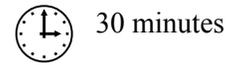
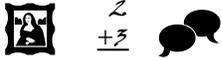


ACTIVITY: Become a DEEPEND scientist to count shrimp and krill

GRADE LEVEL(S): K to 6th



OVERVIEW: Students create a mural to do their own population study

DISCIPLINES: Science, math, and visual arts

OBJECTIVES: Students will be able to:

- discuss why krill and shrimp are important to several ecosystems
- describe the size of a krill
- discuss vertical migration
- discuss challenges of studying and determining populations in the deep
- discuss challenges of deep-sea exploration
- describe where and how shrimp and krill fit within a food web



MATERIALS: Orange and Red Finger Paint

Butcher Paper

Paint brush or new kitchen sponge

Washable black marker (or black Sharpie for older kids)

REFERENCE: WhaleTimes' [10 Things You Should Know about Krill](#)

WHAT TO DO:

Shrimp and krill are important deep-sea animals throughout the world. They are eaten by baleen whales, seabirds, fish, squid, and many other animals.

NOTES:

- For younger students, rather than painting the finger over and over, we use the kitchen sponge to “ink” their finger. We find this makes it quicker, easier, and a bit neater. Re-ink (paint) as sponges when needed. We cut the sponge into 2 or 3 rectangles, dip it into the paint and place it near student groups.
- Have class create two murals to show (and later discuss vertical migration). To do this, when the kids paint the first, place it so the kids naturally and easily paint more of the animals higher on the mural. Then the second, place it so kids more naturally and easily paint lower.

Preparation:

Step 1: Pre-cut butcher paper to the desired size.

Step 2: Draw two or four lines across the paper to represent different depths.

Paint the mural(s):

Step 1: To paint the krill onto the paper, lightly *paint a small amount of orange paint on the outside of the student’s pinky finger. Have the student press or gently stamp the painted finger onto the paper.

Repeat Step 1 as many times as desired.

Step 2: Allow paint to dry (which usually takes very little time). To make a larger shrimp, when the paint is dry, lightly *paint a small amount of red paint on the side of the student's hand and pinky finger. Have the student press or gently stamp their hand onto the paper.

Repeat Step 2 as many times as desired.

Step 3: When the paint is dry. Use the black marker to make the large eye by putting a dot on each krill and shrimp.

Step 4: This craft can be used to create a small picture or a large one depending on your curriculum. The ideas are endless, to become a DEEPEND scientist students can work as a class, in teams or individual to:

- Count the total number of krill and/or shrimp on the mural(s).
 - Choose a portion of the mural, count the number of shrimp and krill. Discuss how to take those numbers to figure out how many are on the entire mural.
 - Determine the number of krill and shrimp at each depth. Then students can
 - Compare and contrast
 - Determine percentage
 - Create a graph or graphs to represent data
 - Compare and contrast the number of shrimp and krill on each mural, their depth...etc.
 - Discuss the **vertical migration** pattern and try to determine what time of day it is on each mural based on location of most shrimp and krill.
 - Discuss the challenges for DEEPEND scientists in determining what kinds of animals and how many are at different depths.
- Discuss why it is important to understand how many and what kinds of animals are at different depths.
- Use the mural as the center of your discussion on the food web for the Gulf of Mexico. Find or draw pictures of other animals in the food web and add them to the mural.
 - Use the mural to represent the trophic level and/or to discuss how the energy moves throughout the food web.

