

VIRGINIA SCIENCE STANDARDS INSTITUTE

K.11 and 1.8 Earth Resources

Earth Resources

- K.11 The student will investigate and understand that materials can be reused, recycled, and conserved. Key concepts include
 - a) Materials and objects can be used over and over again;
 - b) Everyday materials can be recycled; and
 - c) Water and energy conservation at home and in school helps ensure resources are available for future use.

Earth Resources

- ① 1.8 The student will investigate and understand that natural resources are limited. Key concepts include
 - a) Identification of natural resources;
 - b) Factors that affect air and water quality; and
 - c) Recycling, reusing, and reducing consumption of natural resources.

What Are Objects Made Of?

Each team will be given a bag of items.

Objective:

- For each item in the bag, determine the natural resources that were used to create the item. Are the resources used renewable or nonrenewable?

The 3 R's: Reuse

Trash to Treasure

Each team will be given a variety of “trash”.

Objective:

- Each team should use their given trash items to create an object. Your object could be purposeful or a work of art.



What did your team create?

The 3 R's: Recycle

What can "it" be next?

A Wonderful Journey!

Objective:

- Based on the products listed below, teams should map out a plastic bottle's journey.
 - empty plastic bottle
 - plastic bottle preform
 - plastic pellets
 - Recycle container
 - a different plastic bottle



The 3 R's: Reduce

Make a choice to use less

What's In Your Trashcan?

Objective:

- Teams should examine the trash in the sample trashcan, graph the contents, and generate a list of ways to reduce the amount of trash.

Create a challenge in your room of reducing the amount of trash!



Other Ideas?

- ⦿ Trash Pie (lunch waste survey)
- ⦿ Conduct a recycle/reuse Olympics or special event
- ⦿ Have older grade level students mentor younger students on the 3 R's
- ⦿ Teacher testimonials

Resources

- *A Plastic Bottle's Journey* by Suzanne Slade. Picture Window Books. 2011. ISBN 978-1-4048-6267-8. Grades K – 4
- *Just a Dream* by Chris Van Allsburg. Houghton Mifflin. 1990. ISBN 0395533082. Grades 3 – 6
- *The Three R's: Reuse, Reduce, Recycle* by Nuria Roca. Barron's Educational Series. 2007. ISBN 978-0-7641-3581-1. Grades K – 4
- *Weslandia* by Paul Fleischman. Scholastic. 2000. ISBN 0439227771. Grades K – 3
- Science & Children, NSTA publication. March 2012.
- Science & Children, NSTA publication. March 2010.
- Science & Children, NSTA publication. April/May 2008.

Resources

- ⦿ Earth 911: Find Local Recycling Centers
 - <http://earth911.com/>
- ⦿ Environmental Protection Agency
 - www.epa.gov/osw/nonhaz/municipal/
- ⦿ NAPCOR – Free PET Preforms, Pellets, and Samples
 - www.napcor.com/PET/store.html

More Resources

- ⦿ Keep Virginia Beautiful
 - <http://www.keepvirginiabeautiful.org/>
- ⦿ National Institute of Environmental Health Sciences -
<http://kids.niehs.nih.gov/index.htm>
- ⦿ National Resources Defense Council
 - <http://www.nrdc.org/thisgreenlife/0802.asp>
- ⦿ Virginia Dept of Environmental Quality-
Virginia Naturally -
<http://www.deq.virginia.gov/ConnectWithDEQ/EnvironmentalInformation/VirginiaNaturally.aspx>