Oceans and Islands
Special Area: Preschool Level II
Written by: Lisa M. Levesque, Lincoln Academy, Arvada, CO
Length of Unit: Five lessons, (approximately, one week), 15-20 minutes each

I. ABSTRACT
This unit, utilizing content and skills from the Core Knowledge Preschool Sequence, will teach children about ocean and island environments. Scientific reasoning and mathematical reasoning are the main areas of focus. Other content areas include Orientation in Space, Oral Language, Literature, and Poems. Other literature is used to supplement this unit and an evaluation of specific skills is provided.

II. OVERVIEW
A. Content from Core Knowledge Preschool Sequence
1. Scientific Reasoning (page 86)
   a. Classify images of animals according to habitat-ocean. 4KD-SP-A3
   b. Observe, describe, and record some basic properties of water. 4KD-SP-B1
2. Mathematical Reasoning (pages 63-64)
   a. Sort objects according to a single criterion. 4KD-MR-A2A, 4KD-MR-A2B
3. Orientation in Space (page 80)
   a. Identify by name, in “real life” photos or pictures, islands. 4KD-OS-D1
4. Oral Language (page 32)
   a. Given an oral description of a scene, re-create the scene with pictures. 4LD-LA-B04
5. Literature and Poems (pages 44 and 51)
   a. Swimmy- Leo Lionni
   b. At the Seaside- Robert Louis Stevenson

III. BACKGROUND KNOWLEDGE
A. For Teachers
1. Core Knowledge Foundation, Core Knowledge Preschool Sequence
3. Jennings, Terry. Coasts and Islands
4. Novelli, Joan. Using Caldecotts Across the Curriculum

IV. PREREQUISITE PRIOR KNOWLEDGE FOR STUDENTS
A. For Students
1. Identify geographic features and environments by name - water, ocean. 4KD-OS-D1

V. RESOURCES
A. Core Knowledge Foundation, Core Knowledge Preschool Sequence
B. Water- Close Up and Very Personal (video)
C. Ardley, Neil. The Science Book of Water
D. Frost, Helen. Water As a Liquid
E. Jennings, Terry. Coasts and Islands
F. MacDonald, Golden. The Little Island
G. MacDonald, Suse. *Sea Shapes*
H. Novelli, Joan. *Using Caldecott's Across the Curriculum*
I. Stevenson, Robert Louis. *A Child's Garden of Verses* (pop up version)
J. Wilkes, Angela. *Under the Sea*

VI. **LESSONS**  
**Lesson One: Water World**

**A. Daily Objective(s)**
1. Students will observe, describe, and record some basic properties of water by participating in the experiment “Water Weight Lifter”.

**B. Grouping**
1. Whole Group Instruction

**C. Materials and Preparation**
2. *Water As a Liquid* by Helen Frost
3. Large plastic bowl (2-3 gallon bowl)
4. 10-15 stones
5. Plastic shopping bag
6. Water in a separate container- enough to fill large bowl ¾ of the way.
7. A copy of Appendix A (evaluation)
8. A copy of Appendix B (heavier or lighter)
9. Video- *Water up Close and Personal*
10. Globe

**D. Language of Instruction**
1. Teacher: ocean, salty, water, liquid, observe, record
2. Students: ocean, salty, water, liquid, heavier, lighter

**E. Procedures/Activities**
1. Show the globe to the students. Point out that the areas that are blue show us where water is in the world. If the area of water is big, we call it an ocean. Ask the student to repeat the word ocean with you.
2. Say “Ocean water is different than fresh water. Does anyone know what the difference is?” (ocean water is salty) “The difference is that ocean water is salty.” “What does the ocean water taste like?” (salty)
3. Play “Around the World” with the globe. (Play music and when the music stops, the child holding the globe points to a body of water and says “this is an ocean and it is salty”)
4. When you are finished playing the game, read the book *Water as a Liquid* by Helen Frost.
5. “Is salt water safe for us to drink?” (no) “Why do you think that it is not safe for us?” (it is salty)
6. “What kind of big animals do you know that live in the ocean?” (whales, dolphins, sharks etc…)
7. “Did you ever wonder why these big animals are able to swim around in the ocean? I wonder why they don’t sink to the bottom.”
8. “Let’s do an experiment to find out one reason why these animals don’t sink to the bottom.” Explain that an experiment is an activity that helps us understand things better.
9. Place the bag in front of you and put the stones in the bag one at a time having the children count with you.
10. Allow each child to come up and try to pick up the bag. Ask them how it feels to pick up the bag with the heavy stones in it.
11. Put the bag in the bowl. Pour water into the bowl being careful not to get any water in the bag.
12. Have the students come up and again lift the bag. Ask “Is the bag easier to lift or harder to lift when it’s in the water?” (easier)
13. “You’re right; the bag is easier to lift because the water pushes up underneath the bag of stones and supports it. It’s kind of like when your mom or dad helps you on the monkey bars by pushing you up from the bottom. They are supporting you and will not let you fall.”
14. “That is one of the reasons that whales, dolphins, and sharks can be in the water and not sink to the bottom. Another reason is the way their bones are made but we will talk about that on another day!”
15. Show the video *Water, Close up and Personal*. As they are watching the video, begin evaluations on concepts on Appendices A and B.

F. **Go A Little Further**
1. For students who have difficulty, repeat the experiment again, drawing their attention to the weight difference. You can also give them a concrete experience with water support by helping to lift them onto a piece of playground equipment while saying “I am water and I am helping to support you or lift you up!”
2. For students who excel, allow them to experiment with various weights in the bag to continue to prove the point that objects in water seem lighter than when they are not in water.

G. **Assessment/Evaluation**
1. Use Appendix B- Heavier or Lighter, with each child. Use the answers to record on Appendix A- Evaluation, Questions #1 and 2. Save Appendix A to be completed throughout the unit.

**Lesson Two: Ocean Habitat/Coral Reef**

A. **Daily Objective(s)**
1. Students will classify images of animals according to ocean habitat by making their own ocean animals and placing them on a bulletin board and by using sea animal counters.

B. **Grouping**
1. Large group and small group

C. **Materials and Preparation**
1. *Under the Sea* by Angela Wilkes or *Animals in the Ocean* by Moira Butterfield
2. A copy of Appendix A for each child
3. A copy of Appendices C-G copied on tagboard - child will choose one
4. A bulletin board prepared to look like the coral reef with the title “What Do You See, Under the Sea?”
5. Water colors for each child
6. Water
7. Paint brushes
8. “Puffy Paint” in different colors
9. Stapler
10. Various underwater animal books - see Appendix N for suggestions
11. Globe
12. Chart paper and marker (suggestion - blue marker and make “waves” on the top of the paper and write the animal words underneath); you may need to draw a picture next to the word or have stickers ready
13. Scissors
14. Sea animal counters
D. Language of Instruction
1. Teacher: ocean, classify
2. Student: ocean

E. Procedures/Activities
1. Show the globe to the students and pass it around again. Ask for them to recall the name of the large bodies of water on the globe. (ocean)
2. Ask students to think about animals they think live in the ocean. Write down all answers, on the chart paper, even if you know they are wrong.
3. Read the book *Under the Sea* by Angela Wilkes. As you read it, put a check mark next to each animal that is listed.
4. As you read each page, allow comments and questions about the animals they see. Reading this book will take the majority of your lesson time and that’s ok!
5. After you are finished reading, re-read the list the students compiled about ocean animals and if any are not checked off, talk about whether or not that animal could be in the ocean.
6. Show children the pictures from Appendices C-G. Ask them to tell you what the name of that animal is. If they have difficulty, use the 1st letter to help them sound it out.
7. Give the students a choice of which animal they would like to paint.
8. Give out the animals and have students cut them out and use watercolors to paint.
9. While they are waiting for their animals to dry, gather them to the carpet to read another story about sea animals.
10. After the story is finished, divide another piece of chart paper into two sections - Ocean animals / Not Ocean Animals.
11. Hold up pictures from Appendices H and I that are mixed up.
12. Tell students that they are going to classify the animals. Tell them that classify means that even though all the animals are different, they can be put in a big group together.
13. Ask students to tell you where each picture should go and have them place in the right column on the paper. As they place it on the paper, have the child say the name of the animal and the category. Ex: “This is a sea horse, it is an ocean animal. This is a bear; it is not an ocean animal.” Demonstrate each example.
14. Say “We just classified these animals. We used two ways to classify - Ocean animals and Not Ocean Animals.”
15. If painted animals are dry, add the puffy paint to enhance different areas of the animal.
16. Let students choose where they want the animal stapled on the bulletin board.

F. Go A Little Further
1. For students who have difficulty, spend more time classifying animals with them and give them opportunities to look at more books that show ocean animals.
2. For students who excel, make labels for animals that are on the bulletin board and allow them to match the label with the animal.

G. Assessment/Evaluation
1. Use Appendix A to record question #3. Ask the child to sort the sea animal counters and non-sea animal counters. When finished, ask them to classify (or name) the groupings. (sea animals, non-sea animals)
1. Students will identify by name, in real life photos an island by creating their own island.

B. Grouping
1. Large group and small group

C. Materials and Preparation
1. *Coasts and Islands* by Terry Jennings
2. One clear plastic container per child (Zip Lock large square container recommended)
3. Water
4. Blue food coloring
5. Two cups of sand box sand per child
6. Funnel
7. One Plastic spoon per child
8. Two Teddy Grahams per child
9. One drink umbrella per child
10. A copy of Appendix A
11. Various books about islands- see Appendix for suggestions
12. Tape or CD of island music
13. Tape or CD player

D. Language of Instruction
1. Teacher: above, land, ocean, island
2. Student: above, land, ocean, island

E. Procedures/Activities
1. Paraphrase pages 16-19 in *Coasts and Islands* to discuss different types of islands.
2. Point out to the students that an island is land that is surrounded by water. Tell them that we are going to talk about the islands that are surrounded by oceans.
3. Say “There are two ways that islands can be made in the ocean. One way is by a volcano that explodes under the water. The other way an island is made is from tiny coral animals.” “Remember yesterday we saw pictures of the coral reef in our book? Well, the coral we saw are not plants, they are actually little animals and they can keep building on top of each other to form an island.”
4. “When a volcano erupts under water, it starts at the very bottom of the ocean, even under the sand at the bottom of ocean - that’s deep isn’t it?!” “It’s so deep that one eruption, or explosion, doesn’t usually form an island. It usually takes many eruptions to make the top go above the water.” “That’s what we call an island - the part of the land we can see above the water.”
5. Bring students to project area.
6. Say “Today we are going to make our own islands. Some of you will do it now, and some will do it after a different activity. Don’t worry, everyone will get a chance to make one!”
7. While you work with group 1, have group 2 look through various island books while you play island music.
8. Project instructions: Give each child a plastic container. Fill each container about ½ full with water. Allow each child to put 1-2 drops of blue food coloring in the water and stir gently. With your help, have each child slowly pour the 2 cups of sand into the funnel. The funnel should be positioned in the middle of the bowl. This will create an “island”. Talk with the students as you do it and ask them “What are we creating?” They should start to be able to answer “an island”. After, bring their attention to the sand, or “land”, below the surface of
the water. Remind them that we don’t call that part the island. Ask them to point to the sand above the water. Ask them specifically “What do we call the land we see above the water?” This is to prepare them for the evaluation.

9. When you are finished, give them a few minutes to place their teddy grahams carefully on the island and place the umbrella as well.

10. Switch groups and repeat process.

F. Go A Little Further
1. For students who have difficulty, continue to use their project to reinforce the island is above the water.
2. For students who excel, talk with them about continental islands and the difference between the way they are formed.

G. Assessment/Evaluation
1. Use Appendix A to record questions #4 and #5

Lesson Four: The Little Island

A. Daily Objective(s)
1. Students will classify images of animals, (and nature), according to habitat-island.

B. Grouping
1. Large Group

C. Materials and Preparation
1. The Little Island by Golden MacDonald
2. A copy of Appendix A for each student
3. A copy of Appendix J for each student
4. A copy of Appendix K for each student
5. A small Styrofoam bowl for each child
6. Scissors
7. Brown markers or brown tempera paint
8. 2 T. of sand per child
9. Paintbrushes (if needed)
10. Glue
11. Chart paper and brown marker
12. The Little Island on tape (optional)
13. Tape of ocean waves (optional)
14. Tape player (optional)

D. Language of Instruction
1. Teacher: land, ocean, island
2. Student: land, ocean, island

E. Procedures/Activities
1. Give each student a bowl turned upside down and either brown markers or paint.
2. Ask them if the upside down bowl looks more like an ocean or an island.
3. Give them time to paint or color their “island” brown. If they paint their island, the sand can then be sprinkled on top to dry. If the island was colored, you will need to a paintbrush to paint glue on and then sprinkle the sand.
4. As their island is drying, gather them to the carpet to read or listen to The Little Island by Golden MacDonald. (note: the students become engrossed in this story if you play the ocean wave tape and read the story quietly)
5. After the story is finished, go back to the beginning and ask the students to tell what is happening on the page. Call their attention to the plants and animals that they see on the island.
6. When you get to the part when the kitty visits the island, ask them “Does the kitty LIVE on the island or is the kitty VISITING the island?” (note: when you do the evaluation at the end of this lesson, some children may say that a kitty is an island animal. If that happens, ask them the same question you asked above)

7. As you are having the students “read” the story back to you, use the chart paper to write down all the island plants and animals that the students see. You may need to point out some animals and plants that the students miss.

8. Give each students a copy of Appendices J and K. They will color the pictures first and then cut them out.

9. After they cut them out, they will glue them onto their island. They may need some help cutting out some of the pictures.

10. As the students are in centers, call them over a few at a time and ask them what they glued on their island. Reiterate that these are plants and animals that you would see on an island. Ask them if these animals or plants would be found in the ocean. They should answer “no” but if not, review underwater animals and island animals and plants.

F. Go A Little Further
1. For students who have difficulty, work one on one with the book and have them point to animals and plants that they see. When evaluating, you may need to adjust the evaluation by using actual objects.

2. For students who excel, allow them to create their own island/ocean scene using paper, glue, sand, and markers. They will draw the ocean and animals that live under the ocean on the bottom half of the paper. On the top half, they will draw an island and add plants and animals that would live there.

G. Assessment/Evaluation
1. Use Appendix A to record questions #6 and #7. Students may need more time to answer question #7 so you may want to wait until Lesson Five if necessary.

Lesson Five: By Land or By Sea?
A. Daily Objective(s)
1. Students will classify images of animals according to habitat-ocean and island using objects.

2. Students will sort objects according to a single criterion using objects.

B. Grouping
1. Whole group

C. Materials and Preparation
1. The Little Island by Golden MacDonald

2. Sea Shapes by Suse MacDonald

3. Stuffed animals or other plastic animals that would be found on an island or in an ocean

4. Plants, shells, flowers

5. Two hula hoops

6. Two pieces of roll paper large enough to lay underneath the hula hoops - one blue and one brown

7. Marker

8. Copy of Appendix L for each child

9. Various stickers- ocean stickers, plant stickers, any others that would be applicable to oceans and islands

D. Language of Instruction
1. Teacher: ocean, island, sort, classify

2. Student: ocean, island
E. Procedures/Activities
1. Begin by having the students re-tell the story of *The Little Island* by showing them the book page by page.
2. Make sure to emphasize the animals and plants that are on those pages.
3. When you see animals that might be in both the ocean and on an island, be sure to point that out to the students. Say “Some animals and plants are able to live in both places.”
4. Read the story *Sea Shapes* by Suse MacDonald.
5. Ask students to name the animals they see on each page.
6. After the story, take out the two hula hoops.
7. Place one book in each hula hoop.
8. Write the word “ocean” on the blue construction paper and the word “island” on the brown construction paper. Place the ocean paper in the same hoop as the *Sea Shapes* book and the island paper in the same hoop as *The Little Island*. This will give both a visual and language prompt to sort and classify.
9. Give each child an item (animals or plants).
10. Say “We are going to sort these items into the hula hoops.” Point to the ocean hoop. “What types of items do you think we will put in this hoop?” (ocean)
11. Point to the island hoop and ask the same question. Make sure students understand what items go in hoop.
12. Ask each student to come up and place their item in the right hoop. If a child has difficulty, review what the hoops are for and guide them to placing it in the right hoop.
13. When you come across animals or plants that could be in both groups, tell the students to place the item outside the hoops for now. Say “We will figure out where they should go at the end.”
14. When you are finished with placing the items, return to the question of “Where should these items go?” (the items that could go in both places)
15. Ask students to brainstorm and think of ideas of where those items could go. Try all suggestions.
16. If the idea of combining hoops has not been raised, show the students how to do that. Place one hoop slightly over the other hoop so that it looks like Appendix M.
17. Tell the students that sometimes items can only be in one group but sometimes they can be in two groups like the lobster. The lobster can live in the ocean and can also live on an island.
18. Review items that are in each circle, including the middle circle.
19. Give each child a copy of Appendix L and various stickers.
20. Each child should decide which circle they want to use for ocean stickers and which circle they want to use for island stickers. Remind them that if the sticker could be in both places, that they should put that sticker in the middle where the “X” is. Point it out if necessary.
21. Students should do this activity on their own as much as possible as it will be used on the evaluation. If you have a large class, you may want to take some children at a time to do this activity while the others work in centers or do other activities.

F. Go A Little Further
1. For students who have difficulty, continue to use the hoops and have the students continue to work with the hoops and animals.
2. For students who excel, allow them to create their own categories and sort and classify other objects in the classroom.
G. **Assessment/Evaluation**
   1. Use Appendix A to record question #8. Use activity (Appendix L) to evaluate students.

VII. **CULMINATING ACTIVITY—At The Seaside / Swimmy**

A. Students will be given an oral description of a scene, and re-create the scene by drawing a picture.
B. *At the Seaside*—Robert Louis Stevenson
C. *Swimmy*—Leo Lionni
D. Set up the room by allocating two places for new centers. One center will be decorated with blue streamers hanging from the ceiling, blue cellophane on the walls, various other “underwater” type decorations. The other center will be decorated with palm trees, baby pool with sand, shells, and other island decorations.
E. On the ocean side of the room, read *Swimmy* to the students. As a background, play a tape of whale or dolphin noises quietly to set the mood.
F. When finished, allow the students to pretend they are an ocean animal by “swimming” through the streamers. Encourage them to do their best to act like that animal and then you try to guess what they are.
G. Swim over to the island and give each child a pair of plastic sunglasses. (You can also make these easily if you need to.)
H. Read the poem *At the Seaside* to the students. Ask the students what the author means by “digging holes”. What did he dig the holes in? (sand) Allow students to dig one hole in the sand.
I. Gather students at the carpet. Ask them to choose what they would rather be- an island animal or an ocean animal.
J. Give students a copy of Appendix M and have them create a picture that shows what they would see. Encourage them to be detailed on their picture to show many items in either the ocean or on the island.
K. Add a box of items to each center for the children to play with. Example: island- box with sunglasses, sun hats, pails, shovels, summer clothes; ocean- shark fin, puppets, costumes.
L. These centers can be setup in the beginning of the week for children to use all week. The activity should still wait until the end of the week to make sure they understand the difference between ocean and island animals.

VIII. **HANDOUTS/WORKSHEETS**

A. Appendix A: Evaluation
B. Appendix B: Heavier or Lighter
C. Appendix C: Seahorse
D. Appendix D: Dolphin
E. Appendix E: Fish
F. Appendix F: Sea Star
G. Appendix G: Octopus
H. Appendix H: Ocean Animals
I. Appendix I: Other Animals
J. Appendix J: Island Animals
K. Appendix K: Island Plants
L. Appendix L: Sort and Classify Diagram
M. Appendix M: “What I Want to Be!”
N. Appendix N: Extension Ideas / Books
IX. BIBLIOGRAPHY
A. Core Knowledge Foundation, Core Knowledge Preschool Sequence. Charlottesville, VA; 2000 ISBN 1-8095/7-21-6
Appendix A
Oceans and Islands
Evaluation Sheet

1. Is the ocean made of salt water or fresh water? Answer:_______________________

2. Did the child correctly circle the picture that shows which animal would be lighter? Yes / No

3. Did the child correctly sort the sea and non-sea animals? Yes / No
Was the child able to classify (or name) the groupings? Yes / No

4. Can islands be made from volcanos? Yes / No

5. Is an island above the water or below the water? Answer:________________________

6. Which animals would live on an island: lobster or whale? Answer:________________________
   seals or dogs? Answer:________________________

7. What plants were on The Little Island? (name two of the following)
   flowers_____ wild strawberries_____ pear tree or trees_____ small bushes_______

8. Did child correctly sort and classify on Appendix L? Yes / No
Appendix B
Heavier or Lighter
Appendix C
Seahorse
Appendix D
Dolphin
Appendix E
Fish
Appendix F
Sea Star
Appendix G
Octopus
Appendix H
Ocean Animals
Appendix I
Other Animals
Appendix J
Island Animals
Appendix K
Island Plants
Appendix L
Sorting And Classifying Diagram
Appendix M

“I am a _____________________________.

“I am an island / ocean animal.” (child should circle appropriate word)
Appendix N
Extension Ideas and Books

Luau

“Under the C”—give each child a large letter C and play the song “Under the Sea” from The Little Mermaid soundtrack.

Visit a local aquarium

Visit a local beach or island

Books

*Daddy Island*- Philip Wells
*Rainbow Fish*- Marcus Pfister
*The New Oxford Treasury of Children’s Poems*- to continue a unit on poetry
*Sea Poems*- John Foster
*A Child’s Treasury of Seaside Verse*- Mark Daniel
*The Ocean*- Alan Baker
*Looking At Animals In the Ocean*- Moira Butterfield
*Under the Sea*- Claude Delafosse
*Sea Creatures*- Dorling Kindersley
Appendix O
Center Materials

Here are some center materials you may want to make available during this unit:

Math- shells, sea animal counters

Science- shells, plants, aquarium, sea stars, other “touchable” creatures, hermit crab

Library- books about oceans, islands, marine animals, marine professions, specific locations (such as Hawaii or Galapagos Islands),

Art- sponge cut outs in marine animal shapes, colored sand, jars, coloring pages, stickers

Listening or Music- Hawaiian music, sounds of whales, books on tape,

Dramatic Play- beach wear, animal costumes, scuba gear

When choosing items, consider your classroom environment! What would the students really use and what are they interested in that you could add?