

Create a Creature

Use Arts and Crafts to create their own Ocean Animals

KNOWLEDGE

- Understand that the ocean is a large place with many ecosystems and animals.
- Understand how animals are adapted to live in different environments.
- Understand the basic needs of an animal and how it acquires those needs.

ACTIVE

- A variety of arts and crafts
- Students will present their made up animal at the end

TIME	GROUP SIZE	LOCATION	GRADE LEVEL	EQUIPMENT
As long or short as you'd like.	Pairs	Classroom	K-2	Paper / Construction paper Pencil crayons / markers Classroom garbage can Any other available craft supplies Glue stick
DEBRIEF/REFLECTIVE COMPONENT			HELPFUL TIPS	
<ul style="list-style-type: none"> • Where would the different animals live? How would they eat? How would they move? • What features do they share with real animals? • Why do some animals have different features? How does this change the way an animal meets its needs? • Could these animals actually exist? There is a lot that people do not know about the ocean. 			<ul style="list-style-type: none"> • Before the activity you can use three well known animals as examples when you are talking about the different ways animals meet their needs (eat, breathe, see, and move). 	

OCEAN LITERACY PRINCIPLES

1 – The Earth has one big ocean with many features.

- e. Most of Earth's water (97%) is in the ocean. Seawater has unique properties. It is salty, its freezing point is slightly lower than fresh water, its density is slightly higher, its electrical conductivity is much higher, and it is slightly basic. Balance of pH is vital for the health of marine ecosystems, and important in controlling the rate at which the ocean will absorb and buffer changes in atmospheric carbon dioxide.
- g. The ocean is connected to major lakes, watersheds, and waterways because all major watersheds on Earth drain to the ocean. Rivers and streams transport nutrients, salts, sediments, and pollutants from watersheds to coastal estuaries and to the ocean.
- h. Although the ocean is large, it is finite, and resources are limited.

5 – The ocean supports a great diversity of life and ecosystems.

- a. Ocean life ranges in size from the smallest living things, microbes, to the largest animal on Earth, blue whales.
- c. Most of the major groups that exist on Earth are found exclusively in the ocean and the diversity of major groups of organisms is much greater in the ocean than on land.
- d. Ocean biology provides many unique examples of life cycles, adaptations, and important relationships among organisms (symbiosis, predator – prey dynamics, and energy transfer) that do not occur on land.
- e. The ocean provides a vast living space with diverse and unique ecosystems from the surface through the water column and down to, and below, the seafloor. Most of the living space on Earth is in the ocean.
- f. Ocean ecosystems are defined by environmental factors and the community of organisms living there. Ocean life is not evenly distributed through time or space due to differences in abiotic factors such as oxygen, salinity, temperature, pH, light, nutrients, pressure, substrate, and circulation. A few regions of the ocean support the most abundant life on Earth, while most of the ocean does not support much life.
- h. Tides, waves, predation, substrate, and/or other factors cause vertical zonation patterns along the coast; density, pressure, and light levels cause vertical zonation patterns in the open ocean. Zonation patterns influence organisms' distributions and diversity.

7 – The ocean is largely unexplored.

- a. The ocean is the largest unexplored place on Earth – less than 5% of it has been explored. The next generation of explorers and researchers will find great opportunities for discovery, innovation, and investigation.

Setup

1. Talk about some different animals that kids know from the ocean (could be the same animals discussed in the presentation, or different ones).
2. Select three different animals and discuss how they eat, breathe, see and move (or choose or own criteria to observe).
3. Show the students an example of an animal that you have created and how it fits in with each criterion.
4. Tell the students to create their own ocean animal with a partner using the craft supplies given
5. Get each partnership to share the animal with the class
6. Have the students' share how the animal eats, breathes, sees and moves and the name of their animal. Also predict and share where in the ocean it would likely live (tidal zone, coral reef, Open Ocean, ocean floor, etc.)
7. See if the created animal is similar to any real animal, and discuss the similar/different features.