JOHNNY APPLESEED
by
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John Chapman, who became known to Americans as "Johnny Appleseed", sowed apple seeds as well as moral values. He traveled through the wilderness planting apple trees and helping the west grow.

The poem and drawings provide a memorization activity, a way to learn where apples come from, and a model to further understand and represent our earth. Using an apple as a model of the earth, students will understand why protecting our earth and its natural resources is so important They will also see why each one of us should plant a tree each year.

MATERIALS: apple, knife

ACTIVITY: see attached sheet

SOURCE: NESTA Earth Science Share-a-thon, NSTA National Convention, Atlanta, Georgia, 1990.

TEACHER NOTES: This activity is ageless and it can be used in so many different settings.

--With preschool children, I cut the apple in front of them as they sit in a large circle. When the activity is completed, I invite each child to take an apple slice and eat. Once a small girl announced that she was eating a piece of the Earth.

--I have demonstrated the activity at community centers for Earth Day celebrations.

--Older students can cut the apples themselves using plastic knives. On one

Earth Day, I led the activity at lunch for all the middle school students and then we ate the apple for dessert!

STANDARDS:
BSL: 2.1, 3.4, 5.3, 9.1, 12.4, 12.12
NCTM: 4d, 4e, 11 d, 12a, 12b, 12c, 12d
SCS: C3, D1, F3, F4, H2

WEBSITE: www.nutrientsforlife.org At this website, the question raised is: "how can a single apple slice feed the world?" The site informs us about the proper use of fertilizers and how they will help increase food production. By 2050 the world population will top nine billion people. How will farmers produce enough food with limited land resources?

Lindbergh, Reeve. Johnny Appleseed. Joy Street Books, Little, Brown and Company, c1990. ISBN#0-316-52618-5.

THE EARTH AS AN APPLE

What is the most important activity that man does on the earth? Consider the earth as an apple. Imagine the following sequence.

Slice an apple in *quarters*. Remove THREE of the quarters. These quarters represent the oceans of the world. The FOURTH quarter roughly represents the total land area left.

Slice this land quarter in HALF, giving you TWO 1/8 of the world pieces. Set aside ONE of the pieces. This is land *inhospitable to people* -- the polar areas, deserts, swamps, and very high and rocky mountainous areas. The other 1/8 piece is the land area where people live, but not necessarily grow the foods needed for life.

Now slice this 1/8 piece into FOUR sections, giving you four 1/32 pieces. Remove THREE of these pieces. These are areas *too rocky, too wet, too cold, too steep, or with soil too poor to actually produce food*. They also include the areas of land that could produce food, but are now buried under cities, highways, suburban developments, shopping centers, and other structures that people have built.

This leaves us with a 1/32nd slice of the earth. *Carefully peel this slice. This tiny bit of peeling* represents the surface, the very thin layer of the earth's crust upon which mankind depends. Less than 5 feet deep, it is quite a *fixed amount of food-producing land.*

Now, you realize that protecting our land resources is important. Advanced agricultural technology has enabled the world to feed many of its people. But, with a fixed land resource base and an ever increasing number of people trying to feed themselves from the fixed base, each person's portion becomes smaller and smaller, and more important to the individual person. We must protect the environmental quality of the earth, its air, water, and LAND!