

Mission Conservation Activities

Freshwater Ecosystems

-Indoor Activity

Underwater viewer

For the indoor activity this month we will be making an underwater viewer. This craft is relatively simple to create however, there will be cutting involved so adult supervision is required to ensure safety.

-Supplies:

- Empty Sanitizing wipes canister, Empty coffee can, or other hollow rigid plastic cylinder or container
- Clear plastic wrap
- Rubber band; preferably a wide rubber band. Also, must be large enough to be stretched around the container
- Scissors or Razor Knife
- Paint or other decorating supplies not affected by water, i.e. not paper based supplies or water-based glues

Step 1: Gather Supplies



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Step 2: Decorate your container

- Just be aware that you will be cutting off the top and bottom of the container so do not decorate above or below your cut line. You can also switch the next step with this one if you would like.



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Step 3: Cut the container

-Cut the top and bottoms off of the container using the scissors or razor knife so the tube is hollow and open on both ends.



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Step 4: Plastic wrap

-Stretch out a length of plastic wrap so that there is enough to overlap the sides of the container by at least 2-3 inches



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Step 5: Rubber Band(s)

- Stretch the plastic wrap tight on the bottom and wrap at least one or two rubber bands around the excess shrink wrap on the sides, making sure the section stretched over the opening can be looked through.



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Step 6: Use of Viewer

- Place the end with the plastic wrap under the surface of the water and look through the tube. What can you see? Be sure you are aware of your surroundings and the water you are viewing and make sure it is safe!

-OUTDOOR

Freshwater ecosystems include slow moving waters of lakes and ponds, faster moving waters of rivers and streams, and also wetlands. Within these ecosystems there are three classifications of organisms based on where they live in the ecosystem. These organisms are called plankton, Nekton, and Benthos. Plankton are organisms that float near the surface of the water. Nekton are free-swimming organisms and Benthos are bottom dwelling organisms. All of them are important to the environment.

Use your underwater viewer to see what types of organisms you can see. Record what you see in a notebook and then categorize them based on Plankton, Nekton, and Benthos. Look at different places in your body of water to make sure you get a diverse sample and not just in one place.

-What can you Do?

One of the main threats to freshwater ecosystems is humans. Freshwater marshes and wetlands act as catch basins for rainwater and stormwater. They then collect in these areas and act as a buffer zone to help minimize flooding. Many wetlands and marshes are located near urban areas where sediment and runoff collect, slowly filling them in. Pollution and trash can kill wildlife and affect water quality. Also, the use of fertilizers and chemicals cause runoff to be overly nutrient rich which can then cause algae blooms and other environmental issues. Finally, changing weather patterns can cause negative effects due to warming or cooling of water.

So, what can you do? Making sure you dispose of trash properly and recycle appropriate materials, can help prevent trash getting into the water system. Also, you can look in your community to find stream cleanup events. These programs are great for cleaning up the trash in rivers, streams and other bodies of water. Reducing the use of yard fertilizers and properly disposing of chemicals such as used motor oils can prevent these chemicals from making it to the water systems. Finally, minimizing the use of fossil fuels can help reduce greenhouse gasses and slow the change of climate extremes.