raft RESOURCE AREA FOR TEACHING

STEAM SCIENCE TECHNOLOGY ENGINEERING ARTS MATHEMATICS

LEARNING ACTIVITY

Wind Spirals

Reusing Plastic to Make Something Fantastic!

Students will engage in a fun art activity and learn how easy it is to reuse items that might end up in the landfill.

Activity Challenge
Create a wind spiral out of plastic water bottles.

Preparation
Note: **Adult supervision is required**.

1. Review and gather Materials Needed.
2. Cut off the flat bottom parts of the plastic bottles. Reuse the bottoms for another activity or recycle properly.
3. Dry the inside of each bottle using a cloth or paper towel. Reuse or recycle the paper towel.

To Do

1. Remove the lids and labels from the plastic bottles.
2. Color the outside of the bottles with colorful permanent markers. Feel free to be as creative as you'd like (polka dots, stripes, abstract shapes, mosaics, etc.) Make sure the bottles are covered with color from the top to bottom.
3. To create the spiral, start at the bottom of the bottle and cut around and around until you get to the smooth, rounded top of the bottle (see picture above). Repeat with the remaining bottles.
4. Slide the neck of the bottles onto a tree branch or stick.

Materials Needed

- ○ Empty plastic water bottles (3 or more)
- ○ Colorful permanent markers
- ○ Scissors
- ○ Cloth or paper towel
- ○ Tree branch or something to hang the spirals from

Grade Range
K-2

Topics/Skills
Science: Reduce, Reuse, Recycle
Art: Design

Learning Standards
NGSS: Earth and Human Activity
CA Visual Arts: Creating

Duration
20-30 mins

Prep Time
5-10 minutes

Extensions

- Research the energy used to make plastic bottles. Think about ways to reuse and reduce the use of plastic bottles. List the benefits of reusing plastic bottles.
- Contact the local utility company to find out how the electricity they provide is generated (coal-fired, wind power, gas-fired power plants, and/or geothermal power) and research the impacts of these energy sources on the environment.

The Content behind the Activity

The terms “Recycling” and “Reuse” are quite different, but they are often thought to mean the same thing.

Recycling is the process of taking an item, processing it and using the materials to remanufacture a new product. Materials or items that get recycled may not always get remanufactured into the same product again. Recycling materials saves the resources and energy used during the early steps of the manufacturing process; however, the process of remanufacturing recycled products requires additional energy and resources.

Reuse involves the process of taking material in its current form and using it for the same or a different purpose without changing its original form. The practice of reuse reduces solid waste, conserves even more nonrenewable resources, and reduces emissions such as carbon dioxide released during the manufacturing process.

This activity was created in collaboration with Santa Clara County Office of Education