

RIVER TRASH

PURPOSE: Students will conduct a survey and collect data while collecting trash during an outing and then classify that trash by the type of material it is made of. Classify the items into categories including renewable and non-renewable resources.

BACKGROUND: It is difficult for students to understand how their community and actions can affect the Chesapeake Bay. This activity takes students into the surroundings of their own backyard and integrates natural resources, classification, and the impact that their actions can have on the Chesapeake Bay. This activity can be done in conjunction with ground and surface water topics.

VIRGINIA STANDARDS OF LEARNING

- ES.1 The student will plan and conduct investigations in which scales, diagrams, charts, graphs, tables, imagery, models, and profiles are constructed and interpreted; current applications are used to reinforce Earth science concepts.
- ES.6 The student will investigate and understand the differences between renewable and nonrenewable resources. Key concepts include environmental costs and benefits.
- ES.8 The student will investigate and understand how freshwater resources are influenced by geologic processes and the activities of humans. Key concepts include relationships between groundwater zones, including saturated and unsaturated zones, and the water table; identification of sources of fresh water including rivers, springs, and aquifers, with reference to the hydrologic cycle; dependence on freshwater resources and the effects of human usage on water quality; and identification of the major watershed systems in Virginia, including the Chesapeake Bay and its tributaries.
- ES.10 The student will investigate and understand that oceans are complex, interactive physical, chemical, and biological systems and are subject to long- and short-term variations. Key concepts include economic and public policy issues concerning the oceans and the coastal zone including the Chesapeake Bay.

References



(From Enviro-Tacklebox: <http://www.lpb.org/education/classroom/itv/envirotacklebox/>)

Modified by C.P. Anderson

SCIENCE IN THE PARK: GEOLOGY

Name: _____ Date: _____

How much garbage did our class find at the River? Conduct a survey and find out how much trash is collected during an outing and then classify that trash by the type of material it is made of. For an extension you can research how each material adversely affects the ecosystem.

Directions:

1. As you walk collect any trash that you see. Make sure that you protect yourself by wearing plastic gloves so that you are not exposed to anything that could be harmful. Categorize the garbage according to the material from which it is made.
2. Use tally marks under the various categories to record the number of items you collect during your walk. At the end of our walk on the water, total your tally marks in each category. (For example: one banana peel equals one tally mark under Food.) Circle the tally marks that represent items you could recycle.
3. Estimate the percentages of the different categories and fill in the empty garbage can and recycling bin. Choose one piece of trash and think of all the ways it could be damaging to the environment... What animals could it negatively affect? Could it affect any animal or "critter" in a positive way?
4. Classify the materials into renewable and non-renewable resources.
5. How do the percentages of garbage compare to the national averages below?

Paper	Yard	Plastics	Other	Metal	Wood	Food	Glass	

