is the main character, or protagonist? Who are the other major and minor characters? What is revealed in the story about each character’s appearance, personality, background, motivations, and relationships? What conflicts do these characters face?
Devices of sound and figures of speech: Does the story make use of special devices of sound such as onomatopoeia or alliteration, or figures of speech such as metaphor or hyperbole?

Theme: What is the theme, or message, of the story? How is this theme revealed?

DRAFTING AND REVISING: Use the prewriting notes and a rough outline to write a draft of a bird's experience during stormy weather.

- Introduction: Include setting, characters, and external conflict.
- Body: Explain how point of view and plot reveal the theme.
- Conclusion: Sum up the experiences or implications.

PROOFREADING AND PUBLISHING: Make a revised draft by proofreading it for errors in grammar and usage, spelling, punctuation, capitalization, and manuscript form. After correcting all errors, make a clean copy of the short story, and share it with the classmates and the teacher.
BIRD WATCH LIST: CHOOSE A BIRD FOR "STORMY WEATHER" SHORT STORY AND ART.

Canada Geese

Red-Bellied Woodpecker

Killdeer

Robin

Mallard

House Finch

Wild Turkey

Swan

Cardinal

Great Blue Heron

Crow

Barn Swallow

Goldfinch

Ruby-Throated Hummingbird
"STORMY WEATHER" ART

PURPOSE: Students will apply the skill of illustrating a scene from their imagination to demonstrate that humans and wildlife share environments and experience some of the same natural phenomena.

OBJECTIVE: To practice artistic skills in illustrating a bird's experience during an imaginary storm.


STRATEGY: Students illustrate a bird's experience during the simulated field trip.

INSTRUMENT OF MEASURE: Students' illustration of a scene in which a bird experiences stormy weather.

ACTIVITY:

- Guide students through the stormy weather simulated field trip. See pps. 26-28 in Project WILD for the "Stormy Weather" lesson plan.
- Students should select a bird from Bird Watch to imagine during this experience.
- Play the Grand Canyon Suite by Aaron Copland to set the mood with the music of a storm. Refer to Appendix D for citation.
- Have some students share what they saw and felt during the simulated field trip (storm).
- Provide students with paper and encourage them to add detail in drawing a picture of what they saw in their mind.
"STORMY WEATHER" ART

Directions: Draw a picture of the scene you have chosen, focusing on an experience your predetermined bird had during the stormy weather. You may wish to draw details, such as habitats, houses, clouds, and shelters, which make the experience seem more realistic. Decide if the scene will be in black and white or color.
CAREERS INVOLVING ANIMAL CARE

PURPOSE: Students will transfer the skill of evaluating an advertisement for different jobs in the field of animal care.

OBJECTIVE: To apply the skills of reading and comprehension to filling out a job application.


STRATEGY: Students read animal care job descriptions, choose one, and finish the job application.

INSTRUMENT OF MEASURE: Students' completed application for animal care position.

ACTIVITY:
- Ask students to describe jobs in the field of animal care.
- Discuss what skills would be needed for some of the jobs.
- Have students read the job advertisements and finish the application.
CAREERS INVOLVING ANIMAL CARE

A. As you read these advertisements, notice the different jobs in the field of animal care that are available to people. Then choose one of the jobs and fill out the following job application.

WANTED

Women and men with the following qualifications: four or more years of veterinary medicine; certificate of passing grade on examination in veterinary medicine; and license to practice.

For the following positions

1. Veterinarians, clinic work- Treat and prevent illness in household pets; animals on farms, zoos, ranches, racetracks, national parks, and wildlife game preserves.

2. Veterinarians, teaching- Positions open in a veterinary or agricultural colleges and university departments.

3. Veterinarians, U. S. Public Health Service or Department of Agriculture- Inspect animal feed; treat and prevent animal diseases; test poultry, meat, and milk for human consumption; work with animal-food manufacturers; office, lab, and outdoor working environment.

4. Laboratory research scientists- Develop vaccines in research labs; work with veterinarians in private office practice to complete tests on blood and tissue samples.

5. Laboratory research assistants- Career-minded students with interests in animal microbiology, anatomy, chemistry, nutrition, surgery; train with professional veterinarians (offices) and animal research scientists (labs) for work in animal care.

6. Park ranger/Zoo keepers- Need sympathy, kindness, good personal
health, must have excellent powers of observation (Animals can't 
explain what's wrong!) and willingness to work long hours outdoors 
in parks, game preserves; must enjoy working with hands in a 
variety of ways.

Application for the job of ____________________________

________________________________________________________________________

Name ____________________________ Age _______ Grade ______

________________________________________________________________________

Address __________________________________________________________________

Science(s) you are studying and intend to study in the future:

________________________________________________________________________

How will your study of these sciences prepare you for this job?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Explain how English and art courses help you prepare to work in 
an animal-care field. ________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

B. Explain below why you might like to be a veterinarian. Tell which 
birds and other animals you would like to treat. Include your reasons.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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APPENDIX B

ENVIRONMENTAL EDUCATION

SUMMARIZED ACTIVITIES

FROM

PROJECT LEARNING TREE,

PROJECT WILD ACTIVITY GUIDE,

AND

PROJECT WILD AQUATIC EDUCATION ACTIVITY GUIDE.
ENIRONMENTAL EDUCATION
SUMMARIZED ACTIVITIES LIST
FROM

Project Learning Tree, K-8.


Project WILD Activity Guide.


4. Wild Worlds...A Journal-Making Activity. pps.66-69

Project WILD Aquatic Education Activity Guide.

5. Migration Headache. pps. 84-98.

6. Deadly Waters. pps. 146-150.
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ENVIRONMENTAL EDUCATION ACTIVITIES

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ARE VACANT LOTS VACANT?

PURPOSE: Students will describe plants and animals that live in and around a study site, and give examples of and describe ecological relationships between biotic and abiotic elements at the study site.

OBJECTIVE: To observe plants and animals interacting at a study site for a visual presentation of the teams' findings.


STRATEGY: Students visit a "living laboratory" to observe interrelationships between plants and animals, record their data, and prepare a visual presentation of what was observed on location.

INSTRUMENT OF MEASURE: Students' recorded observations and visual presentation showing interrelationships.

ACTIVITY:

• Secure a "living laboratory" for students to record interactions between plants and living animals.

• Before investigating, ask each team to list the plants and animals they expect to find in their study plots.

• Ask teams to examine its plot for signs of animal life, including tracks, burrows, anthills, and spider webs.

• Students note observations of animal use, plant locations, plant to animal ratios, water sources, human use, and signs of pollution.

• In the classroom, teams prepare presentations of visual materials of what was observed during the investigation.
POET-TREE

PURPOSE: Students will express their feeling and attitudes about the environment using various forms of poetry and analyze their own and other people's poetry to discover its full meaning.

OBJECTIVE: To write poems based on four models: haiku, cinquain, diamante, acrostic, picture poetry, windspark, or free verse.


INSTRUMENT OF MEASURE: Students review the poem or poems they wrote and choose the one best for assembling into a book.

STRATEGY: Students visit nearby trees to gather "tree impressions" for their poetry.

INSTRUMENT OF MEASURE: Students' completed poems, ready for publication.

ACTIVITY:

· Ask students to name some of the benefits they derive from trees, including experiences, stories, or favorite places. Tell students they are going to have an opportunity to create a book of poetry expressing their ideas and feelings about trees and forests.

· Review the parts of speech by making categories on the chalkboard and have students generate a short list of examples under each category to make sure everyone understands.

· Present the poetic forms described on pages 14-15 and give examples of forms.

· Take students to visit nearby trees to write descriptive words about how the tree feels, smells, looks, and the sounds from in and around the tree.

· Back inside, have students write their own poems about trees and
forests.

- Students explain which poetic form they used and why they chose it.
- Have students review the poem or poems they wrote and choose the one they like the best.
- Assemble everyone's favorite poems into a book for the class, library, or for each child.
STORMY WEATHER

PURPOSE: Students will generalize that humans and wildlife share environments and experience some of the same natural phenomena.

OBJECTIVE: To experience an simulated field trip to an imaginary storm, write a short story based on that imagined experience, and draw a scene simulating a bird’s experience during a storm.


STRATEGY: Students go on a simulated field trip to experience a storm.

INSTRUMENT OF MEASURE: Students’ participation in visualizing a simulated storm, complete a short story based on imagined experience and illustrate a bird’s experience during a visualized storm.

ACTIVITY:

• This technique involves reading words as a series of pictures for students to imagine in their minds.
• Distribute the Bird Watch Bird List and allow students to choose a bird to imagine during this experience.
• Obtain a copy of Aaron Copland’s Grand Canyon Suite to add emphasis and drama to the storm.
• Read the storm experience on page 27.
• After finishing, have a few students share what they saw and felt during the storm.

• Short Story Extension included in Language Arts section: Write a story that explains a bird’s experiences during stormy weather.
• Art Extension included in the Language Arts section: Illustrate a scene in which a bird experiences stormy weather.
WILD WORDS...JOURNAL-MAKING ACTIVITY

PURPOSE: Students will observe and describe their surroundings, particularly in out-of-door settings, in a variety of ways.

OBJECTIVE: To record data and personal observations of birds in an outdoor setting in journals designed by students.


STRATEGY: Students create journals to record data and personal observations of bird behavior in nature.

INSTRUMENT OF MEASURE: Students' personalized journals with structured entries on bird behavior.

ACTIVITY:

• Provide the students with construction paper, blank unlined writing paper, marking pens, and crayons to create their journal. Fold the paper in half with the construction paper on the outside. Staple along the seams so that the booklet stays together.

• Go outside with the journals and ask students to look around with "soft eyes" - that is, eyes that do not focus specifically on any one thing. "Soft eyes" are good for seeing all the trees, the sky, or the ground in an area. "Hard eyes" are food for focusing on one thing, such as looking closely at a squirrel running up a tree.

• Give students about fifteen minutes to begin using their journals to record impression, feelings, and observations of bird behavior.

• Have students go outside and find a very small living thing in connection with a bird. Look at it as closely as possible without harming it. Write a short description or poem about this small living thing.
MIGRATION HEADACHE

PURPOSE: Students will predict the limiting factors affecting populations of migrating water birds, describe the effects of habitat loss and degradation on migrating populations, and make inferences about the importance of suitable habitat for migrating water birds.

OBJECTIVE: To identify limiting factors affecting populations of migrating water birds, describe the effects of habitat loss and degradation, and draw conclusions about the need for suitable habitat.


INSTRUMENT OF MEASURE: Students' participation in the Migration Headache simulation.

ACTIVITY:

• Select a large playing area (approximately 70 feet in length) and place paper plates in two patches at the ends of the area. Put down one paper plate for every three students to have a foot on. Designate one area, the "wintering habitat" and the other, the "nesting habitat."

• Explain to students that they are water birds and will migrate between these two areas representing wetlands, which is suitable habitat for water birds. At the end of the journey, the students must have one foot on a paper plate in order to continue. No foot on plate = no suitable habitat and students must move to the sidelines to wait until the habitat will support more birds.
• Begin the activity with all students at the wintering habitat and have them migrate successfully to the nesting habitat.

• Before the students migrate toward the wintering habitat, turn over a paper plate to signify the draining of a large wetland area to be used for agriculture. Repeat the migration but three students will be displaced by a loss of habitat. Tell the students that these three died as a result of loss of habitat. Remind any "dead birds" that they will have the chance to come back as surviving hatchlings when favorable conditions prevail.

• Repeat the process for eight to ten migration cycles to illustrate changes in habitat conditions with resulting effects on the birds.

• Have students identify factors limiting and favoring survival of populations of migratory birds.

• Ask students to identify the apparent causes of the birds’ population decline from year to year. Distinguish between catastrophic effects and gradual changes.

• Ask students to summarize what they have learned about some of the many factors that affect the success of aquatic bird migration.

• Review the Evaluation questions on page 98 as a culminating activity.
DEADLY WATERS

PURPOSE: Students will identify major sources of aquatic pollution and make inferences about the potential effects of a variety of aquatic pollutants on wildlife and wildlife habitats.

OBJECTIVE: To analyze the pollutants found in a hypothetical river, graph the quantities of pollutants, and make recommendations about the actions that could be taken to improve the habitat.


STRATEGY: Students graph and evaluate sources of pollutants in a hypothetical river.

INSTRUMENT OF MEASURE: Students' completed graphing of pollutants and participation in discussion on damage to wildlife and wildlife habitat.

ACTIVITY:

- Before the activity begins, make 100 tokens of each of the ten colors of construction paper. Make a copy of the Pollutant Information Sheet for each student.
- List and discuss the four major categories of pollution: chemical, thermal, organic, and ecological.
- Pass out the Pollutant Information Sheets and review each of the nine kinds of pollution with the students. Code each pollutant to a colored token.
- Divide the students into groups of three for research teams who will analyze the pollution content of a hypothetical river.
- Provide the teams with graph paper and 1/4 spoon of the mixed tokens.
- The teams separate the colored tokens into "pollution" piles using the color key to identify each type of pollutant on the Information Sheet.
- The teams then use graph paper to construct a simple bar graph showing the whole array of pollutants.
- Since each team has a different hypothetical river, discuss the varying damage to wildlife and wildlife habitat.
- As an extension, invite students to match the pollutants with the four categories of pollution (chemical, thermal, organic, and ecological). Some seem to fit rather easily; others could fit in more than one category, depending on the source of pollution.
- For example, is the type of thermal pollution human or naturally caused (power plant water effluent or thermal hot springs)?
APPENDIX C

CURRICULAR GUIDES
CURRICULAR GUIDES


APPENDIX D:

AUDIO RESOURCE

REFERENCES


