

# Grade 3: Whale Adaptations

## Lesson 1: Creature of the Sea

### Lesson Objective:

- Students will use Legos to design a creature that is adapted to life in the ocean.

### Learning Objectives:

- Apply engineering problem-solving strategies to create a sturdy structure with Legos that has at least one moving part
- Demonstrate an understanding of animal adaptations by designing a creature with features adapted to life in the ocean to help it breathe, eat, move, protect itself, and adjust to warm and cold temperatures

### Time:

- Three-Four periods of 45-50 minutes

### The Challenge:

- Create a creature that is adapted to survive in the ocean.

### Materials:

- Sea Creature Design Brainstorming sheet
- Sea Creature Design Worksheet
- Our Sea Creature Paragraph planning Worksheet
- Lego Kit
- Optional: Books and videos that demonstrate actual animal adaptations

### Vocabulary:

- Adaptations

### Procedure:

- Prior to this lesson, introduce the concept of animal adaptations with a focus on whale adaptations. (i.e. Blowhole for breathing, blubber for feeding in winter, baleen/teeth for eating, fins/flippers/flukes for moving through water, warm-blooded for keeping warm)
- Review with students some different types of adaptations that would help different creatures survive in the ocean (i.e., clam's shell for protection, bird's wings and hollow bones for flight, cat's whiskers for seeing and feeling)
- Prior to the in-class decision making, for homework have each student fill out a sea creature adaptation brainstorming sheet. The homework will require students to draw a sketch of their sea creature with adaptations for the following: eating, breathing, protection, moving, keeping warm/cool)
- The following day, students come to class with their completed brainstorming sheet and share their ideas. Children are placed in small groups of 2- 4 students. Together they come up with a design for a sea creature that combines all of their ideas including at least one adaptation from each student's original plan. They will complete a Sea Creature Design Worksheet as a group of their final creature.
- When complete, the teacher will review their designs to ensure that they include at least one movable adaptation and are feasible to build with Legos.
- Distribute Team Challenge kits and instruct students to build their creature in small groups of 2-4.
- Each student will write a paragraph describing his/her creature. They will include a name for their creature and at least 3 features of their creature, including a detailed description of the moving adaptation they chose and how it will assist their creature. They should also discuss any other

adaptations that their creature possesses, even if they are not mobile in the Lego version.

- Students will present their work to the class, demonstrating and describing all adaptations.
- A simulated ocean display will be created in which the sea creatures can be observed by others in their own environment.

#### Assessment:

- Teacher observation of the Lego Creature
- Review of the design sheet and paragraph
- Review of students' oral presentation.

#### Trouble Shooting:

- Students may have difficulty translating their drawings into a three-dimensional design.

#### Resources:

- CEEO Curriculum Website - <http://www.ceeo.tufts.edu/roboLABatceeo/>
- Various books from the library that show animal adaptations