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EED 480
Professor Belgrad
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Science Lesson 1st Grade

Big Idea: Students will use observations made about oceanic animals to create solution to a human problem.

Standards:

1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs

I. Formation of Groups: Students will be grouped 5-6 to each station of oceanic creatures (4 stations). Students will rotate to a new group after 4 minutes at each station. For the designing portion, students will remain in their groups that were for rotation and will be responsible for designing something that can be used for humans that is based off of their observations.

Commented [BSF1]: In my experience this is too large a center group to assure each student has access to the materials and tasks.

II. Role Assignments: Beginning with the Checker all roles are assigned to the right (clockwise)

Commented [BSF2]: The roles are well defined and match your lesson objectives.

Materials Manager/ Encourager: This person will also be responsible for obtaining materials for the design portion of the lesson.

Checker/Timekeeper: This student is responsible for making sure the students are designing something on topic, including labels, and a description. They will use the following checklist during the assignment:

Checklist:

- Can be used by humans
- Is based on an animal. Which animal? _____
- Has labels
- Has a description
- Has detailed illustration

Recorder: This student writes the description for the design after discussing with the group.

Observer/Reporter: Students with this job will be in charge of monitoring if students are handling the materials correctly and sharing the materials with each other. These students will also fill out the group participation evaluation sheet.

Other: Presenter: This student is responsible for sharing their design with another group during presentations.

III. Task: 5-E Framework

Engage: Students will be introduced to the concept of animals having different qualities that help them protect themselves. Students will be asked what protection means. **Have-Direct** students **have-into** a discussion about how we protect ourselves versus why an oceanic animal would protect themselves. Start a KWL chart (completing K and W) about animals and **protection**. Preview ~~to-for~~ students that they will explore different things that protect animals in stations and to think about **how** it could be used for human protection. Go over jobs and expectations for rotations.

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Commented [BSF3]: Will this be displayed digitally or on the whiteboard, easel paper, etc.

Explore: Students will rotate between 4 stations that are set up to show examples of how animals **protect** themselves. The stations will be categorized by:

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Commented [BSF4]: Do you have room to duplicate one or two stations so that you have fewer students in a group?

- turtles
- shells from clams, oysters, and mussels
- shells from snails, slugs, and limpets
- sea stars

Each station will have realia as well as books and photographs that give more information about the animals. Diagrams will also be provided. Have each rotation last about 4-5 **mins**.

Explain: Have students get clip boards and sit anywhere around the room since the tables are **occupied**. Have students **begin** to pick a type of animal that can be used to design a human protection item. Have the recorder write what animal and how that animal protects **itself**.

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Commented [BSF5]: Good thinking☺ And they feel so important

Extend/Elaborate: Have students design a **human**-item inspired by the animal of their choice. During this time students must work together to agree on a design. Students can revisit the observation tables to get ideas and to help with their explanation. Students will draw their design and label it on a piece of printer paper. The checker can use the **checklist** throughout this part of the lesson. Students will use lined paper for their explanation. Once designs are done, groups will be paired to share their designs.

Commented [BSF6]: I am pleased that you are enabling students to express what they are thinking and what they see.

Commented [BSF7]: Protection? This is not clear.

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Commented [BSF8]: Great inclusion!

Evaluate: The reporter will fill out the grout assessment sheet. Each person will fill out a self-evaluation sheet.

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IV. Time Limits:

Engage: 5 mins
Explore: 15 mins
Extend/Elaborate: 20 mins
Evaluate: 5 mins

Commented [BSF9]: Good inclusion of time limits.

V. Social Skills and or Habits of Mind to Engage/Assess:

(Attentive Listening; Disagree with Idea- Not the Person; Flexibility in Thinking; Perseverance; Team Work)

VI Level of Voice:

Engagement: Silent, only share when called on by raising a quiet hand
Explore: Medium level volume. Students are allowed to speak to one another using six inch voices.

Commented [BSF10]: I encourage you to select a chart from those available. The students respond well to a poster with these voice levels.

https://www.google.com/search?q=voice+level+chart&rlz=1C1GCEU_enUS844US844&source=lnms&tbn=isch&sa=X&ved=0ahUKewier6TC2MHhAhW5HjQIHetVAdkQ_AUIDigB&biw=1680&bih=939
https://www.google.com/search?q=voice+level+chart&rlz=1C1GCEU_enUS844US844&source=lnms&tbn=isch&sa=X&ved=0ahUKewier6TC2MHhAhW5HjQIHetVAdkQ_AUIDigB&biw=1680&bih=939

Extend/ Elaborate: Medium level volume. Students are allowed to speak to one another using six inch voices.

Evaluate: Silent work. Students should be focused on their self-evaluation.

VII. Processing--Questions for groups and individual reflections:

VIII. Assessment Content:

Group Assessment:

Group Members:

	Not Quite	Getting There	Good Job	Fantastic!
Whole group stayed on task.				
Whole group worked together and was respectful to each other.				
Whole group handled materials respectfully.				

Commented [BSF11]: This is a good descriptive rubric. I do suggest that you select images to make it more accessible for your young students.

Self-Assessment:

Name:

	Not Quite	Getting There	Good Job	Fantastic!
I helped the group with the design.				
I spoke to my group members using a 6-inch voice.				
I did my job to the best of my ability.				

Commented [BSF12]: This is terrific, Valentina.

Formal Assessment (For teacher):

1: Below Grade Level	2: Approaching Grade Level	3: On Grade Level	4: Above Grade Level
Design is not based on an oceanic animal	Design has some resemblance to an oceanic animal	Design resembles an oceanic animal	Design resembles more than one oceanic animal or shows a deeper understanding of the properties of the oceanic animal.
Description of design is missing	Description of design is vague. Has less than 2 details.	Description has 2 to 3 details.	Description has more than 3 details or elaborates on the 2-3 details at above a first-grade level.
Design illustration is missing	Design illustration has no labels or is not detailed or both.	Design illustration has appropriate labels and details.	Design illustration is detailed with detailed labels.

VIII. Encouraging Energizer: Groups can give each other a cheer after they present to each other. Groups can choose which cheer they want like microwave, roller coaster, and the wow.

Based on the book: *Blueprints for Achievement in the Cooperative Classroom*. Bellanca and Fogarty, 2001.