Keep Texas Beautiful

earth: the apple of our eye
earth's finite resources

activity overview

Subject: Mathematics, Social Studies
Time: 15 minutes preparation, 15 to 45 minutes class time
Materials: one apple per student, one sharp knife per student, cutting boards, globe or world map. You may treat this activity as a demonstration and use only one knife.
Vocabulary: earth, finite, natural resource
Concept: Demonstrating the limited supply of natural resources available for human use
Objectives: Students will comprehend that the earth and all its resources are finite. This lesson will motivate students to learn more about resources and human impact on the earth

Protecting our land resource is very important. Advanced agricultural technology has enabled the world to feed many of its people, but the population continues to expand. A fixed land resource base and an ever-increasing number of people to support cause each person's portion to become smaller.

procedure

1. Give each student one apple and a sharp knife. (Optional: instructor may demonstrate using one apple and a sharp knife, or have students work in small groups with adult supervision.) Consider that this apple represents the earth.
2. Slice the apple into four quarters, setting aside three. The three quarters represent the oceans of the world.
3. What fraction is left? (1/4)
4. This fourth quarter represents earth's land area. Slice this land in half and set aside one of the pieces. The portion set aside represents the land area that is inhospitable to people: polar areas, deserts, swamps and high or rocky mountains.
5. What fraction now remains? (1/8)
6. The remaining piece is land areas where people now live, but not necessarily where they grow the foods needed for life. Slice the 1/8 piece into four sections and set three aside.
7. What fraction remains? (1/32)
8. The 3/32 set aside represents the areas too rocky, wet, cold, steep or where the soil is too poor to produce food. They also contain the cities, highways, shopping centers, schools, parks, factories, parking lots, and other places where people live and work, but where they can't grow food.
9. Carefully peel the 1/32 slice of the earth. This tiny bit of peel represents the very thin surface of the earth's crust (less than five feet deep) upon which humans depend for food production. Collect all the sharp knives.

discussion

Discuss the implications of human dependence on the 1/32 peel of the "earth."

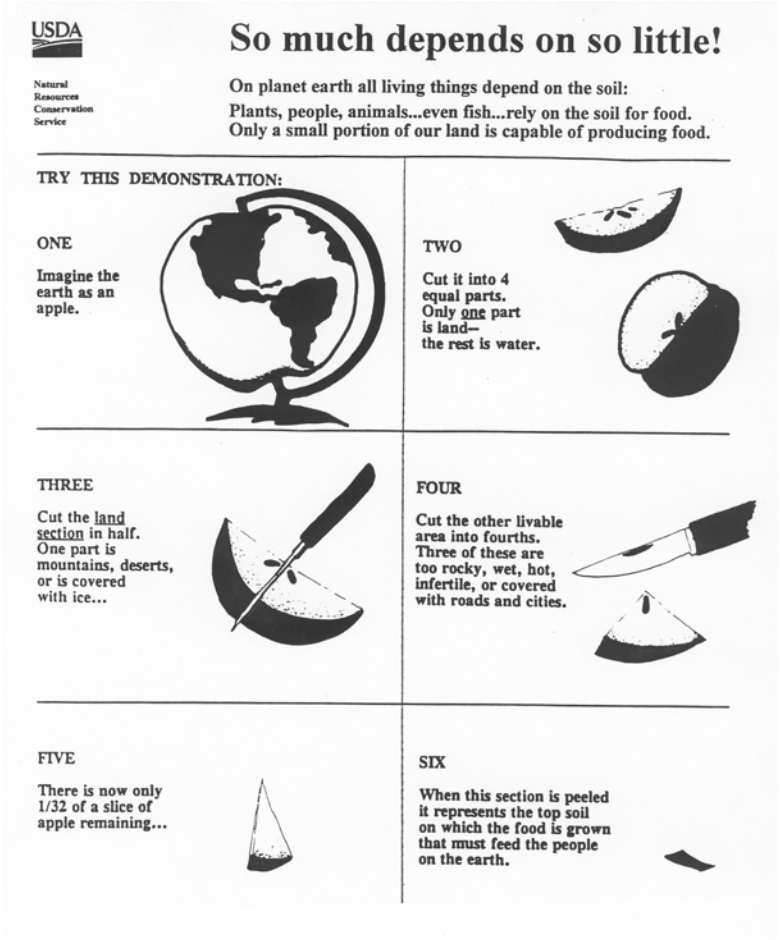
1. What does this say about our relationship with the Earth?
2. Let students eat the "used" portion of the apple (the entire apple minus 1/32 peel).
3. Tell the students “we ate the portions not suitable for humans.” What if we could only consume what is left?

extensions

1. Have the students graph or chart the statistics and research percentages to identify portions of the earth i.e. oceans, land masses, human inhabited land, etc.
2. Discuss concepts of human population and how it relates to the earth’s finite resources.

evaluation

Our planet is finite. What does that mean to humans? What can we do to help protect the quality of the land, air, and water that we all need for survival?



This activity was adapted from A.H. Brainard’s contribution to *Zero Population*. Winter 1988