

Reclamation and Recycling

Title: Reclamation and Recycling

Level: Primary, Intermediate, Middle School

Time: 3 Days

KERA Goals: 5.1, 5.2

Objectives: 1. Students will learn the many uses of mined lands after reclamation has been completed. 2. Students will learn the importance of recycling and the difference between manufacturing with recycled materials and newly extracted materials.

Background Information:

1. Since minerals are a natural resource, it's important that miners use the land responsibly, and that consumers use mineral products wisely.
2. Reclamation is returning land that has been mined to a useful condition.
3. Recycling is using materials over and over, to reduce waste and the amount of new resources that must be mined.

Through reclamation projects, modern miners return mined land to a useful or better condition. They replace mine sites with wildlife habitats, recreation areas and other developments. When the land is reclaimed, it's hard to tell the mine site ever existed. Reclamation specialists work with state and federal agencies to plan the projects. Recycling is another key to better managing our mineral resources. Because of the rising price of gold and silver, it is now economical to go back and re-mine some old mining areas. Miners also reuse many of the solutions used in processing minerals and constantly recycle water used in their operations. All of us, as consumers, can help conserve our mineral resources by recycling and reusing the many mineral products that we use each day. **VOCABULARY:** minerals, recycle, reclamation

Materials:

1. Clump of grass dug up from the yard
2. jar with wet soil in the bottom
3. COMMON GROUND VIDEO

Activity 1: The Grass is Greener

1. Discuss in class how reclamation specialists are needed to turn old mines into land that can be used by plants, animals, and/or people. Many times they are assigned with the task of returning the land to the same habitat that was previously on the mine site. They replace the topsoil, and plant it with native grasses and trees.
2. Grass is one of the toughest, thickest plants on the planet. You can demonstrate this with your clump of grass. Wash off the dirt and show the students its roots, stems and leaves. 3. Plant the clump in the jar of wet dirt, so that the top of the grass sticks out of the jar. Have one of the students cut off the top of the grass that is sticking out.

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4. Keep it in a sunny place for a few days and the grass will be above the rim again.

Activity 2: Recycling Saves Our Mineral Resources

1. After viewing Common Ground, have each student bring in something that they were going to throw away to class the next day.

2. On the next day, put all of the items the students bring in on a table in the classroom. Choose items to discuss what happens to them when you just throw them in the garbage.

3. Discussion points include: How could each item be reused or recycled? If it's a piece of paper, are both sides written on? If it's a piece of foil, could it be used again? Could any of the garbage be made into something useful? Make the point that if an aluminum can or glass bottle is not recycled, new minerals need to be mined to produce more cans and bottles. Do the students have curbside recycling or separate their trash at home and bring it to a drop-off site? Is there recycling at the school? What objects aren't being recycled?

Activity 3: Reclamation -- Year Long Activity

Reclaim your own area of the school. Is there an unsightly area on the playground or schoolyard that could be reclaimed? Maybe it's a hole where a piece of playground equipment used to stand, or barren dirt where grass could grow. Your reclamation project could be as simple as planting grass seeds and putting a fence around the area or maybe the class could pitch in and plant a tree or some flowers. Just like on real reclamation sites, this task will require some planning. If you are planting, make sure the species is native to the area and that you plant and fertilize it properly.

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