Ocean Life

A First Grade Inquiry Based Unit

By: Susan Bozett
Central City School
**Overview of Unit**

The Ocean Life unit is a First Grade unit that was originally written and taught as an “Oceans” unit and was later modified to also include the water cycle. It took approximately 2 weeks to teach this unit, if taught every day for about 2 hours. I used my language arts, science, writing, and computer lab time to teach this. I also used the title 1 teacher to, at times, split the group so that we could teach more efficiently to smaller groups.

The inquiry model of teaching first sets a purpose for learning the information. This was done through the authentic connection letter from our Title 1 coordinator. Our purpose was to come up with a presentation for an upcoming parent’s night—Crazy Cultural Night. Students were excited about this as it is an annual event that they relate to and want to participate in. The hook activity was a great way to get students interest and adds an element of excitement.

The inquiry model is driven by questions. The essential question, “Why are oceans important to me?” is the guiding force behind this unit. Students will study ocean animal and characteristics, ocean habitats, and the water cycle. Along the way students are constantly posing questions and seeking answers. All questions are written on chart paper and posted around the room for students to refer to.

The Final Team Product is ongoing throughout the unit. Students work in teams (at the end of each section or topic) in order to produce a product that will help them fulfill the challenge set forth by the authentic connection letter. When all FTPs are finished, it is ready to be viewed by an audience, in this case, parents at Crazy Cultural Night.

It was amazing how much the students loved doing this unit! I have enjoyed writing and teaching this unit and I hope you will enjoy using it as well.

Susan Bozett

[Click here for Unit Template](#)
## Goals/Standards: (#’s)

<table>
<thead>
<tr>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STATE GOAL 12:</strong> Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.</td>
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<tr>
<td><strong>Standard A:</strong> Know and apply concepts that explain how living things function, adapt and change.</td>
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<tr>
<td><strong>Benchmark 1:</strong> Categorize forms of life by their features and explain how features help animals survive.</td>
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<tr>
<td><strong>Standard B:</strong> Know and apply concepts that describe how living things interact.</td>
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<tr>
<td><strong>Benchmark 2:</strong> Describe the characteristics of habitats of the Earth's oceans.</td>
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<tr>
<td><strong>Standard E:</strong> Know and apply concepts that describe the features and processes of the Earth and its resources.</td>
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<tr>
<td><strong>Benchmark 3:</strong> Order and identify the steps of the water cycle and know its importance in our lives.</td>
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<tr>
<td>Writing</td>
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<tr>
<td><strong>STATE GOAL 3:</strong> Write to communicate for a variety of purposes.</td>
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## Engaging the Learner

**Hook** – Animal pictures will be divided into puzzle pieces, color coded and hidden around the room. Students are asked to go find one puzzle piece and find the others who have that color piece to put their puzzle together. When all are done students will present their pictures to the class. The class will guess how these pictures go together. Conclude by reading “Commotion in the Ocean”, a book of poetry.

**Authentic Connection** – An annual event at our school is Crazy Cultural Night. The Title 1 coordinator has challenged us to make a mural and a video presentation showing what we have learned in our unit.

## Teaching and Learning Events

### Essential Question – Why are oceans important to me?

### Opening activities

- Finish opening activities: **Hook**, Authentic connection letter, **Task analysis** based on challenge of authentic connection, essential questions. (LP)
- Opening **vocabulary** introduction. Introduce animal cards as we talk about animal features. Follow with seek-and-find activity. (LP)
- Ongoing **journal entry**. (LP)
- Inquiry begins with students seeking information from various sources. Jigsaw- putting together information. Read aloud “What are oceans” and “Life in the Ocean” Students are asked to give a fact they remember from the books which will be written on a post it and sorted into categories using a semantic features chart. Mini lessons begin. (LP)

### Section 1- animal classification and characteristics

- Sort living things into categories: fish, mammals, birds, crustaceans, reptiles, other. Introduce the term vertebrate and invertebrate. Identify which animals studied are vertebrates and which are invertebrates. (LP)

## Final Team Performance

**Final Product Organizer** – Students will be videotaped after each assessment presenting various aspects of their learning. Activities include reading Assessment 1 writings, making a mural or ocean habitats, and making and acting out the water cycle.

## Individual Students Assessments

**Assessment 1** – Categorize forms of life by their features and explain how features help animals survive by giving each student a picture of an animal studied. Student will have to decide which category their animal fits into and then write how its observable features help it to survive. Student performance is graded by a rubric.
### Goals/Standards: (#’s)

<table>
<thead>
<tr>
<th>Standard C: Communicate ideas in writing to accomplish a variety of purposes.</th>
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<th>Math</th>
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<td>STATE GOAL 7: Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy.</td>
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| Standard A: Apply word analysis and vocabulary skills to comprehend selections. |

### Teaching and Learning Events

#### Engaging the Learner

- **Use a “Connect 2” activity to compare and contrast ocean life. Student will find 3 similarities and 3 differences. (LP)**
- **WAC-(words and concepts)**
  - Use web site [http://www.seasky.org/sea.html](http://www.seasky.org/sea.html) or [http://www.enchantedlearning.com/dictionarysubjects/sea.shtml](http://www.enchantedlearning.com/dictionarysubjects/sea.shtml) to find an ocean animal for as many letters of the alphabet as possible and then write one characteristic of that animal. (LP)
- **Math activity-weighting and measuring shells. (LP)**
- **QAR- Use the book Dolphins. (LP)**
- **Go on a cyberhunt using linked web sites. (LP)**
- **Give Assessment 1 (explanation)**
- **Students will work on FTP, video presentation, in groups. Students are given opportunities to pose questions. (LP)**

#### Section 2- habitats

- **Power Point presentation for vocabulary introduction for Section 2 and 3. (LP)**
- **Using a map, students will learn the 5 ocean names. (LP)**
- **Science experiment- Sink or Float, put an egg in salt water and plain water. Will it sink of float? What other things that normally sink in water float in salt water? (LP)**

#### Individual Students Assessments

**Assessment 2-** Students will name the 5 oceans. Students will receive a worksheet in which they will be able to label different oceans and name layers of the ocean. Students will pick an ocean habitat, draw a picture of that habit, and describe its characteristics. Student will be assessed with a graded test and a checklist.
### Engaging the Learner

**Goal/Standards:** (#’s)

<table>
<thead>
<tr>
<th>Learning Event</th>
<th>Description</th>
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<tbody>
<tr>
<td>Poetry reconstruction- Cut into strips and reconstruct the poem”Commotion in the Ocean”. (LP)</td>
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<tr>
<td>Together take a virtual field trip of an ocean</td>
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<tr>
<td><a href="http://www.field-trips.org/tours/sci/oceank/">http://www.field-trips.org/tours/sci/oceank/</a></td>
<td>Students are given time to write a journal entry about what was learned. Allow students time to share. (LP)</td>
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<tr>
<td>Explore website</td>
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<tr>
<td>Section 3- water cycle</td>
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<tr>
<td>Introduce water cycles by exploring the web site</td>
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<tr>
<td>Labeling Sheet- label the parts of the water cycle.</td>
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<tr>
<td>Science activity- make a water cycle in a bag.</td>
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<tr>
<td>Give Assessment 3.</td>
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<tr>
<td>Students work on FTP in groups (LP)</td>
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### Teaching and Learning Events

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<td>Assessment 3- Students create a water cycle picture by using Kids Pix computer program. Next, students will write how the water cycle is important to them it is graded by a teacher rubric and self assessed with a student rubric.</td>
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Dear First Graders,

I have a problem and I need your help! I was just planning Crazy Cultural Night for this year and I need your class’s involvement. I was hoping that you would do some research on oceans and set up a display for parents. I would like for you to find out all about oceans and the animals that live in them, and I would like you to know what groups of animals live in the ocean and what their characteristics are and how these characteristics help them to survive. Also, I would like you to learn about where these animals live and the names of the oceans. Finally, I would like you to learn about the water cycle and how it affects our lives. As you are learning these things, put your information together in the form of reports, murals, and skits. Maybe your teacher could make a videotape of your class as you present your findings. Parents will love to see how much you have learned. I know you can do this. I look forward to seeing your finished project.

Miss Carpenter
The Hook
Ocean Puzzle Search

The teacher prints 5-8 ocean animal pictures from the internet. Glue each one onto a different colored construction paper background. Laminate if possible. Cut each one into 3 or 4 pieces, so that you will have one piece for each student. These are now the puzzle pieces. While the students are out of the room, hide the puzzle pieces around the room. You might even do this in a larger area such as a gym or cafeteria. Students are instructed to find one puzzle piece, and then hold it up so that other students may see what color piece they found. They will then get together with the other students who also found the same color piece and reconstruct their puzzle. When all groups have finished, each shares their puzzle picture with the class. As groups are finishing sharing, students will begin to see the theme of the puzzles. You may ask them, “Does anyone have any ideas how these pictures are alike?”. Follow up by reading a book to the class about the oceans. I chose to read a collection of ocean poems called
Commotion in the Ocean by Giles Andreae.
Title of Unit: Ocean Life  
Author(s): Susan Bozett  
Lesson Plan 1

SCIENCE  
STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard A : Know and apply concepts that explain how living things function, adapt and change
• Benchmark 1: Categorize forms of life by their features and explain how features help animals survive.

Teaching and Learning Event: Opening activities (Hook, Authentic Connection, Task Analysis, Questions)

Description and Detailed Sequence of Activities:
• Hook: You will use 4-6 Ocean animal pictures which will be glued onto different colored construction paper (laminating them first is helpful but not necessary), cut into puzzle pieces (depending on how many students you have), and hidden around the room. I did this in a large open room (cafeteria) while the students were gone to P.E. This added an element of surprise and difficulty. Students are asked to go find one puzzle piece and meet with the others who have found that same color piece to put their puzzle together. When all are done students will try to determine what their picture is and report to the class. The class will guess how these pictures go together. Follow by reading “Commotion in the Ocean”, a book of poetry.
• Read authentic connection letter to class to give purpose for the study.
• Conduct task analysis to determine what students are expected to do. Tell students the Title I teacher’s challenge and ask, “What are we expected to do”? Record responses on chart paper Then ask, “If this is what we need to do, what questions do we have now? What do we need to learn?” Students will pose questions based on task analysis. Record these questions onto large chart paper as you will need to refer back to them later.
• Then the teacher posts questions from the essential and coaching questions for the unit. Students will begin searching for answers from trade books and internet.

Time Line: 45 minutes

• Books: “Commotion in the Ocean”, by Giles Andreae

Equipment Name:

Materials: animal puzzle pieces, copy of hook, letter of invitation, task analysis, and essential questions

Resources - Web Sites:
Resources – Software:

TRADEBOOKS ARE INTRODUCED AT THE BEGINNING OF THE UNIT. THESE BOOKS ARE AVAILABLE AND ACCESSIBLE TO STUDENTS THROUGHOUT THE UNIT.
Science

STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard A: Know and apply concepts that explain how living things function, adapt and change.
- Benchmark 1- Categorize forms of life by their features and explain how features help animals survive.

Teaching and Learning event: Opening Vocabulary Activity/ Seek-and-Find

Description and Detailed Sequence of Activities:
- Students will be introduced immediately to the vocabulary in the first section of the unit by the teacher presenting animal flashcards (pictures) and the words written on flashcards. As students are learning the animal's characteristics will be discussed. These words should also be written on flashcards.
- Vocabulary presentation will be followed by a seek-and-find game. Set out animal books around the room. Each student is then given a vocabulary word card and asked to go find a book that has that word or picture in it. Students will be given 10 minutes to seek-and-find and then will report back to the class on the findings.

Time Line: 45 min.

Books: various animal books, at least 1 for each child

Equipment Name:

Materials: Animal pictures and vocabulary words written on flashcards.

Resources –Web:

Resources – Software:

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Science
STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.
Standard A: Know and apply concepts that explain how living things function, adapt and change.
Standard B: Know and apply concepts that describe how living things interact.
Standard E: Know and apply concepts that describe the features and processes of the Earth and its resources.
• Benchmark 1- Categorize forms of life by their features and explain how features help animals survive.
• Benchmark 2- Describe the characteristics of habitats of the Earth’s oceans.
• Benchmark 3- Order and identify the steps of the water cycle and know its importance in our lives.
Writing
STATE GOAL 3: Write to communicate for a variety of purposes.
Standard C: Communicate ideas in writing to accomplish a variety of purposes.

Teaching and Learning event: Ongoing Journal Entries
Description and Detailed Sequence of Activities:
• Run off copy of Student Journal Page and bind together to make a book for each student.
• Each day, at some point in the lesson, the teacher will ask students to take out their journals and write down something from the days learning. It could be a question, a piece of information they have learned that day, or a class journaling activity. This is at the discretion of the teacher.
• Please note: some activities have journaling activities already built into them. This would be your journaling activity for the day.

Time Line: 10 minutes each day, ongoing
Books:
Equipment Name:

Materials: Journals

Resources –Web:

Resources – Software:

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Science

STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard A: Know and apply concepts that explain how living things function, adapt and change.

  - Benchmark 1- Categorize forms of life by their features and explain how features help animals survive.

Teaching and Learning Event: Jigsaw

Description and Detailed Sequence of Activities:

  - Based on the questions that were generated in the previous lesson, students begin searching for information in trade books and on the Internet.
  - Inquiry begins with students seeking information from various sources. Each student gets a nonfiction book at their reading level. They are to read to find a fact about an animal, an ocean feature, or the water cycle. This information is then “jigsawed”, or pieced together on a class Semantic Feature Chart.
  - Mini lessons begin

Time Line: 30 minutes

Books: Various nonfiction books on oceans, ocean life, and the water cycle, at the students reading levels.

Equipment Name:

Materials: Semantic Feature Chart, reproduced on a large chart

Resources - Web Sites:

Resources – Software:

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STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard A: Know and apply concepts that explain how living things function, adapt and change.
- Benchmark 1- Categorize forms of life by their features and explain how features help animals survive.

Teaching and Learning Event: Animal picture sorting

Description and Detailed Sequence of Activities:
- Discuss animal categories: fish, mammals, birds, reptiles, other. Students will sort pictures of ocean animals into categories. Use the board as the visual organizer. Divide it into categories and label each. Craft magnets stuck to the back of the pictures will allow them to be placed into categories for the class to easily see.
- Discuss characteristics of each group and how these characteristics help it to survive.
- Once this activity is done, take all pictures and category markings down. Tell the students that now it is your turn to sort the pictures and that all the categories that we studied can be divided into 2 new groups. Start sorting the pictures into these 2 groups based on whether the animal is a vertebrate or invertebrate. Don’t tell the students what each group has in common, but give them opportunities to guess. Give clues if needed. When finished ask students if they could name other animals not pictured that could fit into each category.

Time Line: 45 minutes

Books:

Equipment Name: A magnetic chalkboard or dry erase board.

Materials: Various pictures of ocean animals downloaded from internet, etc. mounted on tag board, with magnets on the back. You should have 3-4 for each category.

Resources - Web Sites:

Resources – Software:

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STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard A: Know and apply concepts that explain how living things function, adapt and change.

- Benchmark 1- Categorize forms of life by their features and explain how features help animals survive.

Teaching and Learning event: Connect 2

Description and Detailed Sequence of Activities:

- Use a “Connect 2” activity to compare and contrast ocean life vocabulary. Student will use the activity sheet to connect 2 words to come up with 3 ways things are alike and 3 ways things are different.
- Example: Angelfish and gills are connected because angelfish use gills to breathe. If you have not done connect 2’s before you may need to do some prior work with this or give several examples. I started by making a connection to of all animals and worked together as a group to make connections. It’s amazing how quickly they catch on.
- Afterwards make sure to go over examples as a group so all students can see the connections made.

Time Line: 30 min

Books:

Equipment Name:

Materials: Connect 2 activity sheet

Resources – web sites:

Resources- software:

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Title of Unit: Ocean Life  
Author(s): Susan Bozett  
Lesson Plan 7

STATE GOAL 1: Read with understanding and fluency.

Standard A: Apply word analysis and vocabulary skills to comprehend selection

Teaching and Learning Event: ABC Ocean Animals (Words and Concepts Chart)

Description and Detailed Sequence of Activities:

• In the computer lab, students will use the ABC Oceans worksheet and the suggested web sites below to search for an ocean animal for each letter of the alphabet (or as many as possible as time allows), and then list one observable feature of this animal.

Time Line: 45min

Books: Underwater ABC book may be used as a resource if students have exhausted all other possibilities on the web and still have not found something that starts with a certain letter.

Equipment Name: Computers/ Internet

Materials: pencil and ABC ocean worksheet


Resources – Software:

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Title of Unit: Ocean Life
Author(s): Susan Bozett
Lesson Plan 8

Math
STATE GOAL 7: Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy. Standard A: Measure length and weight/mass using scales and other appropriate instruments in customary and nonstandard measuring.

Teaching and Learning event: Weighing and Measuring with Sand Dollars and Starfish

Description and Detailed Sequence of Activities:
- Break students into 2 groups, one will measure specified items with Sand Dollars, the other will use a balance scale to find out how many starfish it takes to balance against certain items. Students may work in pairs and will use weighing and measuring worksheet.

Time Line: 45 minutes

Books:

Equipment Name: Balance Scale,

Materials: starfish and sand dollars (purchased from oriental trading), worksheet, various items to measure or balance

Resources – web sites:

Resources- software:

TRADEBOOKS ARE INTRODUCED AT THE BEGINNING OF THE UNIT. THESE BOOKS ARE AVAILABLE AND ACCESSIBLE TO STUDENTS THROUGHOUT THE UNIT.
STATE GOAL: Reading 1: Read with understanding and fluency.

Standard A: Apply word analysis and vocabulary skills to comprehend selections.

Teaching and Learning event: Question Answer Relationship (QAR)

Description and Detailed Sequence of Activities:
- Break into groups of 3-4 students. Have a book for each group to read (should be at their reading level). If you do not have enough copies you might pick several paragraphs from a book and type them to give students as handouts. Do not copy more than 2 pages as this would be in violation of copyright laws.
- Allow students time to read book or text and answer the first 2 questions together, recording their answers. Groups will report answers to the class.
- The last two questions may be too much for students who have not had prior lessons in QAR. If this is your first attempt using the QAR strategy you may need to stop after the first two questions.
- Give assessment 1

Time Line: 2-30min periods

Books: Several copies of the book “Dolphins”.

Equipment Name:

Materials: QAR – dolphin worksheet

Resources – web sites:

Resources- software:

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Science

STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard B: Know and apply concepts that describe how living things interact.

- **Benchmark 2-** Describe the characteristics of habitats of the Earth’s oceans.

Teaching and Learning event: Cyberhunt

Description and Detailed Sequence of Activities:

- **Students will go on a “cyberhunt” in order to find the answers to questions on worksheet.** It would be best for students to work in pairs making sure you have at least 1 good reader in a group. As some groups finish, they may circulate to help others who are having difficulty.
- **This activity is done in the computer lab.** Students may share answers to questions when they return to class.

Time Line: 45 min.

Books:

Equipment Name: Computer Lab with electronic copy of worksheet with questions (pg 1) loaded to each computer.

Materials: cyberhunt questions (pg 2)

Resources – web sites:
- [http://www.calstatela.edu/faculty/eviau/edit557/oceans/linda/loceans.htm](http://www.calstatela.edu/faculty/eviau/edit557/oceans/linda/loceans.htm)
- [http://seasky.org/reeflife/sea2k.html](http://seasky.org/reeflife/sea2k.html)

Resources- software:

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STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard A : Know and apply concepts that explain how living things function, adapt and change.
- Benchmark 1- Categorize forms of life by their features and explain how features help animals survive.

Teaching and Learning event: Final Team Performance

Description and Detailed Sequence of Activities:
- Teacher will break students into groups according to the animals that they did their assessment 1 reports on (3-4 students per group).
- Students should have copies of their own assessment 1. They will read their report to other group members, then they must come up with one combined report, making sure they have all of the following questions answered. Questions to be answered: How do the features of an animal help us put it into a group? How do an animal’s features help it to survive? How are all ocean animals alike? What categories can sea animals be sorted into? Why are some animals suited for living in the deep ocean while others aren’t?
- Groups will present their combined group reports aloud to the class while being videotaped.

Time Line: 45 min.

Books:

Equipment Name: Video camera

Materials: Each student should have a copy of their assessment 1 writing report.

Resources – Web:

Resources – Software:

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Standard B: Know and apply concepts that describe how living things interact.

Standard E: Know and apply concepts that describe the features and processes of the Earth and its resources.

- Benchmark 2- Describe the characteristics of habitats of the Earth’s oceans.

- Benchmark 3- Order and identify the steps of the water cycle and know its importance in our lives.

Teaching and Learning event: Vocabulary presentation for Sections 1 and 2

Description and Detailed Sequence of Activities:

- The vocabulary words are to be presented and listed on board. The teacher takes a post-it note and gives it each student with one of the vocabulary words on it. It is okay if more than one child has the same word.
- The students are then given a book and must find the word in a book. They write down the pg. # and the title of the book. Students will report to the class at the end.
- Teacher may follow up with review slides from power point presentation.

Time Line: 45min.

Books: Various books on the water cycle or ocean animal habitats, one for each child if possible.

Equipment Name: Computer, projector and screen, etc.

Materials: post-its,

Resources –Web:

Resources – Software: Microsoft PowerPoint, slide show

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STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard: Standard B: Know and apply concepts that describe how living things interact.
  • Benchmark 2- Describe the characteristics of habitats of the Earth’s oceans.

Teaching and Learning event: Learn names and locations of the oceans.

Description and Detailed Sequence of Activities:
  • Using a map, show students the names and locations of the oceans. Students will memorize these. This may be done every day as a review for 5 – 10 minutes.
  • You may use the map worksheet to quiz students at intervals. This worksheet is available at the enchanted learning website listed below.

Time Line: daily practice 10 minutes

Books:

Equipment Name:

Materials: large map, worksheet map

Resources – web sites: Enchanted Learning
http://www.enchantedlearning.com/geography/label/labeloceansanswers.shtml

Resources- software:

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- Benchmark 2- Describe the characteristics of habitats of the Earth’s oceans.

Teaching and Learning event: Make an egg float activity

Description and Detailed Sequence of Activities:
- Try floating an egg in each glass of water. What happens? Now add 1 teaspoon of salt to one glass of water and stir. Add more salt. Repeat until the egg floats. Tally how many spoons of salt were needed to float the egg. What is happening to make the egg float?
- Explanation: When you add salt to the water, you make it heavier, or denser. Eventually, the water solution becomes denser than the egg, and the egg floats. It’s the same reason why we float more easily in the ocean, which is salt water. If you put the salt in the water carefully enough you can make the density of the water equal to the density of the egg. When the densities are the same, the egg should stay pretty much where ever you leave it in the water.
- What does this tell us about things in the ocean? Would it be easier or harder for things in the ocean to float?

Time Line: 20 minutes

Books:

Equipment Name: 2 clear jars or containers, measuring cups

Materials: water, 2 eggs

Resources – web sites: PBS Kids- Zoom: Float an egg
http://pbskids.org/zoom/activities/sci/makeaneggfloat.html

Resources- software:

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Standard B: Know and apply concepts that describe how living things interact.
- Benchmark 2- Describe the characteristics of habitats of the Earth’s oceans.

Teaching and Learning event: Poetry Reconstruction

Description and Detailed Sequence of Activities:
- The object of this activity is to find poems at their reading level that relate to the topic, make copies, cut each line apart, and allow students to work in groups to reconstruct the poem to make sense. I used poems that had been already introduced to the students in the beginning of the unit, and that were not too long. Poems from “Commotion in the Ocean” worked very well for me.
- I chose about 5-6, retyped them in a larger font (making sure that all words from one line stayed together) and then broke my students into small groups of 3-4. Poetry strips were set out in various locations (make sure the strips from each poem are mixed up). Students then worked together to reconstruct the poem. When a group thought they were finished, they first had to read it to me to check. Some groups may need hints to get started.
- Student groups rotated when all groups had completed reconstructing their poem, usually every 5 minutes. At the end I reread the “Commotion in the Ocean” book.

Time Line: 30 min.
Books: “Commotion in the Ocean” by Giles Andrae
Equipment Name:
Materials: 5-6 poems retyped and cut into strips
Resources – web sites:

Resources- software:

TRADEBOOKS ARE INTRODUCED AT THE BEGINNING OF THE UNIT. THESE BOOKS ARE AVAILABLE AND ACCESSIBLE TO STUDENTS THROUGHOUT THE UNIT.
Title of Unit: Ocean Life  
Author(s): Susan Bozett  
Lesson Plan 16

Writing STATE GOAL 3: Write to communicate for a variety of purposes.  
Science STATE GOAL 12: Understand the fundamental concepts, principles and  
interconnections of the life, physical and earth/space sciences.

Writing Standard C.: Communicate ideas in writing to accomplish a variety of purposes.  
Science Standard B: Know and apply concepts that describe how living things interact.  
• Benchmark 2- Describe the characteristics of habitats of the Earth’s oceans.

Teaching and Learning event: Virtual Field Trip/ writing

Description and Detailed Sequence of Activities:  
• Together as a class we visited the web site http://www.field-trips.org/tours/sci/oceank/  
to take a virtual field trip of an ocean. There is a lot of information in this site but it is written  
at a higher reading level so it is best to read this to the class as a group. You may want to take  
notes on chart paper as you go.  
• After the presentation I had students write about what they learned in their journals.  
Allow students time to share entries.  
• This could be done in a lab where teacher is reading and telling students when to advance  
screens, with an overhead projector linked to a computer in which students view together, or  
having students gather around teacher’s computer.

Time Line: 45 minutes

Books:  
Equipment Name: Computer or Overhead Projector linked to a computer or computer lab

Materials: paper for writing

Resources – web sites: Virtual Field Trips  
http://www.field-trips.org/tours/sci/oceank/

Resources- software:  

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AVAILABLE AND ACCESSIBLE TO STUDENTS THROUGHOUT THE UNIT.
Science

STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences

Standard B: Know and apply concepts that describe how living things interact.
- Benchmark 2- Describe the characteristics of habitats of the Earth’s oceans.

Teaching and Learning event: Explore ocean regions and Zones

Description and Detailed Sequence of Activities:
- Students will find out about ocean regions and layer by exploring website http://www.onr.navy.mil/focus/ocean/habitats/default.htm. You may wish to do this first as a group. This could be done in the computer lab or on a projection screen or as a group activity in the computer lab.
- Students will take their journals and pencils with them in order to write important facts that they have found.
- Give assessment 2

Time Line: 45min.

Books:

Equipment Name: computer lab, projection screen, etc.

Materials: Journals and pencils

Resources –Web: http://www.onr.navy.mil/focus/ocean/habitats/default.htm

Resources – Software:

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Science

STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard B: Know and apply concepts that describe how living things interact.

- Benchmark 2- Describe the characteristics of habitats of the Earth’s oceans and their inhabitants.

Teaching and Learning event: Final Team Performance 2

Description and Detailed Sequence of Activities:

- Team work 2 – Students will work in teams to create an ocean mural showing ocean habitats. Students will create a mural setting up different ocean habitats. These habitats include: coral reef, kelp forest, rocky shore, and the 3 ocean layers (sunlit, twilight, deep ocean zones)
- Students will be videotaped explaining what animal they added to the mural and why.
- Questions to be answered: How do the characteristics of an animal help it to survive in its habitat? Where are the oceans? What are features of the ocean?

Time Line: 1 hour, 30 min.

Books: nonfiction ocean books for students to refer to pictures

Equipment Name: Video camera

Materials: sections of white bulletin board paper for each mural, teacher’s choice of size. Paint, crayon, markers, etc. Optional: ocean animal coloring sheets for students to color, cut, and paste pictures into mural.

Resources –Web:

Resources – Software:

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Science

STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Standard: Standard E: Know and apply concepts that describe the features and processes of the Earth and its resources.

- Benchmark 3- Order and identify the steps of the water cycle and know its importance in our lives.

Teaching and Learning event: Water cycle discussion/worksheet

- Description and Detailed Sequence of Activities: The water cycle will be discussed through the presentation of literature and internet web site (Kids Zone http://www.kidzone.ws/water/bactivity1.htm).
- Teacher will read the book The Water Cycle by Rebecca Olien. Discussion will follow about the relevance of the water cycle in their lives.

Time Line: 45 min.

Books: The Water Cycle by Rebecca Olien, Capstone Press; We Need Water, Capstone Press

Equipment Name: Computers

Materials: Labeling Worksheet

Resources – web sites: Kids Zone http://www.kidzone.ws/water/bactivity1.htm

Please note: you will have to modify the worksheet so that the A, B, C, &D are taken off in front of the answer choices.

Resources- software:

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Science

STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences

Standard: Standard E: Know and apply concepts that describe the features and processes of the Earth and its resources.

- Benchmark 3- Order and identify the steps of the water cycle and know its importance in our lives.

Teaching and Learning event: Create a Water Cycle in a Bag

Description and Detailed Sequence of Activities:

- The Objective of this activity is to identify the components of the water cycle and observe the water cycle by constructing a simple, miniature model.
- Procedure: Place the wadded up blue paper towel in the bottom of the plastic bag. Pour 2 teaspoons of water into a clear plastic bag.
- Blow air inside the bag with your mouth and quickly seal the bag closed with a rubber band or twist-tie (zippered bags work well too).
- Place the bag on a sunny window ledge or tape directly to the window pane. Look at the bag throughout the day. What changes do you see?
- Students will be able to see the water cycle as the water evaporates, condenses, and forms droplets on sides of precipitation.
- Students may start an observation log by writing down what they see each day.
- Give assessment 3

Time Line: First Day 30 minutes, observation logs done daily to note changes, possibly done for one week.

Books:

Equipment Name:

Materials: Clear plastic bag (zip lock), Paper Towel (Blue shop towel if possible), Measuring spoon, Rubber band or twist-tie

Resources – web sites:

Resources- software:

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Title of Unit: Ocean Life  
Author(s): Susan Bozett  
Lesson Plan 21

Science
STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.
Standard E: Know and apply concepts that describe the features and processes of the Earth and its resources.
  • Benchmark 3- Order and identify the steps of the water cycle and know its importance in our lives.

Teaching and Learning event: Final Team Performance 3

Description and Detailed Sequence of Activities:
  • Team work 3 – Students will work together in teams to create props and then act out the parts of a water cycle. The teacher will video tape each group’s presentation.
  • What are students supposed to do? Students will create the pictures to represent the steps in a water cycle. Students will tell the steps to the water cycle while being videotaped.
  • It would be best to put students into groups of 4 so that all parts of the water cycle are represented. (evaporation, condensation, precipitation, collection)

Time Line: 1 hr. 30 min.

Books: various books on the water cycle for students to refer to for pictures.

Equipment Name: Video camera

Materials: posterboard, bulletin board paper, paint, markers, crayons

Resources – Web:

Resources – Software:

TRADEBOOKS ARE INTRODUCED AT THE BEGINNING OF THE UNIT. THESE BOOKS ARE AVAILABLE AND ACCESSIBLE TO STUDENTS THROUGHOUT THE UNIT.
Individual Assessment 1

Students will be given an ocean animal picture and will be asked to place their animal into the correct animal category, and then write how this animal’s observable features help it to survive. This is assessed with a rubric.
Individual Assessment #1

Glue your animal picture here.

My animal is a _____________________ and it is in the ____________ group.
Tell how your animal’s observable features help it survive.

________________________________________________________________________
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Rubric for Assessment 1

1. Did student pick the right category? _____

2. Did student list 3 observable animal features in their report? (3pts) _____
   2 observable features? (2pts) _____
   1 observable feature? (1pt) _____

3. Did student match feature to appropriate survival skill? (1 pt for each) _____

4. Was report legible? (1 pt) _____
### Alternate Rubric for Assessment 1

<p>| | | | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1. Student matched his animal to the category.</td>
<td>0</td>
<td>1</td>
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<tr>
<td>2. Student told about at least 3 observable features of their animal.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>3. Student matched feature to appropriate survival skill.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4 Report was legible</td>
<td>Not at all</td>
<td>somewhat</td>
<td>Not too bad</td>
<td>Work is neat</td>
</tr>
</tbody>
</table>
Label the Oceans

Southern Ocean  Arctic Ocean

Atlantic Ocean

Pacific Ocean  Indian Ocean

Name the layers of the ocean. ___________________, ____________________, ____________________.
My habitat is ___________________________.

Draw a picture of your habitat.

Tell about your habitat. ___________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________
Checklist for Assessment 2

1. Student has labeled the 5 oceans correctly.  
   5pts

2. Student has identified the correct ocean layer?  
   3 pts.

3. Students drawing matches the label. 1pt

4. Student has described the habitats characteristics. Worth 1-3 pts.

Total score
Kids Pix Assessment 3

Students will create a slide show showing the 4 parts of the water cycle using the computer program Kids Pix. If you do not have this program students could draw these pictures.
Rubric for Assessment 3

1. Student included all 4 parts of the water cycle (evaporation, condensation, precipitation, and collection) in picture. 4 pts

2. Student labeled the parts of their water cycle correctly. 4 pts

3. Student used a background color and inserted their name in the picture. 2 pts

4. Student told 2 ways that the ocean is important to them. Content was correct. O- 4 pts.

5. Student’s writing is neat and easy to read. 1 pt.
Student Rubric for Assessment 3

1. I included all 4 parts of the water cycle (evaporation, condensation, precipitation, and collection).

2. I labeled the parts of my water cycle.

3. I used a background color.

4. I inserted my name into the picture.

5. I told 2 ways that oceans are important to me.

6. My writing is neat and easy to read.
Assessment 3

Tell how the water cycle is important to you.

___________________________________________

___________________________________________

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___________________________________________
Pick 2 ocean animals. Tell how they are alike or different. Please make 3 connections to tell how animals are alike and 3 to tell how they are different.

- whale
- jellyfish
- shark
- lungs
- sea star
- penguin
- fins
- mammal
- octopus
- scales
- angelfish
- invertebrate
- sea snake
- feathers
- manatee
- turtle
- gills
- vertebrate
- reptile
- sea anemone
- fur
- clownfish
1. _______________ and _______________ are **alike** because ____________________________.

2. _______________ and _______________ are **alike** because ____________________________.

3. _______________ and _______________ are **alike** because ____________________________.

1. _______________ and _______________ are **different** because ____________________________.

2. _______________ and _______________ are **different** because ____________________________.

3. _______________ and _______________ are **different** because ____________________________.
Oceans Cyberhunt

1. Click on the website link below. Click on the words Start Here: Answer the question “What are Fish?”.
   http://www.calstatela.edu/faculty/eviau/edit557/oceans/linda/loceans.htm

2. Click on the website link below. Click on “Choose an animal”. Click on the picture of the shark. Answer the question “How does a shark swim?”.
   http://www.calstatela.edu/faculty/eviau/edit557/oceans/linda/loceans.htm

3. Click on the website link below. Click on the red star. Click on “Listen to the story”. Click in the middle to play the story. You will hear the story “Pup’s Supper”. There are 6 pages to the story. Find out some things that sea otters eat.

4. Click on link. Click on choose animal. Click on picture of the star fish. Click on lets learn more. What happens if a star fishes arm breaks off?
   http://www.calstatela.edu/faculty/eviau/edit557/oceans/linda/loceans.htm

5. Click on the link below. Look through the 2 pages of sea mammals. Find your 2 favorite sea mammals.
   http://seasky.org/reeflife/sea2k.html
1. What are fish? Write two characteristics of fish. 
   (Oceanlifeforkids) _____________________________
   _____________________________
   _____________________________

2. How does a shark swim? (Oceanlifeforkids) ______
   _____________________________

3. What do sea otters eat? Listen to the story Pup’s Supper to find out. Name 3 things. (Sea and Sky)
   _____________________________
   _____________________________

4. What happens if a star fishes arm breaks off? 
   (Oceanlifeforkids)
   _____________________________
   _____________________________

5. Name your 2 favorite sea mammals. (Sea and Sky) _____________________________
   _____________________________
My Ocean Life Journal

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_____________________________
Concept Circle
Which one does not belong?

Please explain your answer
Please explain your answer
**The Frayer Model**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| • The entire body of salty water that covers over 70% of the earth’s surface. | • Large body of water  
• Salt water |

<table>
<thead>
<tr>
<th>Examples</th>
<th>Non-Examples</th>
</tr>
</thead>
</table>
| • Indian  
• Atlantic  
• Arctic  
• Pacific  
• Southern | • River  
• Lake  
• Pond  
• Swimming pool |
The Frayer Model

- Definition
- Characteristics
- Examples
- Non-Examples
QAR on the book “Dolphins”

Right there:
1. Are dolphins fish or mammals?__________________

Think and search:
2. What are dolphins like (characteristics)?
_______________________________________
_______________________________________
_______________________________________

The author and you:
3. How are you the same as a dolphin?
_______________________________________
_______________________________________
_______________________________________

On my own:
4. Would you like to be a dolphin? Why or why not?
_______________________________________
_______________________________________
**ESSENTIAL AND TELLING QUESTIONS**

Essential and telling questions will be introduced after the task analysis, before the mini lessons begin.

**Essential Question:**
Why are oceans important to me?

**Telling Questions:**
1. How do the features of an animal help us put it into a group?
   - How are all ocean animals alike?
   - Are mammals on land like sea mammals?
   - What categories can sea animals be sorted into?
   - Why are some animals suited for living in the deep ocean while others aren’t?
2. How do the characteristics of an animal help it to survive in its habitat?
   - Where are the oceans?
   - What are features of the ocean?
3. How does the ocean affect our lives?
   - How does water get from us to the ocean?
   - How does water get from the ocean to us?
<table>
<thead>
<tr>
<th>Ocean Animal</th>
<th>Animal Characteristic</th>
<th>Ocean Feature</th>
<th>Water Cycle</th>
</tr>
</thead>
</table>


Make an egg float activity

**TIME REQUIRED:** 10 minutes

**MATERIALS REQUIRED:**
- fresh egg(s)
- two glasses of plain water
- salt
- measuring spoon

**INSTRUCTIONS:**
Try floating an egg in each glass of water. What happens? Now add 1 teaspoon of salt to one glass of water and stir. Add more salt. Repeat until the egg floats. Tally how many spoons of salt were needed to float the egg. What is happening to make the egg float?

**Explanation:**
When you add salt to the water, you make it heavier, or denser. Eventually, the water solution becomes denser than the egg, and the egg floats. It's the same reason why we float more easily in the ocean, which is salt water.
If you put the salt in the water carefully enough you can make the density of the water equal to the density of the egg. When the densities are the same, the egg should stay pretty much where ever you leave it in the water.

What does this tell us about things in the ocean? Would it be easier or harder for things in the ocean to float?
Complete Task Analysis

Tell students the Title I teacher’s challenge and ask, “What are we expected to do”? Record responses on chart paper

Then ask, “If this is what we need to do, what questions do we have now? What do we need to learn?”

State what FTP will be

- Add bullets outlining what the FTP is to contain
- Students will be videotaped explaining their Assessment 1 animal and what features it has that help it to survive.
- Students will work together in teams to create a mural showing different ocean habits and the animals which live in them. Teacher will videotape candidly while students work and the mural will be on display.
- Students will work in groups of 4 to create props to show each part of the water cycle (evaporation, condensation, precipitation, and collection). Students will use these props to act out the water cycle while video taping.
- The videotape and mural will all be part the Parent’s Night display.

What questions do we have now?

Students will pose questions based on task analysis.

Then post your essential and coaching questions for the unit. Students begin searching for information in trade books and on the Internet.
Vocabulary for Section 1
Animal Classification and Characteristics

1. fish
2. mammal
3. reptile
4. bird
5. other
6. vertebrate
7. invertebrate
8. gills
9. fins
10. feathers
11. scales
12. shells
13. lungs
14. fur
15. wings
Vocabulary list for Section 2 and 3  
Habits and Water Cycle

1. Atlantic
2. Pacific
3. Indian
4. Arctic
5. Antarctic or Southern
6. coral reef
7. kelp forest
8. rocky shore
9. salt water
10. sunlit zone
11. twilight zone
12. deep ocean
13. water cycle
14. evaporation
15. condensation
16. precipitation
17. collection
18. runoff
Write an animal name for each letter and a characteristic that it has.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
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Water Cycle in a Bag Activity

Objective
Identify the components of the water cycle and observe the water cycle by constructing a simple, miniature model.

Materials Needed
Clear plastic bag (zip lock)
Paper Towel (Blue shop towel if possible)
Measuring spoon
Rubber band or twist-tie

Procedure
1. Place the wadded up blue paper towel in the bottom of the plastic bag. Pour 2 teaspoons of water into a clear plastic bag.
2. Blow air inside the bag with your mouth and quickly seal the bag closed with a rubber band or twist-tie (zippered bags work well too).
3. Place the bag on a sunny window ledge or tape directly to the window pane. Look at the bag throughout the day. What changes do you see?

Conclusion
Water molecules are constantly on the move in what is called the water cycle (or hydrologic cycle). Heat from the sun causes the water to evaporate and become a vapor. As the water vapor cools, it condenses, forming tiny droplets which gather to form clouds. As the droplets get larger, they become heavier causing them to fall to the ground as precipitation (like rain, sleet, or snow). Some of this precipitation joins lakes and streams (called surface water), and some of it soaks into the ground where it becomes groundwater. The process of water soaking into the ground is called infiltration, or recharge.

Activity Source
The Groundwater Gazette, published by The Groundwater Foundation
Essential Question: Why are oceans important to me?

Final Product: A video presentation for Crazy Cultural Night
Audience: Parents at Crazy Cultural Night (A Title 1 parent involvement night)

<table>
<thead>
<tr>
<th>Team work 1</th>
<th>Videotape students as they read Assessment 1 writing report.</th>
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<tbody>
<tr>
<td>Benchmark:</td>
<td>Categorize forms of life by their features and explain how features help animals survive.</td>
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<tr>
<td>Questions to be answered:</td>
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<tr>
<td>▪ How do the features of an animal help us put it into a group?</td>
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<tr>
<td>▪ How do an animal’s features help it to survive?</td>
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<tr>
<td>▪ How are all ocean animals alike?</td>
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<td>▪ What categories can sea animals be sorted into?</td>
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<tr>
<td>▪ Why are some animals suited for living in the deep ocean while others aren’t?</td>
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<tr>
<td>What are students supposed to do?</td>
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<tr>
<td>☑ Teacher will break students into groups according to the animals that they did their assessment 1 reports on (3-4 students per group). Students should have copies of their own assessment 1. They will read their report to other group members, then they must come up with one combined report, making sure they have all of the following questions are answered. Teams will be videotaped reading group report.</td>
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<thead>
<tr>
<th>Team work 2</th>
<th>Create an ocean mural showing habitats.</th>
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<tbody>
<tr>
<td>Benchmark:</td>
<td>Describe the characteristics of habitats of the Earth’s oceans and their inhabitants.</td>
</tr>
<tr>
<td>Questions to be answered:</td>
<td></td>
</tr>
<tr>
<td>▪ How do the characteristics of an animal help it to survive in its habitat?</td>
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<tr>
<td>▪ Where are the oceans?</td>
<td></td>
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<tr>
<td>▪ What are features of the ocean?</td>
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<tr>
<td>What are students supposed to do?</td>
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<tr>
<td>☑ Students will create a mural setting up different ocean habitats. Students will be videotaped explaining what animal they added to the mural and why.</td>
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<tr>
<th>Team work 3</th>
<th>video tape of group water cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark:</td>
<td>Order and identify the steps of the water cycle and know its importance in our lives.</td>
</tr>
<tr>
<td>Questions to be answered:</td>
<td></td>
</tr>
<tr>
<td>▪ How does the ocean affect our lives?</td>
<td></td>
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<tr>
<td>▪ How does water get from us to the ocean?</td>
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<tr>
<td>▪ How does water get from the ocean to us?</td>
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<tr>
<td>What are students supposed to do?</td>
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<tr>
<td>☑ Students will create the pictures to represent the steps in a water cycle.</td>
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</table>
Students will tell the steps to the water cycle while being videotaped.

Final Team Task: The videotape will be shown to parents at Crazy Cultural Night.

Team Evaluation: Use rubric to judge the product and refine as needed.
FTP Group Rubric

Section 1

1. Everyone in the group showed their animal picture and told how the features help it to survive. ☺ ☹

2. Students were all videotaped doing this. ☺ ☹

Section 2

1. Students looked at pictures of our habitat. ☺ ☹

2. Students colored, cut and pasted pictures of the habitat and animals that live there. ☺ ☹

3. Students worked together as a team. ☺ ☹

Section 3

1. Students worked together to create our props. ☺ ☹

2. Students performed the “water cycle” skit in a group. Everyone had a part. ☺ ☹
Student’s FTP Group Rubric

Section 1

1. Everyone in the group showed their animal picture and told how the features help it to survive. ☺ ☹

2. We were all videotaped doing this. ☺ ☹

Section 2

1. We looked at pictures of our habitat. ☺ ☹

2. We colored, cut and pasted pictures of the habitat and animals that live there. ☺ ☹

3. We worked together as a team. ☺ ☹

Section 3

1. We worked together to create our props. ☺ ☹

2. We performed our “water cycle” skit in a group. Everyone had a part. ☺ ☹
Bibliography Hot list- Oceans

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2. Saving Water 0-7368-3699-3W
3. Sources of Water 0-7368-3700-0W
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5. Water as a Gas 0-7368-0412-9W
6. Water as a Liquid 0-7368-0410-2W
7. Water as a Solid 0-7368-0411-0W
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9. Water Cycle, The by Rebecca Olien 0-7368-3701-9W
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11. What is Water? 0-7368-3704-3W
13. What are Oceans 0-7368-0990-2W
14. Sea Snakes 0-7368-1658-5W
15. Corals 0-7368-0244-4W
16. Crabs 0-7368-0245-2W
17. Dolphins 0-7368-0857-4W
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19. Octopuses 0-7368-0246-0W
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22. Sharks 0-7368-0861-2W
23. Rays 0-7368-0858-2W
24. Sea Anemones 0-7368-0248-7W
25. Sea Horses 0-7368-0249-5W
26. Sea Snakes 0-7368-1658-5W
27. Sea Stars 0-7368-0250-9W
28. Sea Turtles 0-7368-0859-0W
29. Walruses 0-7368-1659-3W
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32. Jellyfish 0-7368-1656-9W

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2. Over in the Ocean: In a Coral Reef, by Marianne Berkes
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