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ENHANCING LANGUAGE DEVELOPMENT FOR ENGLISH LEARNERS

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CSUSB

ENHANCING LANGUAGE DEVELOPMENT FOR ENGLISH LEARNERS

A Project

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by

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ABSTRACT

Previously accepted and current research has been reviewed regarding the development of English proficiency for English Language Learners. The particular areas of concern deemed crucial for language development are the domains of reading, writing, listening and speaking. The critical components for effective English Language Development instruction as well as the strategies considered the most effective and efficient were also investigated. The review resulted in the creation of an English Language Development unit that includes the essential components and various strategies that are considered effective in developing English proficiency for English Language Learners.

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CHAPTER ONE

INTRODUCTION

General Statement of the Problem

The development of English language proficiency for students whose primary language is other than English presents a major challenge for classroom teachers and site and district administrators. A significant percentage of students are entering public schools whose primary language is not English. Over 20% of the student population in California from kindergarten to grade twelve are classified as English Learners (ELs). The students represent over 60 different languages and consist of both recent arrivals to the United States and a new generation of California residents (CDE, 2014).

ELs have a double challenge in terms of academic success. They must learn a new language in addition to mastering the same academic content as their English fluent peers. Courts have recognized that during the time that ELs are learning English, they may incur irreversible academic deficiencies and that school districts are responsible to remedy those deficits so that ELs are not left with a learning impediment (Lau vs. Nichols, 1974). The courts further argued that English Learners cannot be permitted to incur such deficiencies while they are mastering English. Although no specific timelines were mandated by the courts, school districts are held responsible to address the educational deficiencies as soon as possible (Lau vs. Nichols, 1974).

In her report, Reparable Harm (2010), Dr. Laurie Olsen advocated that this is an era where much is known about how to teach ELs in order to prevent the lingering impediment to which the courts referred. However, she also argued that despite the research on the needs of English Learners, "an achievement gap still exists due to misguided and ill-informed initiatives leading to one-size-fits-all reforms resulting in another generation of English Learners whose needs are not being met by our educational system" (2010, p. 16). Caught in this achievement gap void is a large group of students that are referred to as "Long Term English Learners." Long Term English Learners are students that have been in United States schools for more than six years and have still not reached sufficient English proficiency to be reclassified as Fluent English Proficient (RFEP).

According to Dr. Olsen a variety of factors such as a complete lack of language development programs; curriculum and materials that do not meet the needs of English Learners; placement in weak L_2 programs; poorly implemented English Learner programs; histories of inconsistent and ineffective programs; partial access to full curriculum; social segregation, linguistic isolation and high rates of mobility have contributed to the problem (Olsen, 2010). This has resulted "in one out of every three districts having more than 75% of their English Learner population designated as long term learners" (2010, p. 1).

Significance of the Project

This project reviews previous and current research regarding the essential components of effective English Language Development (ELD) and various learning strategies that are designed and adapted to meet the needs of English Learners (ELs). It also reviews how those components and strategies are integrated within the domains of reading, writing, speaking and listening resulting in the creation of a third grade ELD unit.

The development of the ELD unit will aid teachers by providing a comprehensible instrument of instruction that meets not only the content objectives outlined in the applicable Common Core Standards, but most importantly, the language development needs in assisting third grade ELs in their goals of obtaining English language proficiency.

Research Questions

This project examines previous and current research regarding what components and learning strategies that effective ELD instruction includes to develop English language proficiency for ELs. It also looks closely at how said learning strategies are best presented within a framework to meet the distinct needs of ELs. It is through this framework that the following questions are derived after reviewing the findings of what is considered effective ELD instruction:

a) What is an English Learner?

b) What is English Language Development?

c) What is the goal of effective English Language Development?

d) What is Content based ELD?

e) What is Designated ELD?

f) What is Integrated ELD?

g) What are the essential components of effective ELD instruction?

h) What does the research regarding the essential components of ELD instruction consider as effective and efficient strategies of those components?

i) What does an ELD unit that incorporates the essential components and efficient strategies look like?

Limitations and Delimitations

The project attempts to review what previous and current accepted research states regarding the critical components and most effective and efficient strategies regarding English Language Development (ELD). It is the word accepted that underlies the limitations of this project. The lack of a comprehensive body of research on ELD instruction has left a practice that is mostly based on theory; which has resulted in accepted practices that are not sufficiently supported by research (Saunders, Goldenberg, and Marcelletti, 2013).

Assumptions

The following researched-based assumptions are presented in this project.

1. ELD instruction is beneficial to students that are developing English Language Proficiency. Saunders, Goldenberg, and Marcelletti (2013) stated that ample evidence exists that providing ELD instruction in some type of form is more beneficial than not providing it.
2. ELD instruction should continue, at least until advanced English language proficiency has been attained. ELs normally require four to six years to achieve “early advanced” English proficiency (August and Shanahan, 2006).
3. ELs should be in mixed-ability classrooms and groupings to facilitate their acquisition of English. Individuals develop more advanced skills by learning from their more competent peers (Vygotsky, 2005).
4. ELD instruction needs to be rigorous, challenging, within relevant curriculum, and be coupled with instructional strategies (Olsen, 2010).
5. There are specific areas that need to be included in ELD instruction. Specific components that emphasize instructional practices are critical for developing second language (L_2) proficiency (Echevarría, Vogt, & Short, 2008).
6. ELD instruction should explicitly teach English language forms. Saunders, Goldenberg, and Marcelletti (2013) concluded that explicit

language instruction approaches were more than twice as effective than implicit language approaches

7. ELD instruction should affirm academic language. “It is widely believed that successful performance in school requires proficiency in academic language” (2013, p. 19).
8. Reading and writing should be incorporated into ELD instruction. The textual demands of literacy warrant that literacy instruction be given priority for ELs (Saunders, Goldenberg and Marcelletti, 2013).
9. Listening and speaking should be emphasized during ELD instruction. As their oral English proficiency improves, ELs are more likely to use English, thus leading to the use of more complex language-learning strategies (2013). In this way, they learn from more proficient peers and English only speaking students, and begin to internalize literacy behaviors (Genesee and Riches, 2007).
10. Specific language objectives should be included in ELD instruction. Clear and explicit objectives and expectations substantially increase the success of any academic lesson (Saunders, Foreman, Carlson, 2006).

Definition of Terms

Educational leaders have periodically changed the terminology and their definitions in describing students that are acquiring English. For example, during the decade of 1980, Limited-English-Proficient (LEP) was the acceptable

identification for students that were developing English language proficiency. The following terminology and definitions will apply throughout this project in order to maintain consistent denotations and enhance comprehension.

English Learners (ELs) are students whose primary language is a language other than English. Upon initial enrollment, students are identified as English learners by parent completion of enrollment forms. One such form, known as a Home Language Survey, requires that parents indicate which is the language spoken at home.

Long Term English Learners (LTELs) are students that have been in United States schools for more than six years and have not been classified as English Language Proficient.

Fluent English Proficient (RFEP) is a state designation that is used to classify ELs once they have achieved grade level proficiency in English.

An EL student must score 300 or above on the Language Arts portion on the California Standards Test (CST), score an overall 4 or 5 (early advanced or advanced) on the California English Language Development Test (CELDT) with no subtest section (reading, writing, listening, and speaking) lower than 3 (intermediate), and include a teacher recommendation.

English Language Development (ELD) is a systematic instructional model intended to develop the English language proficiency of students whose primary language is not English in the language domains of reading, writing, speaking, and listening.

Language Domains refer to the areas of speaking, listening, reading, and writing which constitute the domains of language that an individual must develop in order to communicate.

Language Forms refer to the particular language skills needed in order to communicate within the language domains.

Language Functions refer to how language is used to be able to communicate within the language domains.

Common Core State Standards (CCSS) are the cross-disciplinary literacy expectations for all students grades K-12 to meet in order for college or career readiness.

Limited English Proficient (LEP) is the term that was used during the decade of 1980 to identify a student that was developing their English proficiency.

English Only (EO) refers to mono-lingual, English speaking students.

Content-based ELD is an instructional model that combines content with ELD objectives.

Designated ELD is a separate block of instructional time devoted to ELD.

Integrated ELD incorporates both content and ELD standards across the disciplines during instruction.

Mediated Structure is a concrete tool that helps facilitate the sharing of knowledge between more competent and less competent individuals.

Structured Language Practice is the intentional use of particular vocabulary, phrases, and, or sentences in conversation to develop oral proficiency.

English Proficiency (L_2) refers to an EL's proficiency in the domains of reading, writing, speaking, and listening.

Content Objectives taken from CCSS are the objectives of a particular lesson or unit of study.

Language Objectives are the particular skills needed to develop proficiency in the four language domains.

Schemata refers to an individual's knowledge or personal experience.

Primary language (L_1) is the dominant language that is spoken in the student's home. It is also referred to as the "home" language.

Total Physical Response (TPR) is a physical, visual movement that is used to enhance comprehension of an idea, phrase, or particular word.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The following categories frame this literature review: 1)The needs of English Learners; 2) the necessary components of an effective English Language Development unit; 3) the domains that need to be addressed within English Language Development instruction; and 4) the strategies that are accepted as the most effective and efficient in ELD instruction.

ELs are students that speak a language other than English in the home. The state of California has the largest and most diverse student population in the country with over 60 different languages other than English spoken at home. This constitutes almost one-third of the EL population in the United States. Almost every district in the state has an EL population (CDE, 2014).

More than 40% of students in California public schools speak a language other than English. In addition, approximately 25% of the total student population is not English fluent (CDE, 2015). The 1.4 million ELs in the state are representative of a diverse group with varying economic, socioeconomic, cultural, and linguistic backgrounds. They have different levels of English language proficiency, English literacy and even literacy in their primary language. Due to these factors, ELs enter school with different language needs than their English

Only (EO) counterparts that normally enter school with an English vocabulary base of 2000-8000 words (Data Quest, 2013).

An EL student “must master ‘academic English’ which includes semantic and syntactic knowledge along with functional language use” (Echevarría, Vogt, & Short, 2008, p. 11). They also need to read and understand expository prose, write persuasively, express points of view orally and in writing, make hypothesis, and predictions. ELs must learn academic curriculum while also developing their fluency and proficiency in English to participate in academic work and also meet grade-level standards (Echevarría, Vogt & Short, 2008). A phenomenon within the EL population is the students at the secondary level who are most commonly referred to as Long Term English Learners (LTELs). LTELs have been in U.S. schools for more than six years and still have not met the criteria for reclassification. The expectations to attain English proficiency and diminish the LTEL population have resulted in the need for effective and efficient ELD instruction. Effective ELD instruction will enable ELs to attain academic success as it relates to proficiency and/or mastery of grade-level standards (Olsen, 2010).

ELD is a systematic instructional model intended to develop the English proficiency of students whose primary language is not English. The goal of ELD instruction is to advance EL’s knowledge and use of English at increasing levels of sophistication. It is also intended to help ELs acquire a level of English proficiency which enables them to engage successfully in academic content

taught in English, which fosters their school and career success (Saunders, Goldenberg, Marcelletti, 2013).

ELD instruction focuses on the development of the language domains of listening, speaking, reading, and writing. Effective ELD instruction includes the following:

- Phonology: the sound system of English
- Morphology: the forms and formation of words, including prefixes, affixes, suffixes, root words, inflections, etc.
- Syntax: the structure of language, rules that govern the structure of phrases and sentences
- Semantics: the definition of language, including vocabulary and academic language
- Language functions: the reason why language is used
- Language forms and structures: grammar and language structures
- Pragmatics: the appropriate use of language in specific settings (CDE, 2001)

During ELD instruction, differentiation is used to address the academic needs of ELs that have varying English proficiency levels (2001). One instructional ELD model, content-based ELD, is the focus of this project.

Content-based ELD is an instructional model that integrates content objectives (i.e., Science, Social Science) with ELD language objectives (i.e., ELD Common Core State Standards [CCSS], CCSS Language Arts). Content-based

ELD promotes language development through content. The instructional model promotes language development through Phonology, Morphology, Syntax, Semantics, Language functions, Language forms structures, and Pragmatics. Content-based ELD instruction is considered ELD, only if ELD language objectives are integrated with content objectives (CDE, 2001). Regarding the instruction of content based ELD, the question still remains as to whether integrated or designated ELD is the most effective to meet the needs of ELs. Further research is still necessary to determine which approach best meets the needs of ELs.

Designated ELD is a separate block of time that is devoted to ELD instruction. The lessons during designated ELD instruction are driven by the English Language Development Standards. The standards, aligned with CCSS, specify the particular language development requirements that are needed for an EL to attain English language proficiency.

Integrated ELD is what its name specifies; an integrated approach to ELD instruction throughout the day and across subject areas. Unlike designated ELD, the standards that are the focal point of instruction are English language arts/literacy standards. The ELD standards are used in addition to the language arts standards to support the linguistic and academic progress of ELs (CDE, 2014).

In planning instruction for ELs, a good starting point is determining their current level of reading and writing (Cloud, Genesee, and Hamayan, 2009). This

is especially important for ELs that are at the emergent stage of their literacy development.

It also assists classroom educators in developing stage-appropriate instruction. At the initial stages of literacy, these are the foundational skills where attention should be focused:

- Extracting meaning from text
- Recognizing letters and words
- Phonological awareness
- Forming letters
- Initial decoding and encoding

Upon becoming proficient with these foundational skills, ELs can then build more sophisticated literacy abilities (Cloud, Genesee, and Hamayan, 2009). The findings from the National Reading Panel (2000) affirmed the conclusions of Cloud, Genesee, and Hamayan (2009) and added comprehension as an essential foundational skill. The National Literacy Panel on Language-Minority Children and Youth (August & Shanahan 2006) also found similar results to support the addition of comprehension . Cloud, Genesee, and Hamayan (2009) suggested that comprehension be given priority so that ELs see reading and writing as meaningful and functional activities and the other skills be taught in the following order: vocabulary, phonemic awareness, decoding/encoding, and lastly, fluency. They also recommended that ELD instruction as it pertains to literacy follow these guidelines:

- Literacy activities should be meaningful, interesting, and interactive.
- Literacy activities should build on and expand ELs' oral language skills.
- Reading and writing skills should be directly taught and modeled.
- Literacy skills should be taught systematically in an integrated manner.
- Reading and writing instruction should be connected.
- ELs must have various opportunities to read and write.
- Literacy instruction needs to address all aspects of literacy, social and academic.
- Classroom literacy must connect to and build on home experiences.

These guidelines as stated by Cloud, Genesee, and Hamayan (2009) should be the foundation upon which all teaching strategies are based and that the instruction that addresses these features, also explicitly focus students' attention on targeted language forms (Saunders, Goldenberg, and Marcelletti, 2013).

In their book, Creating Robust Vocabulary, Beck, McKeown and Kucan (2008) reiterate the strong correlation between a student's identification and understanding of vocabulary and his/her ability to read with comprehension. Vocabulary instruction that enhances student reading comprehension includes various exposures to the words regarding context and semantics, and engaging students in deep meta-cognitive processing (Beck, McKeown and Kucan, 2008). In regards to which words should be selected for instruction, Beck, McKeown and Kucan (2008) advocate the use of 'Tier II Words,' or those words that "characterize written text-but are not so common in everyday conversation"

(2008, p. 7). They also state that a student's opportunity to identify Tier II words comes predominately from their interaction with books. When students are able to "cross the lexical bar," (Corson, 1995, as cited in Beck, McKeown and Kucan, 2008, p. 60) or move from conversational vocabulary to academic vocabulary using both oral and written expression, they will be successful both academically and professionally (Beck, McKeown and Kucan, 2008).

"Oral language is the foundation of literacy" (Cloud, Genesee, and Hamayan, 2009, p. 45). It is essential for ELs to develop oral proficiency in English in order to achieve academic and professional success. To do this, they must acquire academic vocabulary, understand and apply standard grammar, and develop an understanding of the semantics of English (Saunders and O'Brien, 2006). In developing ELs' oral proficiency, students must have structured language practice (Kinsella, 2005). It is not enough for students to only hear academic vocabulary, words, or phrases used in the classroom they must also actively use it in context (Kinsella, 2005). In doing so, they are "using language as a means to communicate with real people and in real situations" (Ernst and Richards, 1995, p. 326).

An accepted practice is utilizing interactive activities that pair ELs at varying oral proficiency levels, and also grouping ELs with students whose primary language is English. However, this is just the initial step. The objective of the task must be clear for both the classroom educator and the students

regarding the core concept of the text. The language focus must be directly matched to the core concept and made explicit to the students.
Lastly, the specific words or phrases that are used to communicate during the interaction must be modeled by the teacher (Saunders and O'Brien, 2006).

The modeling of specific skills, vocabulary, phrases, and narrative strategies by the classroom educator to be used during student interactions has been found to be especially beneficial, at least for older ELs (Saunders and O'Brien, 2006). When language or literacy skills are modeled, ELs are initially listening to skills, then making connections to what is already known; and lastly, actively practicing the new skills within a meaningful activity (Winfield, 1989). Fassler (1998) supports the argument for meaningful activities and goes further in stating that when meaningful activities are coupled with student interaction, a more meaningful dialogue and positive learning experience results, which further promotes oral language proficiency for ELs.

Researchers agree that when classroom educators a) utilize structured language practice, b) directly connect a language focus to core context, c) initiate dialogue in meaningful activities, d) model specific language skills, and e) promote a positive environment, ELs will benefit in their acquisition of L_2 proficiency (Smith, 2012).

In 1996, the Office of Educational Research and Improvement, U.S. Department of Education funded the National Center for Research on Education, Diversity & Excellence (CREDE) to research a study on Sheltered Instruction

(Echevarría, Vogt & Short, 2008). The goals of the research were to develop a definitive model of sheltered instruction; use the results of the model to train teachers in efficient sheltered instruction strategies, and collect data to evaluate the effects of the model on the development of EL's L_2 proficiency (Echevarría Vogt & Short, 2008). After a period of evaluation, re-evaluation, and refinement by educators and researchers across the country, the product that resulted was not only an instrument to be used as an observational tool, but a model of lesson preparation and delivery which consisted of the following components:

- Lesson Preparation
- Building Background
- Comprehensible Input
- Strategies
- Interaction
- Practice/Application
- Lesson Delivery
- Review and Assessment

These features within the model are now accepted as integral components of effective ELD lesson preparation and delivery (Echevarría, Vogt & Short, 2008).

In order for learning to be effective and at its full potential, planning must produce lessons that enable students to make connections between their personal knowledge and experiences and the new information being presented in the classroom (Rumelhart, 1994). Learning is made relevant and meaningful

with the inclusion of age appropriate, grade-level materials that are connected to activities that are applicable to real-life situations. This holds especially true for ELs that are developing their L_2 proficiency. When planning lessons, educators must be careful not to "water down" content by using adapted materials, which are absent of critical pieces of information (Echevarría, Vogt, & Short, 2008).

Lesson Preparation

Effective planning includes specific, identifiable content objectives that state what students should know and be able to do. Content objectives can be derived from texts, teacher's guides, and state standards. They guide teaching and learning for both the classroom teacher and students. Since many can be broad in scope and written in complex language; they should be re-written in a manner that makes them more accessible for ELs. Content objectives should be displayed, clearly defined and reviewed with students during the length of the lesson or unit of study (Echevarría, Vogt & Short, 2008).

Language objectives, another critical piece of effective instruction, address the specific language development needs of ELs. When developing or deciding which language objectives to include in a lesson, it must be kept in mind that "acquiring a second language is a process" (Echevarría, Vogt & Short, 2008, p. 25).

Language objectives can range from a particular skill within a language domain (speaking, listening, reading, writing) to being process or performance-orientated products. For example; a language objective within the domain of

writing that requires a student to write a paragraph that utilizes similes is performance-orientated. A language objective within the domain of reading that requires a student to identify similes in a text is an example of a process-orientated objective. All content and language objectives should derive from standards and the topic of the lesson or unit being studied, and be part of lesson planning. Effective lesson planning requires thoughtful consideration from educators, clear, definitive objectives and that those objectives are taught through meaningful, real-life applicable activities (Echevarría, Vogt & Short, 2008).

Building Background

"Building background knowledge is essential for reading comprehension" (Neuman, Kaefer & Pinkham, 2014, p. 145). Students need a bank of knowledge regarding a particular topic in order to comprehend text. All students come to class with their own experiences or "schemata" – knowledge of the world, but it does not always correlate to the topic being introduced by the teacher (Echevarría, Vogt & Short, 2008). To bridge this gap, educators must determine a way to connect students' life experiences, introduce the new concepts or skills required to access information, and make the new material meaningful. Thusly, teachers must build a student's knowledge base or 'background.'

Deriving meaning from multiple meaning words, supplying missing information and making inferences during interactions, and accessing concepts and details from informational texts are all examples of skills that require

students to have background knowledge regarding the particular topic of study. These skills have become even more demanding with the advent of CCSS since the difficulty level of standards increases within specified ranges and at each grade level (Neuman, Kaefer, and Pinkham, 2014). Researchers (Christen & Murphy, 1991; Echevarría, Vogt, & Short, 2008; Neuman, Kaefer, and Pinkham, 2014) suggest these scaffolds to build students' background knowledge: (a) teach vocabulary as a pre-reading step; (b) provide experiences for students that make information meaningful; (c) provide students a guide or framework that they can use to develop their own background knowledge; (d) teach words in categories; (e) use contrasts and comparisons; (f) use analogies; (g) encourage reading that is focused; and (h) utilize multi-media. By increasing a student's background knowledge, classroom educators will be building a student's foundational knowledge which will enable them to read text, understand the information and retain it.

Comprehensible Input

"Making the message understandable for students" is what is referred to as comprehensible input (Echevarría, Vogt, & Short, 2008, p. 79). Comprehensible input extends the knowledge base that building background initiates in the process of comprehending information. However, it goes further than just showing pictures. Making information 'comprehensible' requires a conscious effort on the part of educators to make the information or lesson

meaningful and understandable through a variety of mediums (Echevarría, Vogt & Short, 2008).

Speech is one medium through which information can be made comprehensible. Speech in this context refers to the rate and enunciation that is used to deliver a lesson. ELs that are at the emergent level of L_2 development benefit from a rate of speech that is slower that an L_1 speaker. Oral communication is comprehensible for ELs when enunciation is clear, and when pauses are used to allow short spans for understanding. As students become more proficient, slower rates of speech are not necessary. The other component of 'speech' is the complexity of speech, or what is said. When providing information or explaining a process, educators must be aware of the type of vocabulary, phrases, and idioms that may cause confusion for ELs. When providing oral communication, teachers should use language that is straightforward and clear. When possible, a visual should also be displayed to enhance comprehension. Repetition and paraphrasing of information is also helpful in making oral information comprehensible (Echevarría, Vogt & Short, 2008).

A variety of other means are available to make information understandable for ELs. The use of body gestures or Total Physical Response (TPR), provide an immediate visual and aid in comprehension for particular vocabulary words. Pictorials, (drawn images) labeled with specific terminology, act as a medium to connect content specific words to an idea or concept. Other

vehicles to make information comprehensible are multimedia, charts, chants, realia, and graphic organizers. There is an array of mediums that can be used as comprehensible input. When considering what to use as comprehensible input, educators must remember (a) the linguistic needs of their ELs, and (b) to consistently use a variety of techniques in their daily lessons (Echevarría, Vogt & Short, 2008).

Once students have been provided background information and a variety of vehicles to make the information comprehensible, they need a way in which to access the information from memory; connect their schema to what they are learning, and retain the newly acquired information. This is done through the use of strategies (Echevarría, Vogt & Short, 2008).

O'Malley & Chamot (1990) stated that competent L_2 learners have particular ways of processing information. These mental processes are called 'learning strategies' because they are "the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information" (1990, p. 1). Pressley (2002) found that through carefully and explicitly taught self-regulating strategies, students' reading and learning improves. The three types of strategies identified as the most effective in aiding ELs to retain and apply new information are metacognitive, cognitive, and social/affective (O'Malley & Chamot, 1990).

Strategies

Metacognitive strategies help individuals monitor their thinking (Baker & Brown, 1984). They are strategies that (1) connect thinking and problem solving to specific learning situations, (2) clarify a goal for learning, (3) enable an individual to monitor his/her thinking, and (4) make adjustments if his/her understanding is not correct (Dermody & Speaker, 1995). Studies have shown that when metacognitive strategies are explicitly taught, reading comprehension is improved (Vogt & Nagano, 2003).

Cognitive strategies promote the organization of information that students are expected to apply through self-regulated learning (Paris, 2001). Directly related to individual learning tasks, cognitive strategies are used when students are physically manipulating objects.

The third type of strategies found most effective for ELs are social/affective. These strategies are learning skills used during collaboration and techniques that are used during social interactions when students are clarifying a point (O'Malley & Chamot, 1990). In addition to the strategies, educators must also teach students what a strategy is, how to use it, and when and why it is used. Two important points to remember when utilizing these strategies is that the goal for ELs is to develop independence in self-monitoring and self-regulation regarding their own learning. Also, that educators should explicitly teach, model, scaffold, and provide a variety of opportunities so that

ELs can become effective and proficient strategy users (Echevarría, Vogt, & Short, 2008).

Interaction

The importance of oral language development has been previously discussed. What is briefly mentioned here is its significance within classroom instruction. "Use it or lose it" is a saying that many times is attributed to a particular skill, experience, or knowledge that we have acquired. It also applies to our acquisition of a second language (Day, 1998). Gerald Graff (2003, p. 9) states "talk about books and subjects is as important educationally as are the books and subjects themselves." Ramírez, Yuen, Ramey, & Pasta (1991, as cited in Echevarría, Vogt & Short, 2008) concluded that classrooms are too many times dominated by 'teacher talk,' or conversations initiated and dominated by the classroom educator. In order for students to develop L_2 proficiency, they must be given ample opportunities for interaction to enhance their comprehension of content (Echevarría, Vogt, & Short, 2008). The following are some of the benefits that have been found when students are provided more opportunities to interact:

- Brain stimulation: Activities that are meaningful and interesting stimulate pleasure centers in the brain which cause the individual to learn and retain information (Poldrack, Clark, Pare-Blagoev, Shohamy, Creso Moyano, Myers & Gluck, 2001).

- Increased motivation: Interaction increases reading motivation and comprehension (Guthrie & Ozgungor, 2002).
- Reduced risk: When teachers call upon students to respond, this can be threatening for some (Jenson, 2005). By providing students ample opportunities to interact in groups, the 'threatened' feeling is reduced and students are able to discuss the content more willingly.
- More processing time: Students need more time to process newly acquired information especially those developing L_2 proficiency. Direct instruction should be kept to short increments and opportunities should be given to students to discuss the content presented using particular words or ideas (Echevarría, Vogt, & Short, 2008).
- Increased attention: Grouping students increases their attention and participation (Marzano, Pickering, & Pollack, 2001).

When classroom educators are careful to limit the amount of 'teacher talk' and provide ELs with an array of opportunities to interact, the research has shown that they greatly assist in developing ELs' L_2 proficiency and classroom motivation.

Practice/Application

Practice helps an individual master a skill. When it refers to ELs, 'practice' or application should be done in all four of the language domains: reading, writing, listening, and speaking (Echevarría, Vogt, & Short, 2008). The research regarding L_2 development has also shown that to develop a high level of

proficiency; opportunities for comprehensible output (Swain, 1985) must be provided, specifically oral and written practice.

Classroom educators should carefully choose activities that address the particular content and language goals within the topic of instruction to provide ELs with ample application avenues to develop their L_2 proficiency.

Lesson Delivery

Lesson delivery or the manner in which instruction is presented is closely associated with lesson preparation. The effectiveness of a lesson's delivery, students' engagement or participation, and the students' level of understanding evidenced through their application, is often linked back to lesson preparation. Lesson delivery is effective when teachers stay focused on what the content and language objectives are, when those objectives are clearly displayed, orally stated, and reviewed with students prior, during, and at the conclusion of the lesson. Effective lesson delivery should engage students 90 to 100% of the time. This does not mean that students are always highly engaged, but that they should be responding to the educator's directions, following the lesson, and participating in the planned activities. If students know what the expectations are, they most likely will strive to meet them (Echevarría, Vogt, & Short, 2008).

Review and Assessment

The final component of effective ELD instruction is assessment. It is not only a question of what students learned at the end of a particular unit of study or lesson, but what modifications during instruction might be necessary to meet the

needs of the students. Reviewing students' understanding or lack thereof through an assessment at various intervals, and with a variety of assessments; enables educators to make more informed instructional decisions and determine if students are mastering lesson objectives.

As previously stated; assessments are utilized to summarize what a student has learned and to provide information or feedback to the educator as a guide to modify instruction. Because of this, assessments can range from written products provided by students to a 'thumbs up' response from both teacher and students. The decision of what to assess and why should be determined before the unit of study is selected, the content and language objectives are developed, and which strategies are to be utilized (Wiggins and McTighe, 2005). This focuses educators on the purpose of the instruction or content objectives, which are derived from the CCSS, and again whether the assessments should be summative or used to alter instruction.

The term *assessment* has been specifically used to point out a distinction between assessment and evaluation. Assessment is defined as "the gathering and synthesizing of information concerning students' learning," and evaluation is defined as "making judgments about students' learning" (Echevarría, Vogt, & Short, 2008, pp. 171-172). Assessment as previously stated, occurs before, during, and at the end of instruction. It must be connected to instruction and target the goals of the lessons. Evaluation is the educator's judgment on whether the student has achieved the expected goal.

Assessment guides an instructor's teaching and instruction. It enables educators to make informed decisions, provides both student and teacher feedback on progress, and through the use of a variety of assessments educators can make a fair, comprehensive evaluation of whether students are meeting the desired objectives.

CHAPTER THREE

DESIGN AND METHODOLOGY

The Context of This Project

The premise behind the development of the ELD unit for this project derived from the research by Echevarría, Vogt, & Short (2008). Their research known as the SIOP® Model (Echevarría, Vogt & Short, 2008) provides the groundwork to prepare and deliver instruction across all subject areas to meet the challenges for ELs regarding acquisition of grade-level content and fostering their English Language development. The following categories frame the structure of the ELD unit for this project: 1) Lesson Preparation; 2) Building Background; 3) Comprehensible Input; 4) Strategies; 5) Interaction; 6) Practice/Application; 7) Lesson Delivery; and 8) Review and Assessment.

Lesson Preparation

"Planning must produce lessons that enable students to make connections between their own knowledge and experiences and the new information being taught" (2008, p. 23). To make content relevant for students, Echevarría, Vogt, & Short (2008) advocate that materials and activities should be meaningful to students. A student's interest in acquiring new knowledge is motivated when materials and activities foster real-life applications between new information studied and his/her personal experiences (Echevarría, Vogt & Short, 2008).

For effective instruction, educators must include content objectives that specify the goal for the lesson.

Content objectives set the particular, over-arching purpose for the lesson. The objectives can be derived from standards, district goals, or an educational framework that states what students should know or be able to do to be considered at grade-level or proficient status regarding the academic focus. "The objectives are not a by-product of an activity but the foundation of one" (2008, p. 27). Objectives identify for students what the expected goal is, thus providing a particular purpose for the lesson and helping to eliminate any ambiguity sometimes associated with standards, especially broad or generic ones. Content objectives should state clearly the purpose for the particular standard. Also referred to as the language function within the standard, the content objective specifically states how language is to be used in the lesson (Echevarría, Vogt & Short, 2008). Content objectives should be displayed, orally stated, and directly linked to specific, grade-level content standards (Echevarría & Graves, 2007). This is especially helpful for ELs that have both the challenge of learning academic content and developing L_2 acquisition.

Language objectives that are incorporated into lesson preparation assist teachers in providing instruction to ELs to foster their language development (Short, 1999). As with content objectives, language objectives should be posted in student friendly vernacular and be stated both orally and in writing (Echevarría, Vogt & Short, 2008).

Educators should keep in mind when incorporating language objectives into their lesson preparation that learning a second language is a process (Echevarría, Vogt & Short, 2008). It is also recommended that when developing language objectives, educators should determine whether the objectives are process or performance oriented (Echevarría, Vogt & Short, 2008).

Performance oriented language objectives require that students produce evidence of their application and, or mastery of the objectives. Process oriented language objectives focus on the students' ability to follow a sequential process or cognitive procedures that lead them to performance oriented activities (Echevarría, Vogt & Short, 2008). Language objectives can focus on developing and using academic vocabulary, particular language skills, grammar or language structures or a particular lesson task (Echevarría, Vogt & Short, 2008). The ELD Standards that correlate to the CCSS are a resource for educators when incorporating content and language objectives within their lesson preparation.

Another feature of effective lesson preparation is the selection of content that is appropriate for the students' age and background (Echevarría, Vogt & Short, 2008). During lesson development, the teacher should consider the following: 1) the students' literacy in his/her primary language, 2) his/her L_2 proficiency, 3) reading ability, 4) age and cultural relevance of the L_2 materials, and 5) the reading difficulty of the text to be used (Gunderson, 1991, p. 21).

Supplemental materials that enhance and make information meaningful should be included to foster clarification and understanding of demanding

concepts (Echevarría, Vogt & Short, 2008). Using an array of supplemental materials aids different learning styles and enables students to connect their personal experiences with new concepts.

Lesson preparation is a critical component in developing lessons that address the needs of ELs that have the challenge of learning academic content while developing L_2 proficiency. Classroom instruction that is purposeful, with clearly defined objectives, that addresses both content and language development while incorporating relevant materials can provide meaningful classroom experiences for ELs.

Building Background

A student's knowledge of the world or "schemata" provides a foundation for that individual's learning and ability to remember facts, details and understanding of concepts and new ideas (Echevarría, Vogt & Short, 2008). However, when a student's background knowledge is not sufficient to connect to classroom concepts, then particular interventions should be considered for building background knowledge. Echevarría, Vogt and Short (2008) recommended the following: 1) teach the necessary vocabulary as a pre-reading step; 2) provide meaningful experiences; and 3) introduce a cognitive framework that students can use to develop their own understanding of text.

Certain studies suggest that the first intervention be a particular number of words taught during a particular time frame, and that the selection of those words be strategic (Beck, Perfetti & McKeown, 1982). Other recommendations support

the idea of teaching ELs Tier I words that their English only speaking peers already know (Stahl & Nagy, 2006).

The second intervention advocates making information and activities meaningful for ELs (Echevarría, Vogt & Short, 2008). This can be done through a variety of mediums such as realia, power points, field trips and a number of experiences that make content substantial for students.

The third intervention fosters the ability of the students to develop their own background knowledge. This is done by teaching students particular strategies or how to use specific graphic organizers suited for a particular activity or process. As students become more proficient in their understanding of concepts, they build their reserve of background experiences (Echevarría, Vogt & Short, 2008).

In addition to developing vocabulary and the use of particular strategies, developing students' background knowledge also includes understanding the difference between activating prior knowledge and building background (Echevarría, Vogt & Short, 2008). Although the two terms are used almost as synonyms, Echevarría, Vogt & Short (2008) argue that they are instructionally different. "All students have prior knowledge, gained from schooling and life experiences" (2008, p. 56). Teachers are able to assess informally what students know, or address any mismatches in schemata by brainstorming, using graphic organizers, discussions and a variety of techniques regarding prior knowledge. However, if students have very little prior knowledge of a particular

topic, educators must build background knowledge using strategies to fill in the missing information and connect what prior knowledge students do have with what is being taught (Echevarría, Vogt & Short, 2008).

Two final features regarding building background knowledge should be considered by teachers. First, explicit connections need to be made between new material and concepts previously taught. This is done by the educator specifically stating what the link between the concepts is, through the use of prompts to promote discussions on how the new and previous material are related. Secondly, key vocabulary needs to be emphasized through use, repetition, and application. Words that are specific to the content, that denote a process, and that teach English structure are also necessary in developing background knowledge (Echevarría, Vogt & Short, 2008).

English learners encounter the dual challenge of learning academic content while trying to make meaning of that content. When introducing new concepts to English Learners; teachers should consider the prior knowledge that their students bring to the classroom and what strategies and techniques can be used to link their students' schemata to new knowledge, while making that knowledge meaningful.

Comprehensible Input

ELs learn much the same way as their English only peers. However, since they are developing their L_2 proficiency while learning new academic concepts, they require certain modifications to instruction to make new information

understandable (August & Shanahan, 2006). It is the accommodations to the linguistic needs of ELs that make effective ELD instruction more than "just good teaching."

Acquiring a second language takes time, which requires a variety of skills by classroom teachers to make information comprehensible. One skill is the use of appropriate speech (Echevarría, Vogt & Short, 2008). For ELs that are at the emergent level of their L_2 development, the rate, enunciation and complexity of speech are essential factors for making information meaningful. The rate and enunciation of speech refers to *how* the classroom educator delivers the information. Attention should be paid to the rate of speech, the use of pausing, and clear enunciation, all of which help to slow the educator's rate of speaking, making information easier for ELs to understand. Once students become more comfortable with the language and are increasing their L_2 proficiency; teachers can return to a regular rate of speech. The complexity of speech refers to *what* is said and indicates the selection of vocabulary, the complexity of sentence structure, and can also include the use of idioms (Echevarría, Vogt & Short, 2008).

The clear explanation of required tasks and activities also assist in making information meaningful for students. According to Echevarría, Vogt & Short (2008), assignments that require sequential steps should be orally stated, modeled, posted and frequently referred to, making the input comprehensible for

students. In addition to making procedures readily visible, and clearly stated, a variety of techniques should also be used. The following are a few examples:

- Body gestures or Total Physical Response (TPR): provides a visual aid for students (Echevarría, Vogt & Short, 2008).
- Preview material (Echevarría, Vogt & Short, 2008).
- Hands on activities, Realia (Echevarría, Vogt & Short, 2008).
- Use of multi-media (Echevarría, Vogt & Short, 2008).
- Pre-exposure of academic vocabulary: exposes students to specific information (Jenson, 2005).
- Repeated exposure to content specific vocabulary (Marzano, Pickering, & Pollock, 2001).
- Sentence Strips (Echevarría, Vogt & Short, 2008).
- Graphic Organizers: to show key points (Vogt & Echevarría, 2008).
- Audiotape: to provide repeated listening (Vogt & Echevarría, 2008).

Making information comprehensible is more than providing students with images to enhance their learning. It is the conscious effort by teachers to understand the linguistic needs of their EL students and to use a variety of techniques to meet their students' L_2 development needs.

Strategies

When introducing students to new information, the desired outcome is to have them make connections between new concepts and those that they have already acquired. In addition, their ability to retain new information and apply it

through the use of techniques and skills is also a goal (Echevarría, Vogt & Short, 2008). The mediums in which to do this are known as Metacognitive (Baker & Brown, 1984), Cognitive (Paris, 2001), and Social/Affective (O'Malley & Chamot, 1990) strategies. As previously stated in the project (see p. 24) these are "self-regulating strategies that improve student learning and reading" (Echevarría, Vogt & Short, 2008, p. 96).

Scaffolding, a term that is equated with Vygotsky's (1978) Zone of Proximal Development (ZPD) is what assists an individual in comprehending new information through the collaboration with a more competent peer (Echevarría, Vogt & Short, 2008). Two types of scaffolding can be effective for introducing and reinforcing ELs understanding of content.

Verbal scaffolding is the use of prompting, elaboration and questioning to increase a student's level of comprehension, L_2 proficiency, and critical thinking (Echevarría, Vogt & Short, 2008). The following are examples of verbal scaffolding:

- Paraphrasing: restating a student's verbal response to illicit standard grammar usage (Echevarría, Vogt & Short, 2008).
- "Think-Alouds": the teacher speaks out-loud about what she/he is thinking to provide students with an oral example of his/her thought process (Echevarría, Vogt & Short, 2008).

- Orally using academic vocabulary in context, in a phase or sentence: provides the students with examples of sentence structure and intonation (Beck, McKeown and Kucan, 2008).

Procedural is the second type of scaffolding. The scaffolding is what its name indicates, a structure that assists in the understanding of procedures. Used to help students increase their level of independence the procedures can be 1) one-on-one teaching, 2) small group instruction with students at varying ability levels, and 3) partnering with more proficient peers when reading (Echevarría, Vogt & Short, 2008).

A final feature in promoting a student's ability to make connections between new and previously taught information are questions that promote higher-order thinking skills (Echevarría, Vogt & Short, 2008). Echevarría, Vogt & Short (2008) recommend that when promoting critical thinking for ELs, educators should plan carefully what and which higher-order thinking questions are included during lesson preparation. Once students are able to identify and use varying levels of questions, they will be able to derive more meaning from text (Taboada & Guthrie, 2006).

Educators should explicitly teach, model, scaffold, and provide a variety of strategies for ELs. They will not only give their students opportunities to become effective and proficient strategy users, but also help them develop independence in self-monitoring and self-regulation regarding their own learning (Echevarría, Vogt, & Short, 2008).

Interaction

All students should be provided with a variety of opportunities to interact with their peers regarding concepts and ideas that they are learning. ELs especially need to interact with their more competent L_2 peers. "If one doesn't practice using language, it is difficult to maintain it" (2008, p. 115). In addition to providing students with increased opportunities to interact with proficient peers as previously discussed (see pp. 25-26), teachers should also pay particular attention to student groupings to promote and support language use.

Grouping configurations should consist of whole to small group, and small group to individuals. By varying groups, classroom educators provide students with the opportunities to talk about new information, process it and develop their L_2 proficiency utilizing academic vocabulary in context (Echevarría, Vogt & Short, 2008). However, teachers should practice caution and not rely on homogenous groupings. Studies have shown that groupings of low, average, or high groups for ease of instruction have "serious academic and social ramifications for those students not in the high group" (2008, p. 126). Groupings can consist of whole-class to facilitate the introduction of new concepts, or small flexible groups to provide more focused instruction and help promote collaboration through interaction (Tompkins, 2006).

Wait time is the period of silence between responses during a conversation. Echevarría, Vogt & Short (2008) concluded that the wait time provided by teachers in U.S. schools is not enough and classroom teachers frequently

interrupted students and, or finished their sentences. When students were interrupted and not given enough time to verbalize their thoughts, their language development through academic discourse was decreased. When teachers are patient in waiting for their students' responses, they not only foster language development, but also demonstrate to students that they value their input.

Practice/Application

When new learning of concepts or ideas takes place, students need time to practice and apply the new information to foster mastery (Echevarría, Vogt & Short, 2008). Practice helps an individual master a skill. For ELs, the practice and application needs to be within the domains of reading, writing, listening and speaking to provide opportunities for comprehensible output (Swain, 1985). In selecting activities for ELs, educators should consciously incorporate opportunities to practice not only content, but also language objectives. Activities that promote writing skills are particularly important because ELs do not need to have oral proficiency before they read and write (August & Shanahan, 2006). When students are engaged in activities that promote new content along with language objectives, they are able to make connections more effectively (Echevarría, Vogt & Short, 2008).

Lesson Delivery

Effective lesson delivery during ELD instruction is reflected through student participation, the clarity with which the educator presented the content, the quality of students' work, and the specific identification and continuous review of

both content and language objectives (Echevarría, Vogt & Short, 2008). Providing a focus for ELs regarding the purpose of the content instruction through intentional content and language objectives facilitates the students' understanding of the direction of the lesson and aides them in staying on task (Echevarría, Vogt & Short, 2008).

Efficient lesson delivery should engage students 90 to 100% of the time. This does not mean that students need to be always highly engaged, but that they should be responding to the educator's directions, following the lesson, and participating in the planned activities (Echevarría, Vogt & Short, 2008). There are three components regarding student engagement that educators should be conscious of 1) allocated time; 2) engaged time; and 3) academic learning time (Berliner, 1984).

Allocated time is the decision by classroom teachers regarding how much time should be given to a particular topic. The important idea during allocated time is a balance between presenting information and providing students with opportunities for practice and application (Echevarría, Vogt & Short, 2008).

According to Echevarría, Vogt & Short (2008), engaged time is the percentage of time students participate within the allocated time during classroom instruction. Bickel and Bickel (1986) stated that students learn more when they are able to engage in learning tasks that are focusing on instruction.

Academic time is the students' time-on-task (Echevarría, Vogt & Short, 2008).

As with all activities and the time allocated to them, the task should be directly linked to the focus of the instruction and provide students with opportunities to practice and apply the concepts and skills that will be assessed (Leinhardt, Bickel & Pallay, 1982).

Review and Assessment

Assessment is defined as “the gathering and synthesizing of information concerning students’ learning” (Echevarría, Vogt, & Short, 2008, p. 171). Through the use of an assessment at various intervals, and with a variety of assessments, educators can make more informed instructional decisions and determine if students are mastering lesson objectives. Modifications during instruction must be made to meet the needs of the students (Echevarría, Vogt & Short, 2008).

The following are examples that educators should consider incorporating into their assessments whether the assessments are to modify instruction (informative), or to determine if students have mastered content and language objectives at the end of a given period (summative):

- Review of key concepts
- Specific and timely feedback regarding student output to address any misinformation or misconceptions
- Fair and comprehensive conclusions regarding student achievement

As previously stated, assessment guides an instructor’s teaching and instruction. They enable educators to make informed decisions, provide both

student and teacher feedback on progress, and through the use of a variety of assessments, educators can make a fair, comprehensive evaluation of whether students are meeting the desired objectives.

CHAPTER FOUR

PROJECT DEVELOPMENT

The following questions are the basis on which the ELD unit was developed: a) What are the essential components of ELD instruction? b) What are considered as effective and efficient strategies within the essential components of ELD instruction? c) What does an ELD unit that incorporates the essential components and the related strategies look like?

The following components: 1) Lesson Preparation; 2) Building Background; 3) Comprehensible Input; 4) Strategies; 5) Interaction; 6) Practice/Application; 7) Lesson Delivery; and 8) Assessment are the criteria used to develop the ELD unit (see appendix pp. 108-112). This chapter describes how the ELD unit was developed using these eight research based components.

Lesson Preparation

According to Echevarría, Vogt & Short (2008) deliberate lesson preparation is the foundation for effective ELD instruction. The word deliberate in this context refers to the thoughtful process used by classroom educators regarding a clear and thorough understanding of the required state standards and, or skills, especially language skills, that they want their EL students to master. Once teachers have determined the long and short-term objectives of their intended instruction, they can then begin to efficiently design effective ELD lessons.

Efficient and effective ELD lesson preparation should begin with the determination of the assessment that is going to be used to evaluate students' understanding and application of the particular standard (s) and language skills (Wiggins and McTighe, 2005). The ELD unit developed for a 3rd grade class on Marine Mammals began with the formation of a summative assessment that requires the utilization of content standards and particular language skills as evidence of mastery of the standards by the students. The assessment was based on the applicable New Generation Science Standards and The California English Language Development Standards that correspond to the California Common Core State Standards for Language Arts (see Appendix A, pp. 60-69). After the assessment was created, specific content and language objectives were utilized.

Content objectives, developed from the grade-level science and language arts standards for 3rd grade are intended to provide students with a written and visual direction of the expectation (s) for learning (Echevarría, Vogt & Short, 2008). The content objectives are written in student friendly vernacular stating the specific science and, or language arts standards that the students are expected to learn. Examples of content objectives are provided prior to the strategy examples (refer to Appendix A, p. 72). Following the determination of the particular content objectives, the next step in lesson preparation is to specify the particular language skills that are essential for ELs' L_2 development.

As stated by Saunders, Goldenberg, and Marcelletti (2013), ELD instruction must include the specific functions and forms of L_2 development. The particular language functions and forms that will be taught, should be written, displayed and orally reviewed by teachers in the form of language objectives (Echevarría, Vogt & Short, 2008). Like content objectives, language objectives should be written in student friendly text, but unlike content objectives, should specifically state the particular language forms, vocabulary and, or phrases particular to the language domain that are needed for ELs to attain English proficiency (Echevarría, Vogt & Short, 2008). Examples of language objectives are listed prior to the strategy examples (see Appendix A, p. 72). The incorporation of content and language objectives in an ELD unit, provide a clear direction regarding the purpose of instruction that is intended for students to learn grade-level content and develop their English language proficiency (Echevarría & Graves, 2007).

Building Background

All students bring their knowledge of the world to the classroom. However, their life experiences or "schemata" do not always connect to the topic that is taught in the classroom (Vogt, 2005). To overcome this gap in knowledge, educators must find vehicles to make new information for students meaningful. Building this lack of background knowledge for students can be done through the intervention of teaching vocabulary that is particular to the topic (Biemiller, Boote,

2006; Stahl & Naggy, 2006). The ELD unit includes a vocabulary list that ranges from what are considered very familiar or Tier One words, to more challenging words (Tier Two) to vocabulary that is specific (Tier Three) to the content (Beck, McKewon and Kucan, 2008). The Tier Two and Tier Three words are specifically taught through the use of input charts and chants. A list of other vocabulary building activities is also provided (see Appendix A, pp. 58-59).

According to Echevarría, Short & Powers (2006) another intervention that can be used to enhance students' background knowledge is the use of new text. A 'Big Book' is included in the unit that not only introduces the overarching theme, but also includes a mix of defined and highlighted Tier Two and Tier Three words. The incorporation of repeating text and classification of main ideas within the big book fosters the idea of teaching content to ELs through a sequence of subskills (Koda, 2008, as cited in Mikulecky, 2011). Another strategy included in the unit motivates student participation while enhancing background knowledge.

The KWL chart questions what students *know* about a particular topic and what they would like to investigate further regarding the subject (Vogt & Echevarría, 2008). The purpose of utilizing this mediated structure in the form of a graphic organizer is to informally assess the students' knowledge regarding the subject matter. The KWL chart promotes the validation and clarification of information and it can also be used to provide short, specific instruction (mini-lessons) on language, grammar and spelling ("ProjectGLAD," 2015).

Comprehensible Input

The attempt to make the information regarding marine mammals comprehensible is done through the use of a Pictorial Input chart™ and a World Map™ graphic organizer ("ProjectGLAD," 2015). Both mediated structures provide a visual representation and direct instruction of the unit ideas, content and topic specific vocabulary. While using a rate of speech that is well-suited to their ELs' proficiency level, the teacher can further promote student comprehension of the content by using TPR and paraphrasing of the subject matter while modeling the charts (Echevarría, Vogt & Short, 2008). Tier Two and Tier Three vocabulary is also directly taught in context through the charts. The correct pronunciation of academic vocabulary by ELs is developed through the teacher's oral repetition of the phrase "read with me," which prompts students to orally repeat specific phrases and vocabulary (Saunders, Goldenberg, and Marcelletti, 2013). The skill of recognizing how information is categorized is scaffolded through the use of color coding ("ProjectGLAD," 2015).

Strategies

The strategies utilized in the ELD unit were selected to provide ample opportunities for ELs to develop their L_2 proficiency in each of the language domains. The selected self-regulating strategies (see pp. 24-25) are examples of what O'Malley & Chamot (1990) refer to as Metacognitive, Cognitive and Social/Affective. By specifically teaching students multiple self-regulating

strategies, educators enable students to improve their own learning, thusly promoting their L_2 development (Fisher, Frey & Williams, 2002).

Interaction

Students need to practice speaking a language in order to learn it (Day, 1986). ELs need ample opportunities to practice academic English, not only socially, but through the use of structured conversations that are meaningful (Wong-Fillmore & Valadez, 1986). The conversations meant to develop students' academic English are presented in the unit through various activities.

During the direct instruction of the unit Pictorial Input chart™ and World Map™ ("ProjectGLAD," 2015) the students are given specific oral prompts to discuss with a peer their understanding of the modeled information (see Appendix A, pp. 76-77). This pause within the direct teaching of the input charts, allowing students the time for discussion of content material is known as 'chunk and chew' (Echevarría, Vogt & Short, 2008). The same opportunity to address the language domain of speaking is also provided following the reading of the unit Big Book. The unit includes examples of Sentence Frames which can be used as a scaffold to provide structured, language practice regarding the main idea and details from grade-level text (see Appendix A, pp. 76-77). The unit also provides examples of prompts to expand students' answers to content related questions. Questions that promote critical thinking (Fordham, 2006) and address particular oral language skill development for ELs (CDE, 2014) are also included

(see Appendix, p. 89) to augment the content presented in the Pictorial Input Chart™ (“ProjectGLAD,” 2015).

Practice/Application

Multiple opportunities that are focused on speaking and writing develop a high level of L_2 proficiency for ELs (Swain, 1985). The incorporation of Learning Logs™ (“ProjectGLAD,” 2015) and Interactive Journals (Brechtel, 2001) are intended to provide students with the opportunity to apply their newly acquired content knowledge through the domain of writing. The inclusion of Expert Groups™ (“ProjectGLAD,” 2015), are intended to extend the writing opportunity while addressing the domain of reading in a small group setting. The social interaction that takes place during the Expert Groups™ (“ProjectGLAD,” 2015) activity also allows ELs to orally practice content vocabulary and phrases in a meaningful way.

The aforementioned strategies are included in the unit because of the opportunities they initially provide for ELs to practice and apply their understanding of newly acquired content within the domain of writing, then expand the applications to reading, speaking and listening.

Lesson Delivery

As previously stated in the project, effective lesson delivery of new information requires that content is supported by content objectives, language

skills necessary to access the information are specifically stated in language objectives, that students are engaged approximately 90% to 100% during meaningful activities, and that information is delivered at a pace that is appropriate to students' ability levels (Echevarría, Vogt & Short, 2008).

Review and Assessment

Review and assessment of key concepts, academic vocabulary and language skills for L_2 proficiency development are done throughout the unit. The unit begins with a Prediction and Review Guide and KWL Chart to evaluate students' knowledge regarding the key concepts emphasized within the Marine Mammal ELD unit. The students' understanding of main ideas and key details of grade-level text as presented in the Big Book is evaluated through the use of prompted dialogue and, or Sentence Frames examples that are provided in the unit . A writing assessment of the students' understanding of content and academic vocabulary is achieved with the utilization of a Learning Log™ ("ProjectGLAD," 2015). Regular feedback intended to evaluate and expand students' understanding of information and, or clarification of ideas is obtained through the use of open-ended question examples provided in the unit. Evaluating students L_2 proficiency development and assessing their growth is made possible by the use of the scaffolded question matrix (see Apendix A, pp. 90-91) and their written responses in both the Learning Logs™ ("ProjectGLAD," 2015) and Interactive Journals (Brechtel, 2001).

A summative assessment to gather evidence regarding the students' understanding and application of content objectives, language objectives, academic vocabulary, and development of oral language proficiency will be produced by the students in the form of a power point presentation. The unit includes a rubric that outlines the expectations to demonstrate content proficiency and L_2 development (see Appendix A, p. 113).

These components served as the research foundation for the development of the ELD unit.

CHAPTER FIVE

CONCLUSION

The third grade ELD unit that resulted from the reviewed research strives to incorporate the essential components and strategies that previous and current findings have determined to be accepted practices for L_2 English development. The unit includes the components of a) lesson preparation, b) building background, c) comprehensible input, d) strategies, e) interaction, f) practice/application, g) lesson delivery and h) review and assessment which are considered the foundation of effective ELD instruction (Echevarría, Vogt & Short, 2008).

Within the necessary components, the language domains of reading, writing listening and speaking are also emphasized in the unit to provide an approach to L_2 development that is balanced regarding the language needs of ELs (CDE, 2015). A variety of strategies are integrated throughout the unit which accepted research has also indicated to be the most efficient in L_2 development while also increasing the ELD repertoire of classroom educators (Echevarría, Vogt & Short, 2008).

As a scaffold for teachers, various examples of content and language objectives are listed prior to the specific strategies throughout the unit. This was done to provide a particular focus for both content and language development. An original drawing meant as an example of comprehensible input is

accompanied by a matrix of leveled questions also meant to foster L_2 development while addressing content standards.

Original chants meant to address vocabulary development and reading fluidity have also been included to promote active participation by students.

Small group reading activities of grade-level expository text are included that not only focus on reading comprehension, but also promote note taking skills and the use of advanced graphic organizers. All of which are linked to a matrix that develops the skill of categorizing details and facts about a particular topic and connecting those facts to writing.

The unit finishes with a comprehensive assessment which allows the students to choose a particular subject and present their findings in a manner that addresses the language domains of reading, writing, listening and speaking while utilizing the medium of technology.

Recommendations for Further Research

This project is not a definitive example of a complete unit of ELD instruction. It is an attempt to include what research has deemed as acceptable practices regarding a unit of study to address the particular language needs of EL students while teaching grade-level content. It was developed to assist teachers with the knowledge of how to construct a particular unit while being conscious of the various components of effective ELD instruction necessary to address the domains of reading, writing, listening and speaking. The following are

suggestions to promote the knowledge of teachers in how to develop effective ELD units:

1. Provide trainings on the essential components of an ELD unit.
2. Within the trainings, have teachers in grade-level groups select topics of instruction and determine the applicable content and language standards.
3. Instruct teachers regarding the importance and difference between content and language objectives and have them practice writing both content and language objectives.
4. Model for teachers how to determine and select strategies that are within the essential components.
5. Model and have teachers practice developing an ELD unit.
6. Use the developed unit as a 6 or 8 week topic of instruction.
7. Provide time for teachers to reflect and modify the unit as needed for more effective instruction.

This project contributes to the field of education. It promotes the understanding and knowledge of what components and strategies are necessary in the development of what research considers an effective ELD unit. It will deliberately help teachers organizationally, theoretically and practically. Classroom educators need to visualize and know how to organize their instruction in order to mediate not only the students' acquisition of academic language, but also their scientific knowledge.

APPENDIX A

THIRD GRADE ELD UNIT

MARINE MAMMALS

APPENDIX A

THIRD GRADE ELD UNIT
MARINE MAMMALS:

UNIT THEME:

- Understand that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction and death.
- Different organisms develop traits and, or characteristics from their environment in order to survive
- Cross-cultural respect theme: Everyone has a social responsibility to protect our marine life and their habitats.
- 21st Century Theme: Global Awareness: Learning from and working collaboratively with individuals of diverse cultures and backgrounds to build a global community of awareness and action to protect our planet's marine mammals and their aquatic environments.

Lesson Preparation:

Possible Content Objectives:

Possible Language Objectives:

Building Background:

- Field trips
- Prediction/Reaction Guide
- KWL Chart
- Big Book
- Pictures and illustrations
- Quickwrites with a prompt
- Read Alouds
- Videos
- Realia
- 4 Corners Vocabulary

Comprehensible Input:

- Mediated Image Organizer
- Powerpoints
- Read aloud with Story Map and images

- Graphic Organizers

Interaction:

- 10/2 (Chunk and Chew)
- 5/1 (Chunk and Chew)
- Cooperative Learning Groups
- Role Playing
- Group Response with a White Board
- Reciprocal Teaching
- Inside-Outside Circle
- Gallery Walk

Practice and Application:

- Poetry and Patterns
- Interactive Journals
- Go Graphic for Expository Texts
- Story Maps
- Venn Diagrams
- Mediated Classification Matrix
- Cornell Notes

Lesson Delivery:

- Display content and language objectives
- Orally state content and language objectives
- 10/2 (Chunk and Chew)
- 5/1 (Chunk and Chew)
- Rate of Speech
- Think-Pair-Share
- Pausing
- Student Engagement

Assessment:

- Mediated Classification Matrix
- Graffiti Wall™
- Writing Assessment
- Performance Task (Marine Mammal Power point)

NEXT GERNERATION SCIENCE STANDARDS CALIFORNIA – GRADE 3

3 Inheritance and Variation of Traits: Life Cycles and Traits

3-LS1-1. **Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.** [Clarification Statement: Changes organisms go through during their life form a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.]

3-LS3-1. **Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.** [Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]

3-LS3-2. **Use evidence to support the explanation that traits can be influenced by the environment.** [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]

3-LS4-2. **Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.** [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]

California Department of Education. (2015). NGSS for California public schools, K-12. Retrieved from http://www.cde.ca.gov/pd/ca/sc/ngssstandards.asp

SCIENCE AND ENGINEERING PRACTICES

Developing and Using Models

Modeling in 3-5 builds on K-2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.

- Develop models to describe phenomena. (3-LS1-1)

Analyzing and Interpreting Data

Analyzing data in 3-5 builds on K-2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations.
When possible and feasible, digital tools should be used.

- Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS3-1)

Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in 3-5 builds on K-2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems

- Use evidence (e.g., observations, patterns) to support an explanation. (3-LS3-2)
- Use evidence (e.g., observations, patterns) to construct an explanation. (3-LS4-2)

Scientific Knowledge is Based on Empirical Evidence

- Science findings are based on recognizing patterns. (3-LS1-1)

DISCIPLINARY CORE IDEAS

LS1.B: Growth and Development of Organisms

- Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1)

LS3.A: Inheritance of Traits

- Many characteristics of organisms are inherited from their parents. (3-LS3-1)
- Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. (3-LS3-2)

LS3.B: Variation of Traits

- Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1)
- The environment also affects the traits that an organism develops. (3-LS3-2)

LS4.B: Natural Selection

- Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. (3-LS4-2)

CROSSCUTTING CONCEPTS

Patterns

- Similarities and differences in patterns can be used to sort and classify natural phenomena. (3-LS3-1)
- Patterns of change can be used to make predictions. (3-LS1-1)

Cause and Effect

- Cause and effect relationships are routinely identified and used to explain change. (3-LS3-2), (3-LS4-2)

CONNECTIONS TO NATURE AND SCIENCE

Scientific Knowledge is Based on Empirical Evidence

- Science findings are based on recognizing patterns (3-LS1-1)

California Department of Education. (2015). NGSS for California public schools, K-12. Retrieved from http://www.cde.ca.gov/pd/ca/sc/ngssstandards.asp

CALIFORNIA COMMON CORE STATE STANDARDS CONNECTIONS: ELA/LITERACY

RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS3-1), (3-LS3-2), (3-LS4-2)

RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS3-1), (3-LS3-2), (3-LS4-2)

RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS3-1), (3-LS3-2), (3-LS4-2)

RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). (3-LS1-1)

W.3.2.a–d Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS3-1), (3-LS3-2), (3-LS4-2)

SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

a. Plan and deliver an informative/explanatory presentation on a topic that: organizes ideas around major points of information, follows a logical sequence, includes supporting details, uses clear and specific vocabulary, and provides a strong conclusion. **CA** (3-LS3-1),(3-LS3-2),(3-LS4-2)

SL.3.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details. (3-LS1-1)

RF.3.1.a-d Know and apply grade-level phonics and word analysis skills in decoding words both in isolation and in text.

a. Identify and know the meaning of the most common prefixes and derivational suffixes.
b. Decode words with common Latin suffixes.
c. Decode multisyllable words.
d. Read grade-appropriate irregulary spelled words.

RF.3.4.a-c Read with sufficient accuracy and fluency to support comprehension.

a. Read on-level text with purpose and understanding rereading as necessary.
b. Read on-level prose and poetry orally with accuracy, appropriate rate and expression with successive readings.
c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

California Department of Education. (2015). NGSS for California public schools, K-12. Retrieved from http://www.cde.ca.gov/pd/ca/sc/ngssstandards.asp

CORRESONDING ENGLISH LANGUAGE DEVELOPMENT STANDARDS

Part I: Interacting in Meaningful Ways
B. Interpretative

6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language
7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text, type, purpose, audience, topic, and content area
8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic and content area

C. Productive

9. Expressing information and ideas in formal oral presentations on academic topics
11.Supporting own opinions and evaluating others' opinions in speaking and writing
12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas

Part II: Learning About How English Works
A. Structuring Cohesive Texts

1. Understanding text structure
2. Understanding cohesion

B. Expanding and Enriching Ideas

5. Modifying to add details

C. Connecting and Condensing Ideas

6. Connecting ideas
7. Condensing ideas

California Department of Education. (2015). NGSS for California public schools, K-12. Retrieved from http://www.cde.ca.gov/pd/ca/sc/ngssstandards.asp

MATHEMATICS

MP.2	Reason abstractly and quantitatively. (3-LS3-1), (3-LS3-2), (3-LS4-2)
MP.4	Model with mathematics. (3-LS1-1),(3-LS3-1),(3-LS3-2),(3-LS4-2)
3.NBT.1-3	Use place value understanding and properties of operations to perform multi-digit arithmetic. (3-LS1-1)
3.NF.1-3	Develop understanding of fractions as numbers. (3-LS1-1)
3.MD.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. (3-LS4-2)
3.MD.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS3-1), (3-LS3-2)

California Department of Education. (2015). NGSS for California public schools, K-12. Retrieved from http://www.cde.ca.gov/pd/ca/sc/ngssstandards.asp

3 Interdependent Relationships in Ecosystems

3-LS2-1. **Construct an argument that some animals form groups that help members survive.**

3-LS4-1. **Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.** [Clarification Statement: Examples of data could include type, size, and distributions of fossil organisms. Examples of fossils and environments could include marine fossils found on dry land, tropical plant fossils found in Arctic areas, and fossils of extinct organisms.] [Assessment Boundary: Assessment does not include identification of specific fossils or present plants and animals. Assessment is limited to major fossil types and relative ages.]

3-LS4-3. **Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.** [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]

3-LS4-4. **Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.*** [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.] [Assessment Boundary: Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.]

SCIENCE AND ENGINEERING PRACTICES

Analyzing and Interpreting Data

Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

- Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS4-1)

Engaging in Argument from Evidence

Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed worlds.

- Construct an argument with evidence, data, and/or a model. (3-LS2-1)
- Construct an argument with evidence. (3-LS4-3)
- Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. (3-LS4-4)

DISCIPLINARY CORE IDEAS

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

- When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of

resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. (secondary to 3-LS4-4)

LS2.D: Social Interactions and Group Behavior

- Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size. (Note: Moved from K–2) (3-LS2-1)

LS4.A: Evidence of Common Ancestry and Diversity

- Some kinds of plants and animals that once lived on Earth are no longer found anywhere. (Note: Moved from K–2) (3-LS4-1)
- Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments. (3-LS4-1)

LS4.C: Adaptation

- For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)

LS4.D: Biodiversity and Humans

- Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4)

Scale, Proportion, and Quantity

- Observable phenomena exist from very short to very long time periods. (3-LS4-1)

Systems and System Models

- A system can be described in terms of its components and their interactions. (3-LS4-4)

CONNECTIONS TO ENGINEERING, TECHNOLOGY, AND APPLICIATIONS OF SCIENCE

Interdependence of Science, Engineering, and Technology

- Knowledge of relevant scientific concepts and research findings is important in engineering. (3-LS4-3)

CONNECTIONS TO NATURE AND SCIENCE

Scientific Knowledge Assumes an Order and Consistency in Natural Systems

- Science assumes consistent patterns in natural systems. (3-LS4-1)

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CALIFORNIA COMMON CORE STATE STANDARDS CONNECTIONS: ELA/LITERACY

RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS2-1), (3-LS4-1), (3-LS4-3), (3-LS4-4)

RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS4-1), (3-LS4-3), (3LS4-4)

RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS2-1), (3-LS4-1), (3-LS4-3), (3-LS4-4)

W.3.1.a–d Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-LS2-1), (3-LS4-1), (3-LS4-3), (3-LS4-4)

W.3.2.a–d Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS4-1), (3-LS4-3), (3-LS4-4)

W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-LS4-1)

SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

a. Plan and deliver an informative/explanatory presentation on a topic that: organizes ideas around major points of information, follows a logical sequence, includes supporting details, uses clear and specific vocabulary, and provides a strong conclusion. **CA** (3-LS4-3),(3-LS4-4)

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CORRESONDING ENGLISH LANGUAGE DEVELOPMENT STANDARDS

Part I: Interacting in Meaningful Ways

B. Interpretative

6. Reading closely literary and informational texts and viewing Multimedia to determine how meaning is conveyed explicitly and implicitly through language

7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text, type, purpose, audience, topic, and content area

C. Productive

9. Expressing information and ideas in formal oral presentations on academic topics

10. Writing literary and informational texts to present, describe and explain ideas and information, using appropriate technology

11. Supporting own opinions and evaluating others' opinions in speaking and writing

12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas

Part II: Learning About How English Works

A. Structuring Cohesive Texts

1. Understanding text structure

2. Understanding cohesion

B. Expanding and Enriching Ideas

5. Modifying to add details

C. Connecting and Condensing Ideas

6. Connecting ideas

7. Condensing ideas

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MATHEMATICS

MP.2 Reason abstractly and quantitatively. (3-LS4-1), (3-LS4-3), (3-LS4-4)

MP.4 Model with mathematics. (3-LS2-1), (3-LS4-1), (3-LS4-3), (3-LS4-4)

MP.5 Use appropriate tools strategically. (3-LS4-1)

3.NBT.1-3 Use place value understanding and properties of operations to perform multi-digit arithmetic. (3-LS2-1) **3.MD.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3-LS4-3)

3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS4-1)

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VOCABULARY

TIER I	TIER II	TIER III
change	marine	Cetaceans
ocean	mammal	Pinnipeds
seal	distinct	Sirenians
whale	environment	Ursus maritimus
otter	unified	Kolponomos
dolphin	aquatic	Thalassocnus
land	breed	Enhydra lutris
prey	dependence	Lontra feline
polar bear	subdivided	Cetacea
walrus	carnivore	Sirenia
porpoise	dweller	Desmostylia
manatee	semiaquatic	Pinnipedia
globe	mate	Cetartiodactyla
North America	molt	dugongs
South America	breed	Carnivora
Africa	adapt	Hypoosmotic
Asia	population	Bradycardia
Australia	ecosystem	Vasoconstriction
Indian Ocean	biomass	Odontocetes
Pacific Ocean	integral	Mysticetes
Arctic Ocean	component	Organochlorides
Atlantic Ocean	psychological	polycyclic
fin	anatomical	Hydrocarbons
balance	feature	Anthropogenic
oxygen	locomotion	
blood	drag	
muscle	propulsion	
nets	steering	
plastic	fluke	
habitat	thermoregulation	
mercury	appendage	
lead	predator	
Canada	genetically	
United States of America	morphological	
Greenland	urine	
Russia	deprivation	
Indonesia	exploitation	
Caribbean	subsistence	
Migrate	echolocation	

PREDICTION/REACTION GUIDE

Possible Content Objectives:

1. Students will (SW) construct explanations built on experiences and knowledge that progresses to the use of evidence in constructing explanations that describe and predict phenomena.
2. SW use evidence to support an explanation.
3. SW use evidence to construct an explanation.
4. SW ask and answer questions to demonstrate understanding of text.

Possible Language Objectives:

Part I: Interacting in Meaningful Ways
Interpretive

1. Students will be able to (SWBAT) read informational texts using content vocabulary such as mammals, aquatic, and environment to determine how meaning is conveyed explicitly and implicitly through language.
2. SWBAT analyze how authors use content vocabulary for specific purposes depending on topic and content area.

Productive

1. SWBAT support own opinions in writing.
2. SWBAT select and apply precise language such as mammal, habitat and pollution to effectively convey ideas.

Part II: Learning About How English Works
Structuring Cohesive Texts

1. SWBAT understand informational text structure.
2. SWBAT understand informational text cohesion.

Connecting and Condensing Ideas

1. SWBAT connect ideas regarding marine mammal habitat when reading informational text.
2. SWBAT condense ideas when reading informational text regarding marine mammal extinction.

Expanding and Enriching Ideas

1. SWBAT use present tense regular verbs correctly in writing.
2. SWBAT use past tense regular verbs correctly in writing.
3. SWBAT use present tense irregular verbs correctly in writing.
4. SWBAT use past tense irregular verbs correctly in writing.
5. SWBAT modify phrases or sentences with additional details taken from informational text.

Connecting and Condensing Ideas

1. SWBAT connect ideas regarding marine mammal extinction.
2. SWBAT condense ideas regarding efforts to reduce contamination of marine mammal habitats.

Directions: Please respond by sketching and writing below.

1. What do you predict the word mammal means?

Prediction	Reaction

2. What are the names of the oceans around the world?

Prediction	Reaction

3. Write the names of some animals that you think are mammals.

Prediction	Reaction

4. What do you know about the habitat of marine mammals?

Prediction	Reaction

5. Many marine mammals around the world are now extinct or in danger of becoming extinct. Why do you think this is happening?

Prediction	Reaction

KWL CHART

Possible Content Objectives:

1. SW cite information gained from text illustrations and the text vocabulary to demonstrate understanding of the text.
2. SW cite evidence to support an explanation.
3. SW cite evidence to construct an explanation.
4. SW ask and answer questions to demonstrate understanding of text.

Possible Language Objectives:

Part I: Interacting in Meaningful Ways
Interpretive

1. SWBAT listen actively to spoken English in academic context regarding marine mammals.
2. SWBAT evaluate how well speakers use language to support ideas or opinions with details or reasons from regarding marine mammals.

Productive

1. SWBAT express information orally on academic topics.
2. SWBAT support own opinions and evaluate other's opinions in speaking.
3. SWBAT select and apply precise language such as mammal, habitat and pollution to effectively convey ideas.

Part II: Learning About How English Works
Expanding and Enriching Ideas

1. SWBAT use present tense regular verbs correctly in writing.
2. SWBAT use past tense regular verbs correctly in writing.
3. SWBAT use present tense irregular verbs correctly in writing.
4. SWBAT use past tense irregular verbs correctly in writing.
5. SWBAT modify phrases or sentences with additional details taken from informational text.

Marine Mammals

What I Know	What I Wonder	What I Learned

TEACHER MADE BIG BOOK

Possible Content Objectives:

1. SW use information gained from text illustrations and the text vocabulary to demonstrate understanding of the text.
2. SW determine the main idea of a text; recounting key details and explain how the details support the main idea.
3. SW analyze and interpret information to understand that animals have traits inherited from their parents.
4. SW conclude that inherited traits can vary within a specific group.
5. SW use evidence to support their argument that traits can be influenced from the environment.
6. SW use evidence to support the argument that variations in inherited traits may provide advantages in surviving, finding mates, and reproducing.

Possible Language Objectives:

Part I: Interacting in Meaningful Ways
Interpretive

1. SWBAT read informational texts using content vocabulary such as mammals, aquatic, and environment to determine how meaning is conveyed explicitly and implicitly through language.
2. SWBAT analyze how authors use content vocabulary for specific purposes depending on topic and content area.

Part II: Learning About How English Works
Structuring Cohesive Texts

1. SWBAT understand informational text structure.
2. SWBAT understand informational text cohesion.

Connecting and Condensing Ideas

1. SWBAT connect ideas when reading informational text.
2. SWBAT condense ideas when reading informational text.

Possible Sentence Frames:

- "The main idea is_____."
- "I think that_____."
- "Marine Mammals."
- "Dolphins and orcas are_____."
- "In order for marine mammals to _____."

- “One adaptation that a dolphin has is_____.”
- “Mammals are _____.”

Possible prompts to expand student responses:

- “Tell me more about that.”
- “What else about the marine mammal?”
- “What does that remind you of?”
- “Why do you think the marine mammal does that?”
- “How would a _____ protect itself?”

The Important Book about Marine Mammals

Written by: Frank Silva

Table of Contents

Page 3:

Topic Sentence:

Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

A mammal is an animal that drinks milk from its mother's body as a baby. All mammals are warm-blooded which means that their body temperature stays the same whether they are in warm or cold places.

Marine mammals include seals, whales, dolphins, porpoises, manatees, dugongs, otters, walruses, polar bears and 120 other species that depend on the ocean for their survival.

Their dependence on the ocean is determined by their species. For example, whales and dolphins are completely dependent on the ocean to survive, whereas mammals like the walrus or seal feed in the ocean, but breed on land.

Marine mammals are divided into four groups. There are the cetaceans (whales, dolphins, porpoises); pinnipeds (seals, sea lions and walruses); sirenians (manatees and dugongs); and fissipeds, which are carnivores that have separate digits (polar bear, two species of otter).

The cetaceans and sirenians are 100% ocean dwellers. Pinnipeds are semiaquatic and mammals like the polar bear and otter are more adapted to land than the ocean.

Concluding Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Page 4:
Topic Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Marine mammals can be found around the world. Their populations depend on the productivity of the oceans which means how much food is available in a particular area. The largest populations of marine mammals are around North and South America, Africa, Asia and Australia. A species ability to survive in a particular location depends greatly on the food that is available, their ability to adapt to changes in the aquatic environment, and human interference.

Concluding Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Page 5:
Topic Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Scientists think that marine mammals evolved from animals that lived long ago on land. They now have many physiological and anatomical features that help them to survive aquatic living. These features or traits are what they inherited from their parents. Many have inherited traits like torpedo shaped bodies, which reduce drag and allows them to swim quickly. Called locomotion, this inherited adaptation helps them to escape from some enemies. Other traits such as modified limbs like tail flukes and dorsal fins help them with propulsion, balance and steering.

Marine mammals also have the ability to regulate their body temperatures. This ability is called thermoregulation. This is done through the dense fur or blubber that many have, or through the appendages or torpedo shaped bodies of others.

Their ability to dive for long periods of time is due to large and complex blood vessel systems. Marine mammals are able to store large quantities of oxygen in their muscles, blood, and the spleen. Many have the trait known as bradycardia. This is the ability to actually slow down their heart rate. Others are able to limit the amount of oxygen to their brains and heart. This adaptation is known as vasoconstriction.

Concluding Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Page 6:
Topic Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Marine mammals can feel vibrations in the water. For some, it is their sensitive skin that allows them to feel if food or an enemy is close by. For others, it is a combination of vibrations and sound that tells them about their environment. This ability functions like what submarines use.

Many mammals use echolocation to know what is around them. Whales for example make sounds called clicks or chirps that cause vibrations in the water. These vibrations bounce off an object in the water and return to the whales as echoes. The sounds of the echoes tell the whale the size, location and distance of the object in the water. Dolphins cannot open their mouths like whales so they produce their chirps from nasal sacs that are in their heads.

Marine animals that mostly hunt at night depend on their long set of whiskers. The long hairs or whiskers that marine mammals like sea lions and seals have, help them to feel vibrations in the water. Since there is no light when they dive in deep water, the whiskers around their mouths let them know that something else is around them, especially when they cannot see it.

Concluding Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Page 7:
Topic Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Marine animals reproduce or have babies by mating. Marine mammals give birth to live young just like a human. Most give birth to just one baby at a time because it is difficult to care for two babies at once. The gestation period or pregnancy of a whale or dolphin can be anywhere from 10 to 18 months long depending on the species. Dolphins are born tail first so that they do not drown during delivery. Whale, dolphin, seal and sea lion babies are called a "calf," or "pup." A whale calf even has a belly button just like a human baby.

A marine calf or pup is cared for by its mother. The mother will nurse it by feeding it milk which is produced by the mother's mammary glands. The pup latches onto its mother's teat or nipple to drink. The milk that the mother produces is high in fat and rich with vitamins which the calf or pup needs to grow healthy. The mother also protects its calf from enemies and most marine mammal mothers teach their pups how to swim and hunt. However, some species of seals do not teach their pups these skills and they have to survive on their own.

Concluding Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Page 8:
Topic Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Most marine mammals are predators. They hunt, kill and eat other animals in order to survive in their environment. However, their hunting and eating of other animals is important in maintaining a balance within their aquatic environment. They help to regulate or keep in check other populations of sea life. If one particular population of marine mammal were to grow too large, it

could cause the possible extinction of another group which would affect yet another group of mammals.

Concluding Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Page 9:
Topic Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Marine mammals are in danger. The most dangerous threat to marine mammals are humans. Many marine mammals are endangered or in danger of becoming extinct or dying out. The oceans which the mammals need to survive are being polluted with trash, poisons and large oil spills. All of this has been caused by human neglect, indifference and the need for more and more oil.

Many scientists, organizations, and everyday people are working to stop the pollution of our oceans and the possible extinction of some marine mammals. Marine mammals and the marine ecosystem that they are a part of are important to our planet.

Concluding Sentence:
Marine mammals have adapted to living in salt water. They spend much of their time in the ocean and depend on the sea for food. They are important in maintaining marine ecosystems and our world.

Page 10:

Glossary of Terms

adaptation – the ability of a species to survive in a particular environment

Africa – the continent south of Europe and between the Atlantic and Indian Ocean

anatomical – the shape or structure of a living organism

appendage – a smaller part that is attached to a main or larger part

Asia – the continent that is bordered by Europe and the Pacific, Indian and Artic Oceans

Australia – the continent southeast of Asia and between the Indian and Pacific Oceans

Cetaceans – a group of aquatic marine mammals that includes whales and dolphins

ecosystem – a system or group, formed by a community of organisms that are interconnected and dependent on each other

locomotion – the act or power to move from place to place

mammal – a vertebrate, of the class Mammalia that has hair or fur and feeds its offspring with milk made from its mammary glands

marine – something that lives in or comes from the sea

physiological – a characteristic of a healthy, living organism

Pinnipeds – a living thing that is part of the Pinnipedia class, a carnivore that has limbs for sea life, such as a seal or walrus

predator – any organism or animal that hunts other organisms or animals

propulsion – the power of moving in a forward direction

semiaquatic – growing or living part of the time in water and on land

Sirenians – an aquatic, plant eating mammal, of the group Sirenia such as the manatee and dugong

South America – the continent south of North America and bordered by the Pacific and Atlantic Oceans

species – a group of individuals or animals that have common characteristics

thermoregulation – the ability to regulate body temperature in different environments

vasoconstriction – the ability to slow down blood flow in the veins

warm-blooded – the ability of some animals and mammals to keep their body temperature constant between 98 to 102^{o} F

References:

Kalman, B. (2000). *What is a Marine Mammal?: The Science of Living Things Series*. NY: Crabtree Publishing Company.

The Marine Mammal Center (2015). Introduction to Marine Mammals. Retrieved from http://www.marinemammalcenter.org /education/marine-mammal-information/

Chants

Possible Content Objectives:

1. SW use text vocabulary to demonstrate understanding of the text.
2. SW record poems or chants that demonstrate fluid reading at an understandable pace.
3. SW identify and know the meaning of the most common prefixes and derivational suffixes.
4. SW decode words with common Latin suffixes.
5. SW decode multisyllable words.
6. SW read grade-level appropriate irregulary spelled words.
7. SW read with sufficient accuracy and fluency to support comprehension.
8. SW read on-level text with purpose and understanding rereading as necessary.
9. SW read on-level poetry orally with accuracy, appropriate rate, and expression successive readings.
10. SW use context to confirm or self-correct word recognition and understanding, rereading as necessary.
11. SW create audio recordings of poems that demonstrate fluid reading at an understandable pace.

Possible Language Objectives:

Part I: Interacting in Meaningful Ways
Interpretive

1. SWBAT read informational texts using content vocabulary such as mammals, aquatic, and environment to determine the main idea.
2. SWBAT read closely informational text to determine how meaning is conveyed explicitly and implicitly through language.
3. SWBAT analyze how authors use content vocabulary for specific purposes depending on topic and content area.

Part II: Learning About How English Works
Structuring Cohesive Texts

1. SWBAT understand poetry cohesion.

Connecting and Condensing Ideas

1. SWBAT connect ideas when reading poetry text.
2. SWBAT condense ideas when reading poetry text.

Part III: Using Foundational Literacy Skills

1. SWBAT read poetry text with sufficient accuracy and fluency to support comprehension.
2. SWBAT read grade level poetry orally with accuracy, appropriate rate and expression with successive readings.
3. SWBAT use context to confirm or self-correct word recognition and understanding, rereading when necessary.

Dolphins and Seals

Written by Frank Silva
(sung to the Addam's Family tune)

Dophins and seals (snap, snap)
Dolphins and seals (snap, snap)
Dolphins and seals
Dolphins and seals
Dolphins and seals (snap, snap)

Both aquatic mammals,
but one breathes using nostrils
the other has a blow hole
Seals and dolphins share the sea.

Dolphins and seals (snap, snap)
Dolphins and seals (snap, snap)
Dolphins and seals
Dolphins and seals
Dolphins and seals (snap, snap)

Warms its body in the sunshine,
gives birth along the coastline,
on land to mate, to molt, or rest time,
Seals and dolphins share the sea.

Dolphins and seals (snap, snap)
Dolphins and seals (snap, snap)
Dolphins and seals
Dolphins and seals
Dolphins and seals (snap, snap)

Their calves are born underwater,
protected by their mothers,
travel in pods, to help each other,
Seals and dolphins share the sea.

Dolphins and seals (snap, snap)
Dolphins and seals (snap, snap)
Dolphins and seals
Dolphins and seals
Dolphins and seals (snap, snap)

Marine Mammal Bugaloo

Written by Frank Silva

We're marine mammals and we're here to say,
we enjoy aquatic living every day!
Whether on land or in the sea,
We're part of an ecosystem… that everyone needs.

Cetaceans, Pinnipeds and Sirenians too,
doing the marine mammal bugaloo!!

Along many seashores you will see,
all the different Pinniped families.
More than 30 species into 3 main groups,
Our appendage is a flipper, instead of a foot.

Crawling seals, walking seals and walruses too,
doing the marine mammal bugaloo!!

With large bulky bodies, and a thick tail too,
We're the Sirenians, but call us sea cows… that'll do!
With a lot of blubber… under our skin,
moving slowly in the water, that's how we swim.

Three manatee species and dugongs too,
Doing the marine mammal bugaloo!!

Cetaceans we're called if you please,
We travel in pods… when we feed.
Some filter food, then swallow their meal,
While some of us hunt…we are predators of the sea.

Whales, orcas, and dolphins too,
doing the marine mammal bugaloo!!

Marine Mammals Here, Marine Mammals There

Written by Frank Silva

Marine mammals here, marine mammals there,
marine mammals, marine mammals everywhere.

Hungry marine mammals hunting daily,
aquatic marine mammals swimming quickly,
inquisitive marine mammals watching closely,
and territorial marine mammals defending ferociously.

Marine mammals warming themselves under the Sun,
marine mammals hunting within their pods,
marine mammals migrating across oceans,
and marine mammals surviving within their environments.

Marine mammals here, marine mammals there,
marine mammals, marine mammals everywhere.

Marine mammals!! Marine Mammals!! Marine Mammals!!

ELD Matrix: New ELD Standards, Revised Bloom's Taxonomy, and Depth of Knowledge

- **Linked to Pictorial Input Chart™: <u>Sea Lion</u>**

Stages of Language Acquisition	**Preproduction**	**Early Production**	**Speech Emergence**	**Intermediate Fluency**	**Advanced Fluency**
California (ELD) Proficiency Level Descriptors	**Emerging**	**Expanding**	**Bridging**		**Lifelong Language/ CCSS**
Level of Questioning	**Point To, Locate, Trace**	**Yes/No**	**Either/Or**	**Open Ended**	
Create *Arrange, assemble, collect, compose, combine, construct, create, design, develop, devise, forecast, formulate, hypothesize, imagine, invent, manage, organize, plan, prepare, propose, set up*	Show me the sea lion.	Does a sea lion hunt in the ocean?	Is a sea lion a carnivore or herbivore?	What other marine mammal can you name?	Hypothesize: What would a sea lion do if it could not find food in its habitat?
Evaluate *Appraise, argue, assess, choose, compare, critique, decide, debate, defend, determine, discuss, estimate, evaluate, judge, justify, predict, prioritize, rate, recommend, select, Support, value, verify, weigh*	Point to one of the physical traits of the sea lion.	Does a sea lion have blubber to keep it warm?	Do sea lions live in herds or alone?	Why do you think sea lions are in danger?	Predict: What would a scientist say about the pollution found in oceans?
Analyze *Analyze, appraise, calculate, categorize, classify, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, explain, identify, infer, question, test.*	Identify a sea lion's enemy from the Pictorial Input Chart™	Is a sea lion part of the Pinniped family?	Explain: How are humans polluting the sea lion's habitat?	Use the Pictorial Input Chart™ to infer or explain how the sea lion is able to survive in the ocean.	Analyze the Pictorial Input Chart™ to explain why the sea lion is a predator.

Stages of Language Acquisition	Preproduction	Early Production	Speech Emergence	Intermediate Fluency	Advanced Fluency
California (ELD) Proficiency Level Descriptors	**Emerging**	**Expanding**	**Bridging**		
Level of Questioning	**Point To, Locate, Trace**	**Yes/No**	**Either/Or**	**Open Ended**	
Apply *Apply, calculate, categorize, classify, change, choose, compare, construct, demonstrate, describe, determine, distinguish, dramatize, employ, estimate, explain, extend, illustrate, interpret, judge the effects, operate, practice, schedule, select, show, sketch, solve, use*	Point to the sea lion.	Is a sea lion a mammal?	Do sea lions have flippers or fins?	What other marine mammal has flippers?	Compare a sea lion to a dolphin, how are they different?
Understand *Categorize, cite, clarify, classify, describe, discuss, explain, express, identify, indicate, interpret, locate, match, paraphrase, predict, recognize, restate, review, select, summarize, translate*	Show me the sea lion's flipper.	Does a sea lion feed its pups milk?	Doe sea lions live in herds or alone?	Summarize why sea lions give birth to only one pup at a time?	Explain why sea lions are predators of the ocean.
Analyze *Analyze, appraise, calculate, categorize, classify, compare, contrast, criticize,*	Identify a sea lion's enemy from the Pictorial Input Chart™	Is a sea lion part of the Pinniped family?	Explain: How are humans polluting the sea lion's habitat?	Use the Pictorial Input Chart™ to infer or explain how the sea lion is able to survive in the ocean.	Analyze the Pictorial Input Chart™ to explain why the sea lion is a predator.

Remember *Arrange, choose, define, describe, draw, find, give example, identify, label, locate, list, match, name, recall, recite, recognize, record, repeat, reproduce, select, state,*	Tell me an example of a physical trait that a sea lion has. Use the Pictorial Input Chart.	Can a sea lion stay under water for a long time?	Recall: Why do sea lions give birth to only one pup at a time?	Name which adaptation you think the sea lion has that is the most useful and why.	Identify one category from the Pictorial Input Chart and give specific examples to retell the information.

Mediated Structure

Pictorial Input Chart™

Brechtel, M. (2001). *Bringing it all together: Language and literacy in the Multilingual classroom*. Parsippany, NJ: Pearson Education Inc.

Language Objectives:

1. SW analyze data to provide evidence that animals have traits inherited from their parents.
2. SW use evidence to support the explanation that traits can be influenced by the environment.
3. SW use evidence to construct an explanation of how characteristics among animal groups of the same species may provide advantages in surviving, finding mates and reproducing.
4. SW ask and answer questions to demonstrate understanding of a text.
5. SW recount the key details of a text and explain how they support the main idea.
6. SW use information gained from illustrations and the words in text to demonstrate understanding of the text.

Possible Language Objectives:

Part I: Interacting in Meaningful Ways
Interpretative

1. SWBAT read closely informational text to determine how meaning is conveyed explicitly and implicitly through language.
2. SWBAT analyze how writers and speakers use academic vocabulary for specific purposes.
3. SWBAT evaluate how well writers and speakers use language to support ideas with details depending on content.

Productive

1. SWBAT select and apply precise vocabulary to effectively convey ideas.

Part II: Learning About How English Works
Expanding and Enriching Ideas

1. SWBAT use regular present tense verbs and verb phases correctly.
2. SWBAT use regular past tense verbs and verb phrases correctly.
3. SWBAT use irregular present tense verbs and verb phrases correctly.
4. SWBAT use irregular past tense verbs and verb phrases correctly.

Connecting and Condensing Ideas

1. SWBAT connect ideas regarding how a sea lion is a predator like many other marine mammals.

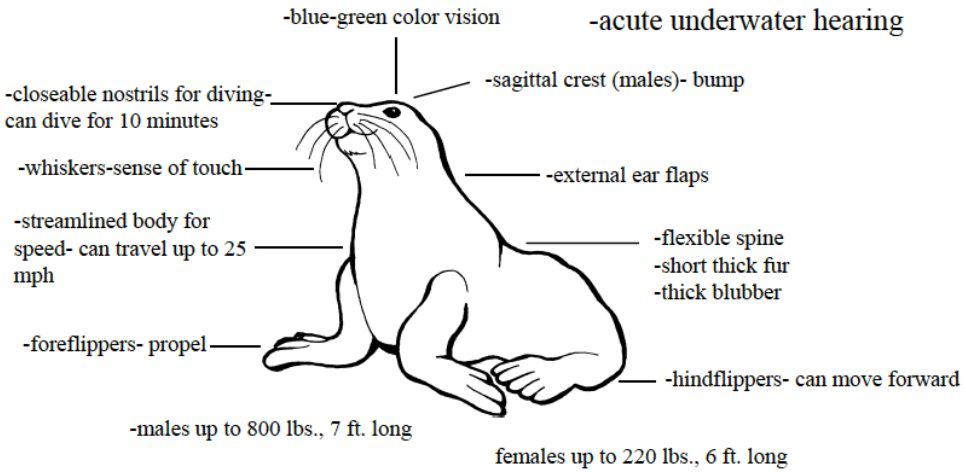
California Sea Lion

Classification

Kingdom- Animalia
Phylum- Chordata
Class- Mammalia
Order- Carnivora (eat meat)
Suborder- Pinnipedia
Family- Otariidae

Inherited Traits/ Physical Characteristics

-can walk on all 4 flippers
-acute underwater hearing



Diet

-carnivore- hunts meat
-squid
-fish
-15-35 lbs. of food per feeding

Environment

-habitat ranges along coast
-from Alaska to Mexico
-live along coast
-can live in freshwater for short periods

Reproduction

-reproduction cycle- 1 yr.
-babies--> pups
-pups weigh 13-20 lbs.
-pups nurse for a year
-pups born June/July
-lifespan: 20-30 yrs.

Threats to Existence

-orcas (killer whales)
-sharks
-malnutrition
-nets
-water too warm
-pollution

Brechtel, M. (2001). *Bringing it all together: Language and literacy in the Multilingual classroom*. Parsippany, NJ: Pearson Education Inc.

Possible Content Objectives:

1. SW analyze and interpret data to provide evidence that animals have traits inherited from parents.
2. SW evidence to support the explanation that traits can be influenced by the environment.
3. SW will analyze and interpret data to make sense of phenomena using logical reasoning.
4. SW use evidence to support an explanation.
5. SW use evidence to construct an explanation.
6. SW understand that reproduction is essential to the continued existence of every kind of organism.
7. SW recount key details and explain how they support the main idea.
8. SW use information gained from illustrations and the words in text to demonstrate understanding of the text.
9. SW create visual displays when appropriate to emphasize certain facts or details.

Possible Language Objectives:

Part I: Interacting in Meaningful Ways
Collaborative

1. SWBAT exchange information and ideas with others through oral collaborative discussions on academic topics.
2. SWBAT interact with others in written English.
3. SWBAT offer and support facts/data and negotiate with others in communicative exchanges.
4. SWBAT adapt language choices to various contexts.

Interpretive

1. SWBAT listen actively to spoken English on academic contexts.
2. SWBAT evaluate how well speakers use language to support ideas with details from content.
3. SWBAT analyze how speakers use vocabulary for specific purposes depending on content.

Productive

1. SWBAT express information on academic topics.
2. SWBAT support own statements and evaluate other's statements in speaking.
3. SWBAT select and apply precise vocabulary and language structures to convey ideas, data and facts.

Part II: Learning About How English Works
Expanding and Enriching Ideas

1. SWBAT modify information to add details.

Connecting and Condensing Ideas

1. SWBAT connect ideas and facts.
2. SWBAT condense ideas and facts

Process Grid™

Brechtel, M. (2001). *Bringing it all together: Language and literacy in the Multilingual classroom*. Parsippany, NJ: Pearson Education Inc.

Marine Mammals	Classification	Inherited Traits/Physical Characteristics	Diet	Environment	Reproduction	Threat to Existence
Sea lion	Pinniped	warm-blooded streamlined bodies molt fur blubber flippers long whiskers oily bodies ear flaps excellent vision lungs breath oxygen 'barks'	Carnivore: Fish	sub-arctic to tropical waters water/land along coastlines	mate live-birth 9 month gestation period up to 4 'pups' born at a time female nurses and cares for 'pups'	marine pollution caused by humans
Orca Whale	Cetacean	warm-blooded torpedo shaped bodies fins tail blow hole breath oxygen lungs sleep on surface swim over 56 miles per hour clicks, whistles and pulsed calls	Carnivore: fish sea lions porpoises seals	either transient, resident, or off-shore	mate once every 5 years live-birth gestation period approx. 17 months single calf female nurses and cares for calf	noise from drilling, shipping and other human activities Exxon Valdez Oil spill

Dolphin	Cetacean	Warm blooded toothed (cone shaped) Echolocation clicks streamlined bodies tail flippers blow hole breath oxygen lungs blubber excellent hearing	Carnivore: fish squid seals	mostly found in tropic zones others in colder waters social animals live in pods	mate every 2-3 years live-birth gestation period 11-12 months single calf born in water, tail first, female nurses and cares for calf	hunted 'bycatch' habitat loss marine pollution by humans
Manatee	Sirenian	warm-blooded large, bulky bodies paddle-shaped forelimbs thick flat tail four rows of teeth rough skin hear on a higher frequency	Herbivore: plants sea grass	warm waters from Florida to Brazil rivers of Africa Amazon River	mate once every 2 years gestation period of 12 months live-birth to a single calf female nurses and cares for calf	collision with boats over-development of their habitat hunted for hides, bones and oil

Process Grid™

Brechtel, M. (2001). *Bringing it all together: Language and literacy in the Multilingual classroom*. Parsippany, NJ: Pearson Education Inc.

Template

Marine Mammals	Classification	Inherited Traits/Physical Characteristics	Diet	Environment	Reproduction	Threat to Existence

Small Group Collaboration

Possible Content Objectives:

1. SW analyze and interpret data to provide evidence that animals have traits inherited from parents.
2. SW evidence to support the explanation that traits can be influenced by the environment.
3. SW will analyze and interpret data to make sense of phenomena using logical reasoning.
4. SW use evidence to support an explanation.
5. SW use evidence to construct an explanation.
6. SW understand that reproduction is essential to the continued existence of every kind of organism.
7. SW recount key details and explain how they support the main idea.
8. SW use information gained from illustrations and the words in text to demonstrate understanding of the text.
9. SW create visual displays when appropriate to emphasize certain facts or details.

Possible Language Objectives:

Part I: Interacting in Meaningful Ways
Collaborative

1. SWBAT exchange information and ideas with others through oral collaborative discussions on academic topics.
2. SWBAT interact with others in written English.
3. SWBAT offer and support facts/data and negotiate with others in communicative exchanges.
4. SWBAT adapt language choices to various contexts.

Interpretive

1. SWBAT listen actively to spoken English on academic contexts.
2. SWBAT evaluate how well speakers use language to support ideas with details from content.
3. SWBAT analyze how speakers use vocabulary for specific purposes depending on content.

Productive

1. SWBAT express information on academic topics.
2. SWBAT support own statements and evaluate other's statements in speaking.
3. SWBAT select and apply precise vocabulary and language structures to convey ideas, data and facts.

Part II: Learning About How English Works
Expanding and Enriching Ideas

1. SWBAT modify information to add details.

Connecting and Condensing Ideas

1. SWBAT connect ideas and facts.
2. SWBAT condense ideas and facts

Small Group #1
Killer Whales

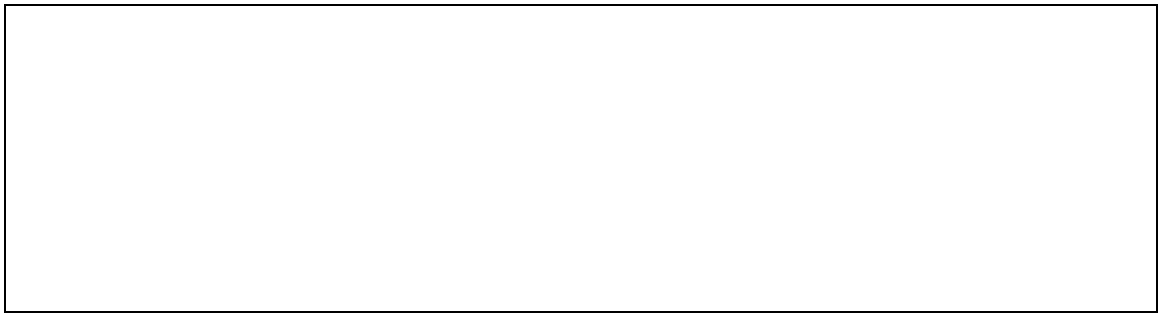
Expert_____

Classification: Killer whales are also called orca whales or orcas. Their scientific classification is Phylum: Chordata and Class: Mammalia. They are cetaceans because they spend their entire life in the water. They belong to the dolphin family and are considered apex predators because they have no natural enemies.

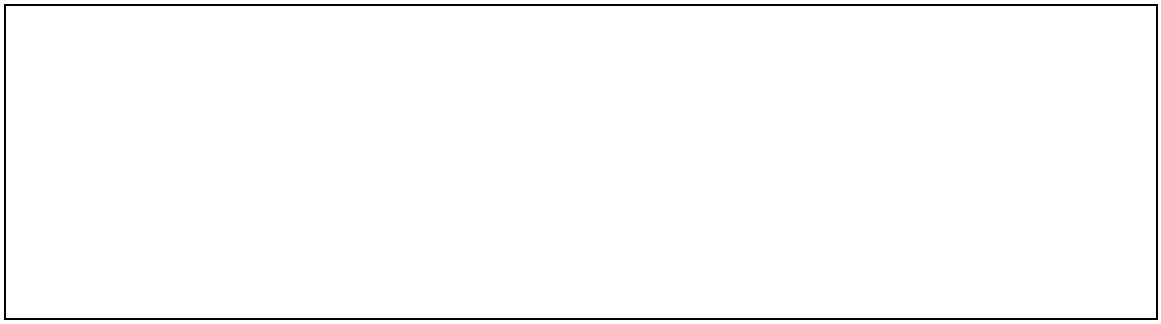
Inherited Traits/Physical Characteristics: Killer whales have large pectoral fins that are large and rounded and torpedo shaped bodies. They have excellent hearing, good eyesight and sense of touch. Their tales give them balance and help them to steer while swimming. This is especially important because they can swim up to and over 56 miles per hour. They have a blow-hole which allows them to breathe oxygen. They communicate by making 'clicks,' whistles and pulsed calls. To sleep, killer whales float on the surface of the water. This is called logging. They keep their heads floating above the water so that they can breathe while sleeping.

Diet: Like most marine mammals, killer whales are carnivores. They are predators of the sea. Their diet includes fish, sea lions, porpoises and seals. Since they feed on other mammals, they are an important part of the marine ecosystem. They help to prevent over population of a particular marine mammal which could cause food shortages for other mammals.

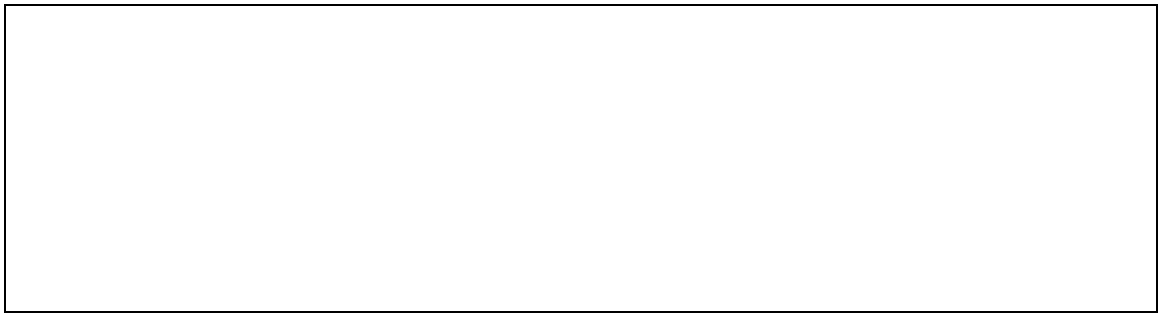
Environment/Habitat: Killer whales are either transient, resident or off-shore dwellers. Transient killer whales travel from location to location, usually in groups of 4 to 6. These are the killer whales that mostly hunt other marine mammals. Resident killer whales are usually found in the coastal waters of the northeast Pacific Ocean. They live in small groups called pods and feed on fish and squid. Off-shore killer whales are mostly found off the west coast of Vancouver Island and near Haida Gwaii. They travel from shore to shore and usually eat schools of fish. Off-shore killer whales are normally in groups of 20-75. Some groups of up to 200 have also been seen.



Reproduction: Killer whales mate once every 5 years. The gestation period for a female killer whale is approximately 17 months and they give live birth to only one calf. The mortality rate during the first 7 months of life is high. Anywhere from 37 to 50% of calves will die. Both females and males within pods care for the calves. Weaning begins when the calf is about 12 months and ends when the calf is 2 years old.



Threats to Existence: People are the biggest threat to the survival of killer whales. Activities such as drilling and shipping have caused killer whales to leave their natural habitats. Pollution of the oceans with chemicals and poisons are also causing the death of killer whales. The Exxon Valdez oil spill in Alaska killed many of the fish and mammals that killer whales fed on. A transient population that fed on the salmon in the oil spill area did not reproduce after the spill. Their population died out.



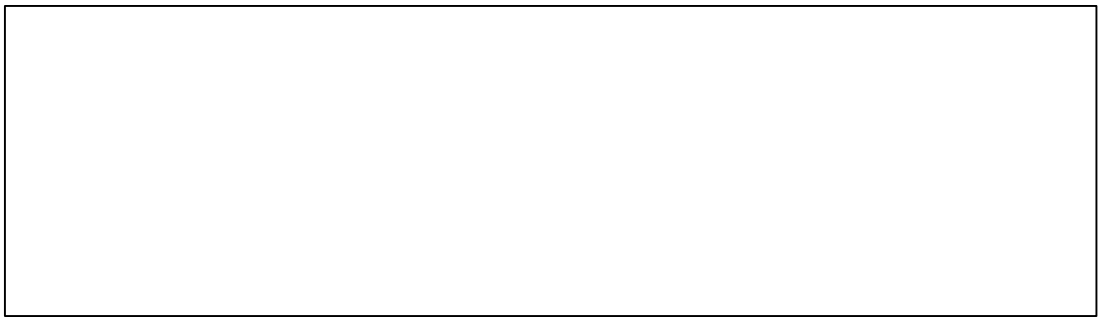
Kalman, B. (2000). *What is a Marine Mammal*?*: The Science of Living Things Series*. NY: Crabtree Publishing Company.

The Marine Mammal Center (2015). Introduction to Marine Mammals. Retrieved from http://www.marinemammalcenter.org/education/marine-mammal-information/

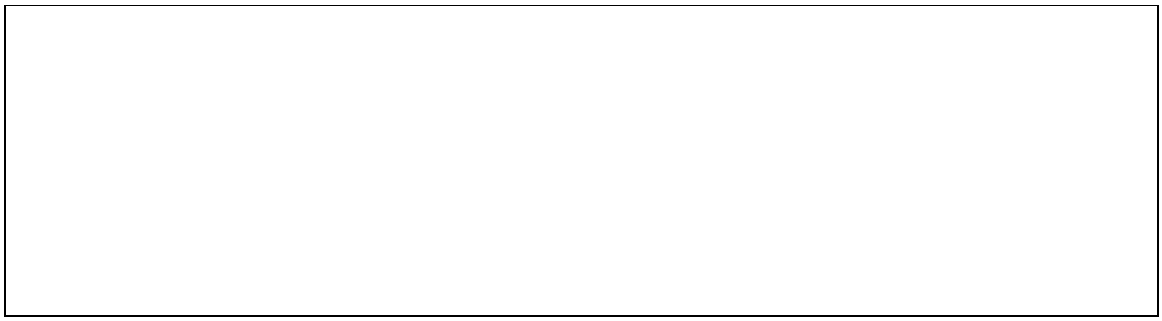
Small Group #2
Dolphins

Expert_____

Classification: Dolphins are considered by scientists to be an informal grouping of marine mammals. They are cetaceans because they spend their entire life in the water. There are 40 species of dolphins. They include dolphins that live in oceans and rivers. They are very social mammals that travel in pods. Dolphins are also considered one of the most intelligent animals in the world.



Inherited Traits/Physical Characteristics: Dolphins have streamlined bodies which help them swim quickly. Their tails give them balance and they use their flippers for steering. Dolphins have cone shaped teeth to help them catch fast moving prey. Their ability to hear in water and air is so well developed they could survive even if they were blind. Dolphins can swim up to 35 miles per hour. They have a blow-hole which allows them to breathe oxygen. They make 'clicks,' a sound which helps them to figure out the size and location of other sea animals. This ability is called echolocation. To sleep, they float on the surface of the water. This is called logging. They keep their heads floating above the water so that they can breathe while sleeping. Dolphins are able to slow down their heart rate to conserve oxygen when they are deep diving.



Diet: Dolphins are carnivores. They are predators of the sea. Their diet includes fish, squid and seals. A hunting method that dolphins use is called herding. A pod of dolphins will 'herd' a school of fish into a small area and start feeding on the fish while swimming in between them.

Environment/Habitat: Most species of dolphins prefer the warmer waters of the tropic zones, but some are found in colder waters.

Reproduction: Dolphins mate every 2-3 years. The gestation period for a female dolphin is 11 to 12 months. They give birth to live young and a dolphin calf is born tail first to prevent it from drowning. Like other female mammals, female dolphins also nurse their young.

Threats to Existence: Contamination of oceans by humans is the biggest threat to the survival of dolphins. Many dolphins are killed by accident during seine fishing which is used to catch tuna or by the use of drift or gill nets by fishermen. This is called by-catch. Many species of dolphins are on the verge of extinction. The Yangtze River dolphin no longer exits.

Kalman, B. (2000). *What is a Marine Mammal*?*: The Science of Living Things Series*. NY: Crabtree Publishing Company.

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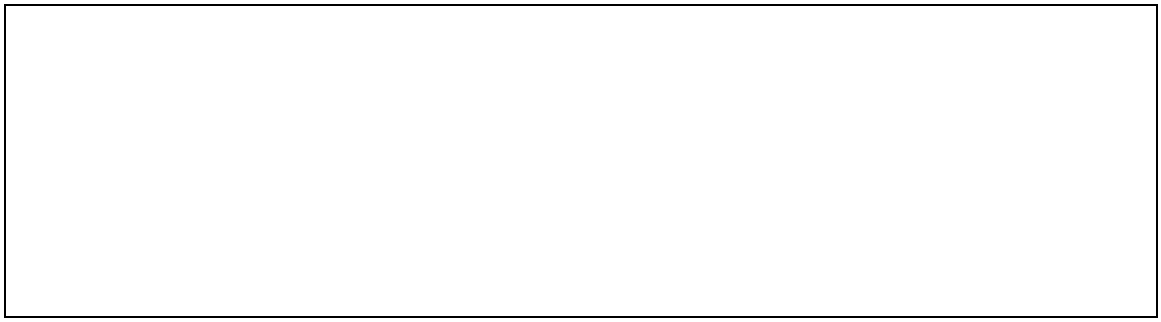
Small Group #3
Manatees

Expert_____

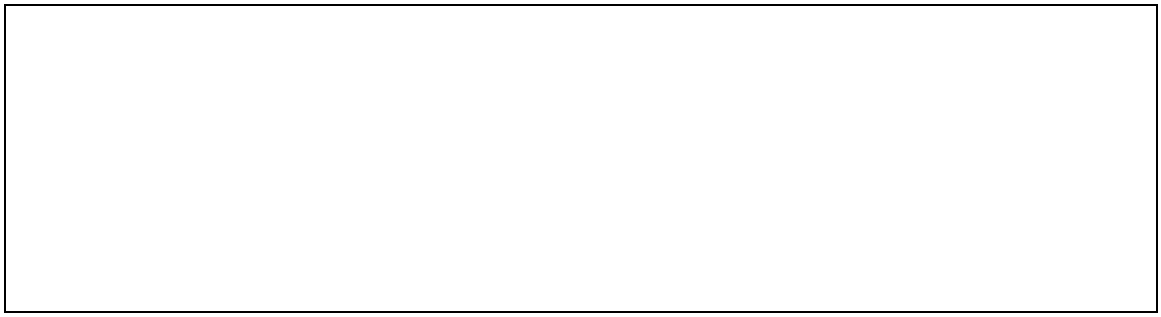
Classification: Manatees are also called sea cows. They are classified by scientists as Phylum: Chordata and Class: Mammalia. They belong to the Order: Sirenia. The species of manatees are Amazonian, West Indian and West African. Their name manatí comes from the Taíno, the indigenous people that Columbus first encountered when he arrived in the Caribbean. The same indigenous people that Columbus later sold as slaves and that no longer exist. The word manatí means “breast.”

Inherited Traits/Physical Characteristics: Manatees are slow swimmers. They have large, bulky bodies and paddle-shaped forelimbs. Manatees also have thick, strong, flat tails and four rows of flat teeth. Despite being slow swimmers, Manatees are very graceful in the water. They usually swim about 5 miles per hour and can speed up to 15 miles per hour in short bursts.

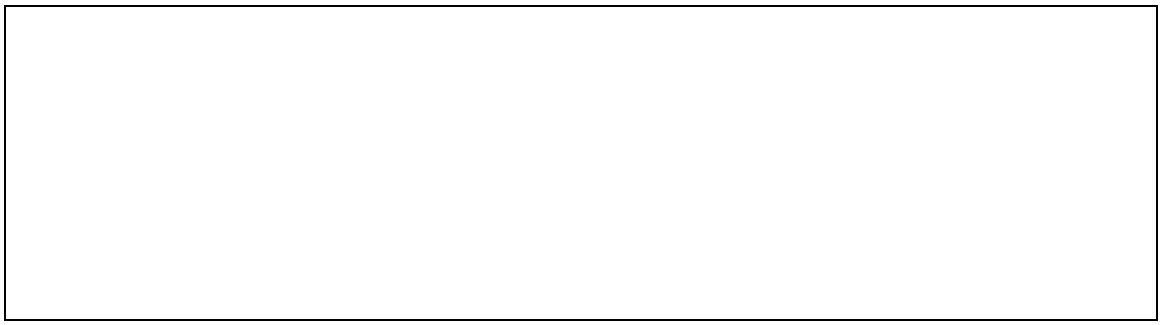
Diet: Manatees are herbivores. They eat plants and sea grass. Manatees will graze for up to 7 hours a day.



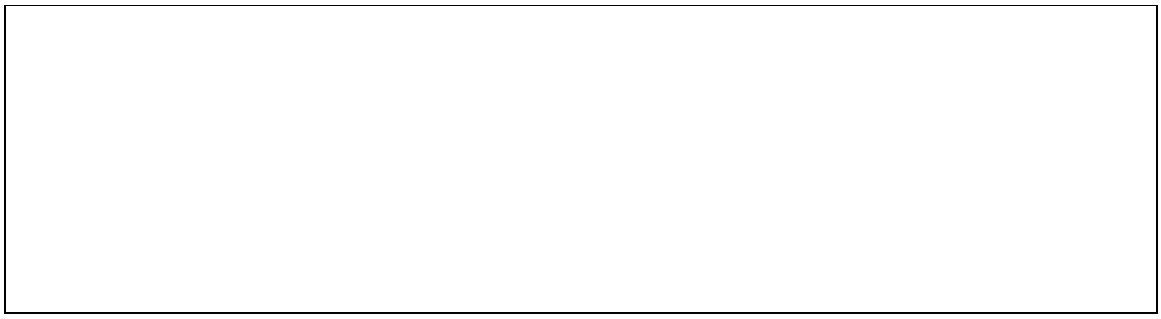
Environment/Habitat: Manatees range along the North American east coast from Florida to Brazil. They are also found in the Amazon River and along the west coast of Africa and rivers of Africa.



Reproduction: Manatees mate once every 2 years. The gestation period for a female manatee lasts for 12 months and another 12 to 18 months to wean the calf. Female manatees normally give birth to only one calf at a time. The calves are born underwater and their mothers help them to the surface to take their first breath. However, the calves are able to swim by themselves within an hour of being born. Female manatees nurse their young like other female mammals.



Threats to Existence: Over-development of the Manatees' habitat is threatening their survival. Since they are slow moving, they are vulnerable to hunters that kill them for their hides, bones and oil. Even though they are protected by law, manatees are still an endangered species. Many are also killed or injured by river boats.



Kalman, B. (2000). *What is a Marine Mammal*?*: The Science of Living Things Series*. NY: Crabtree Publishing Company.

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Graffiti Wall Questions™

Brechtel, M. (2001). *Bringing it all together: Language and literacy in the Multilingual classroom*. Parsippany, NJ: Pearson Education Inc.

(Matching) Read the question and place a check mark next to the correct answer.

In which family classification does the sea lion belong to?

a) Sirenia _____

b) Mustelid _____

c) Pinniped _____

d) Cetacean _____

(Fill in the Blank)

a. All marine mammals are _____.

b. A flipper on a seal is considered a natural _____.

c. Manatees live in rivers within the countries of _____ and _____.

d. _____ and _____ are two marine mammals of the Cetacean family.

Write (T) True or (F) False next to each statement.

_____ Manatees give birth twice a year.

_____ Orcas are also known as killer whales.

_____ Ocean pollution is mostly caused by human beings.

_____ Sirenians are carnivorous.

(Open Ended) Answer the following questions.

1. What are some reasons for the extinction of some marine mammals?

2. Describe how a dolphin's body is adapted for speed.

3. How do orcas hunt?

4. Why is the habitat of many manatees disappearing?

Writing Assessment

Writing Prompt: Compare two marine mammals that you learned about and use facts to describe how they are similar and different.

Student Writing Rubric

Rubric: Exceeds standard=4; Meets standard=3; Working toward standard=2; Not meeting standard=1

1. I have written my name and date _____
2. I have a title _____
3. I have written complete sentences _____
4. I have capital letters _____
5. I have correct punctuation _____
6. I have a topic sentence _____
7. I have included details (2+) _____
   - ✓ Who? ___
   - ✓ What? ___
   - ✓ When? ___
   - ✓ Where? ___
   - ✓ Why? ___
8. I have a concluding sentence _____

Teacher Grading Rubric

4 or 3 = Exceeds or meets standard

- ☐ Student indented most or all of the paragraphs.
- ☐ Student wrote in complete sentences; using correct verb conjugation.
- ☐ Student began each or most paragraphs with a topic sentence.
- ☐ Most or all of the sentences began with a capital letter and ended with correct punctuation.
- ☐ Most or all sentences supported the topic sentence and included 2 to 3 details.
- ☐ Student ended the writing with a concluding sentence.

2 or 1 = Working toward or not meeting standard

- ☐ Student did not indent many or most paragraphs.
- ☐ Student did not write in complete sentences and verb conjugation was incorrect in many or most paragraphs.
- ☐ Student did not begin most paragraphs with a topic sentence.
- ☐ Many or most sentences did not begin with a capital letter and/or end with correct punctuation.
- ☐ The sentences had one or no details.
- ☐ Student did not end the writing with a concluding sentence.

Power Point Assessment

Directions: Choose a marine mammal that you find interesting. You can research information regarding the mammal from the internet, books and from television programs such as 'The Animal Channel.' Your power point is to include the following:

- A slide that introduces your mammal
- A slide for each of the categories of a) Classification, b) Diet, c) Environment, d) Inherited Traits, e) Reproduction, and f) Threats to existence
- Include a slide stating your opinion on what humans can do to help protect the habitat of your marine mammal
- Your last slide will include a list of where you found your information, list only three references

Include images within your slides and also academic vocabulary that you have learned during the unit such as **marine mammal/s**, **predators**, **carnivores**, **herbivores**, **extinction**, **pollution**, **sirenians**, **pinnipeds**, **adaptation**, **echolocation**, ect. . The following are examples of references:

- Kalman, B. (2000). *What is a Marine Mammal*?*: The Science of Living Things Series*. **(book example)**
- (2015). *Animal stories*. [Television series]. **(television show example)**
- www.lifescience.com **(internet example)**

Student Power Point Rubric

Student exceeds standards (4)	Student meets standards (3)	Student is working toward standards(2)	Student is not meeting standards (1)
• An introduction is included and clearly stated • Each category is included with complete sentences • An opinion is included that is clearly stated • Academic vocabulary is logically included • Images are captivating • Oral presentation is clearly stated in a confident manner • Emotion and excitement regarding presentation is evident • Use of correct verb conjugations	• An introduction is included and clearly stated • Each category is included with complete sentences • An opinion is included that is clearly stated • Academic vocabulary is logically included • Images are included • Oral presentation is clearly stated • Use of correct verb conjugations	• An introduction is included but not clearly stated • Most categories are included with some complete sentences • An opinion is included but not clearly stated • Academic vocabulary is included but not presented logically • Few images are included • Oral presentation is not always clearly stated • Some use of correct verb conjugations	• An introduction is not included • Few categories are included with few complete sentences • An opinion is not included • Little use of academic vocabulary • Few or no images are included • Oral presentation is not clearly stated • Limited use of correct verb conjugations

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