



A Public Agency

Resource Conservation Quiz

1. What are the 4Rs that help us make less garbage? Circle the correct four words:
rescue, reduce, recess, reuse, revise, recycle, return, rot
2. Raw materials taken from earth to make human-made objects are called:
 - a. electricity
 - b. natural products
 - c. dirt
 - d. natural resources
3. What percentage of earth's water is fresh water?
 - a. 50%
 - b. 3%
 - c. 10%
 - d. 25%
4. Recycling paper can save which natural resource?
 - a. rocks
 - b. trees
 - c. air
 - d. coal
5. Plastic is made from which natural resource?
 - a. trees
 - b. metals
 - c. oil
 - d. sand
6. Composting is a method for recycling _____ into a rich, dark soil amendment called compost.
 - a. glass bottles
 - b. car and truck tires
 - c. food and yard waste
 - d. aluminum cans
7. In a landfill, how long does it take for an aluminum can to break down?
 - a. 10-30 years
 - b. 75-100 years
 - c. 200-500 years
 - d. 1000-1500 years
8. What is another name we use for garbage?
 - a. junk
 - b. waste
 - c. trash
 - d. all of the above

Pre-Tour Activity

9. How long has garbage been around?
 - a. as long as people have been on earth
 - b. forever
 - c. 100 years
 - d. 1000 years

10. When you throw out your garbage it may first go to a Transfer Station (like you will visit on your field trip). Materials like garbage that are not recycled are put where?
 - a. the ocean
 - b. outer space
 - c. the landfill
 - d. the desert

11. How much garbage does the average person in the United States make in one day?
 - a. 1 pound
 - b. 2.5 pounds
 - c. 4.5 pounds
 - d. 8 pounds

12. What are some of the common materials that we can recycle?
 - a. Plastic and glass bottles
 - b. aluminum and steel cans
 - c. paper
 - d. all of the above

13. Recycling is the only way that we can decrease the amount of waste we make. **True False**

14. Once we throw away something it disappears after a few years in a landfill. **True False**

15. Recycling means changing old materials into new products. **True False**



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Answer Sheet to Quiz

1. Reduce, reuse, recycle, rot. See answer #13 for the importance of the 4Rs hierarchy.
2. **D.** - Natural resources are raw materials from Earth that are used to make the products we use. Some resources are renewable (can be replenished), like trees and water, while others are non-renewable (there is a finite amount on earth) like metals and oil. Discuss how paper comes from trees and recycling can lead to cutting down less trees; and how plastic comes from oil which will run out some day (perhaps within a couple hundred years) and so recycling is a way to conserve natural resources.
3. **B.** - The earth's surface is 74% water. 97% of that water is salt water. Of the remaining 3%, 77% of that is ice. 22% of that 3% is ground water and the river water, lake water and the wetlands account for less than 1% of the total water on the planet. Fresh water is precious and needs to be conserved.
4. **B.** - Recycling paper makes new paper products, saves water, conserves energy, and reduces the amount of harvested trees. Have students look at different paper products to find out what percentage of the content comes from recycled paper.
5. **C.** - Plastics come from oil, which must be drilled from the ground. The world's supply of oil is finite as we extract it at a rate much faster than it is produced. Oil is made in the earth's crust from decomposed organic matter. This process takes millions of years to occur.
6. **C.** - Composting is nature's way of recycling. Anything that was once alive (i.e. paper from trees, grass, food scraps) will be decomposed by fungus, bacteria and invertebrates, such as worms, if exposed to air and water.
7. **C.** - An aluminum can will be in the landfill for 200-500 years. Also, throwing away a single aluminum can is like pouring out six ounces of gasoline. Americans throw away enough aluminum cans to rebuild an entire commercial air fleet every three months.
8. **D.** - Can your students think of other names for "garbage?" Brainstorm ideas for talking about the meaning of garbage: something worthless or meaningless. Should recyclable material be considered garbage?
9. **A.** - Garbage has been around a long time. Today we must think about what we throw away more and more as populations grow, landfills become full and more natural resources are used to meet the consumer demands of a larger population.
10. **C.** - Shoreway Environmental Center receives approximately 750 tons per day of trash, which is transported to the Ox Mountain Landfill, in Half Moon Bay. State law has been passed to achieve 75% diversion (recycling and composting) by 2020. Today's landfills are not considered "dumps." They are designed with several layers of clay and gravel, as well as protective layers of plastic and piping to catch pollutants: liquid runoff known as leachate and methane gas.

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11. **C.** – The average amount of garbage generated by one person in one day is estimated to be about 4.5 pounds. About 30% of this is estimated to be from packaging alone. This is twice as much packaging waste as 10 years ago. How much does the entire class produce in one day? In one week? In a month? In one year?
12. **D.** – Glass, aluminum, steel, paper and plastic are all commonly recycled. Discuss with students whether they recycle at home, at school, or elsewhere. What do they recycle at home? Can they recycle more?
13. **False** – *Recycling* is but one step in the hierarchy of reducing what goes to the landfill. Preferably we will reduce the amount of solid waste by first *reducing* our packaging and the amount of raw materials we use in manufacturing products today. Then we try to *reuse* items such as plastic bags, bottles, fabric etc. Next we can *recycle* paper, plastic, metals and glass or *rot* (compost) materials such as food or plant debris.
14. **False** – When we dispose of garbage in the landfill it may be out-of-sight, out-of-mind, but it takes a long time for it to break down. Sanitary landfills are designed to limit the amount of air, water and light that reach the garbage. This limits the decomposition, which produces leachate and methane gas. Plastic grocery bags may take 20 years to break down while glass may take over one million years.
15. **True** – Discuss some items that can be recycled and examples of new products that are made from recycled materials. For example, aluminum cans are made into new cans, and plastic soda bottles are made into fleece jackets or frisbees.