



Craft Me an Ecosystem [MS]

Grades: K-2

Time: 45 minutes to 1 hour

Goals: To use art to understand the differences between aquatic ecosystems.

Objectives:

Students will be able to: describe freshwater and saltwater ecosystems; identify different organisms that live in these ecosystems; and craft several examples of these species.

Materials:

Squid craft:

Toilet paper roles or tubes
Paints
Paint brushes
Craft eyes
Markers/crayons
Scissors
Glue

Seal craft:

Seal picture (provided)
Cotton balls/craft pompoms
Glue
Craft eyes
Markers/crayons

Turtle craft:

Rounded/smooth rocks
Craft sticks (large)
Green markers
Black markers
Green paint
Paint brushes
Glue/hot glue gun

Crayfish craft:

Egg cartons
Red paint
Red pipe cleaners
Paint brushes
Craft eyes
Scissors
One-hole punch
Glue

Procedures:

1. Pre-Activity (introduction): Begin by asking students about the neighborhoods in which they live in. Have them describe their home, their street, their community, the living and non-living things found there, and if they have water nearby, whether it is salt or freshwater. Expand on their community and introduce the term ecosystem to begin a discussion on local aquatic ecosystems. Explain that the crafts they will be doing represent organisms that live in different ecosystems. Discuss the types of things organisms need for survival and why specific organisms need to be in certain ecosystems.



2. Activity: You may choose to do all four crafts for each student in your class or ask the students individually which one they want to do. For older students, it is best that they complete all four crafts to identify four different ecosystems. Younger students can work in pairs to complete their crafts as well. Pass out the materials and instruct the students on how to create their individual crafts.

Squids represent the open ocean ecosystem (saltwater). Have the students paint their tubes first. Take the scissors (safety scissors for the older students) and cut two inch thick tabs halfway up the tube. Fold these tabs out to look like tentacles. Older students can fold them accordion-style to texture them. Glue on craft eyes. Students can use the markers/crayons to decorate their squid once the paint dries.

Seals represent barrier islands and coastal ecosystems (saltwater). Students will take cotton balls or craft pompoms and glue them to the seal picture, making sure they stay inside the black outline of the seal. They can then glue on craft eyes to one of the cotton balls and use the markers/crayons to create a beach ecosystem around the seal.

Turtles represent estuaries (brackish water). In this particular lesson, the turtle represented here is the Northern Diamondback terrapin, an estuarine species. Students will first paint their rocks green. While the paint is drying, they can use the green markers to color their craft sticks. They then use the black markers to draw eyes and scutes on the backs of their turtles. Using a hot glue gun, carefully glue the craft sticks (3) so they crisscross under the bottom of the rock. You should have one that makes the head/tail and two that creates the feet.

Crayfish represent lakes/ponds (freshwater). Prepare each egg carton ahead of time by cutting the cup section into fours (this will be used for four students). Take the scissors and make diagonal cuts into the last cup to form the tail. Extra cups can be cut in half and then cut diagonally to create the claws. You can also pre-punch holes in the sides of the cups for the legs. Students will first paint their crayfish red. Using the pipe cleaners, they will fold them in half and thread one end through one hole and then the other end through the opposite hole, creating the feet. The head cup has four holes, two for the claws and two for the eye stalks. Students will again fold pipe cleaners in half and thread them through the claw holes and those for the eye stalks. Then glue craft eyes to the top of the pipe cleaners. Glue the cut half cups to create the claws. A picture is provided to show you what the crayfish looks like.

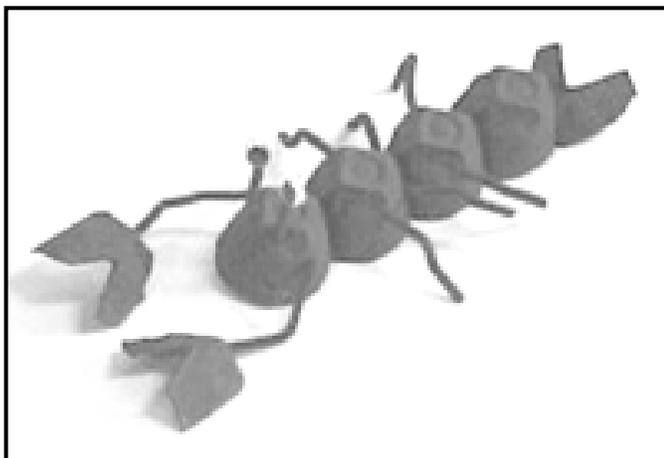


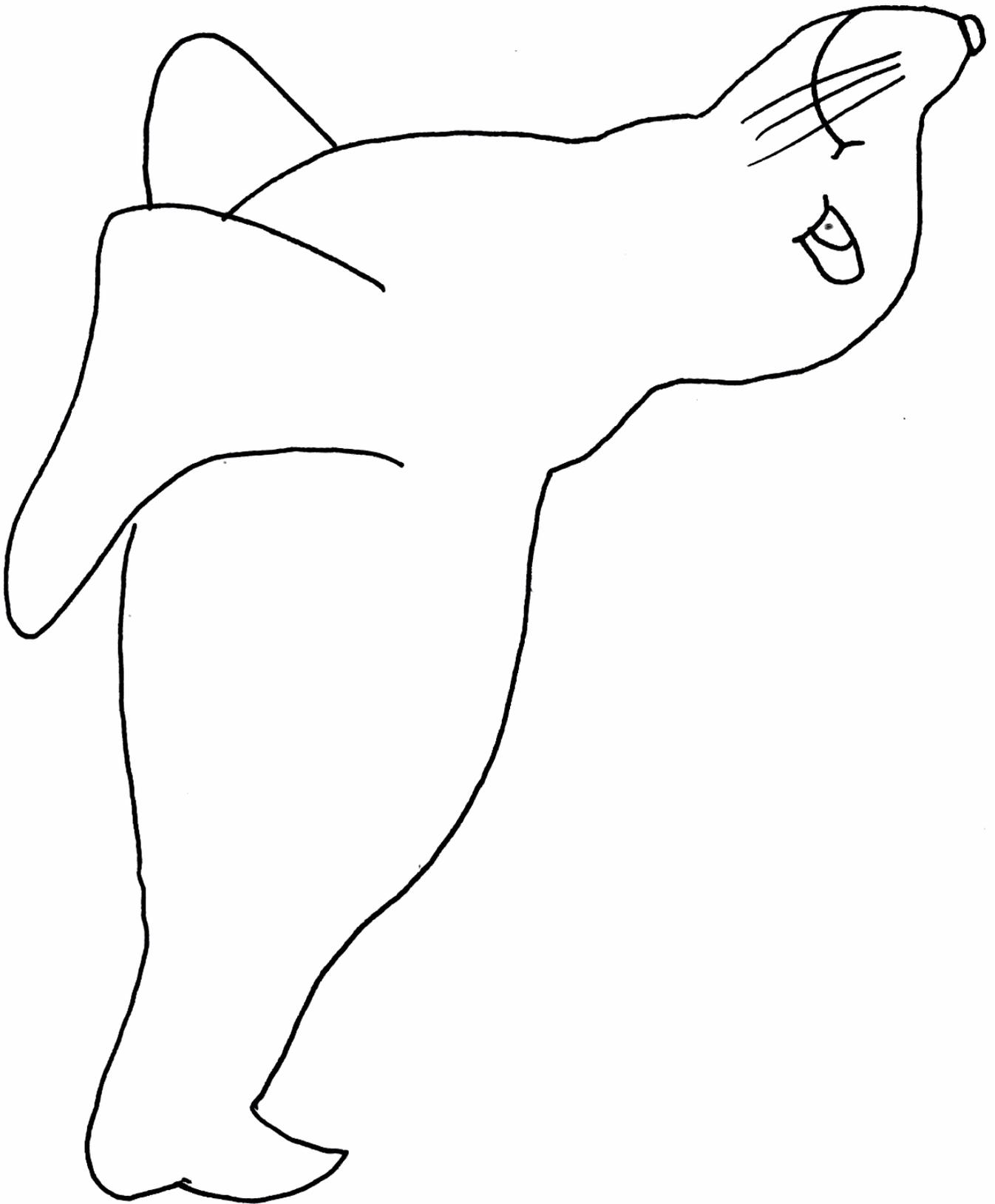
3. Post-Activity (review): Discuss how each of these organisms lives, what they need to survive, and how they find those things in their ecosystems. Have the students describe the different ecosystems and why these organisms cannot survive in a different ecosystem. As an extension to this lesson, you can take the students on a field trip to an aquarium or to visit each ecosystem to compare them to each other.

Squid Craft:



Crayfish Craft:





**Key Words:**

Ecosystem
Freshwater
Brackish water

Habitat
Saltwater
Survival

Organism
Estuary

Background Information:

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Lakes, ponds, rivers and streams all make up freshwater ecosystems. Freshwater simply means there is no salt dissolved in the water. Organisms, such as crayfish, that live in these habitats have body systems that are regulated for survival in a non-salt environment. Plants grow both in the water and alongside the banks of these habitats and provide necessary oxygen for animals through the process of photosynthesis.

Before a river flows into the ocean, it often will pass through a body of water known as the estuary. An estuary is an ecosystem that is influenced by both freshwater and saltwater and is referred to as brackish water. They are extremely unique habitats as they provide a nursery for a variety of juvenile species such as clams, crabs, and bass. They are important habitats because they reduce the risk of coastal flooding, provide a buffer for coastal storms, and clean our waters through nutrient uptake by aquatic plants.

Oceans are completely saltwater ecosystems and provide habitat for an enormous amount of wildlife. Plant life is limited to coastal areas seaweeds and kelp and mid-ocean floating mats of seaweed species. These plants provide adequate shelter and food supply for many juvenile species of fish such as tuna and sunfish. The ocean is extremely vast and stretches between continents but can still be polluted when it comes in contact with rivers and estuaries.

