

NATURAL RESOURCES

Activity NR01

Theme

Outdoor Class activity (CA) or indoor Demonstration (D). How much of the Earth is available to sustain people and how are we taking care of it?

Objectives

Thinking about the finite nature of resources and the pressures on these resources across the globe and demon-

strating that although we think of the earth as a big place it is really very small to support all of humanity.

Curriculum Strands

SESE, Science and Geography–Environmental awareness and care

SESE, Geography–Natural environments; Rocks and soils; Soils

SPHE–Myself and the wider world; Environmental care

Skills

Questioning, observing, predicting, interpreting

Time

30 minutes

Where do you stand?

→ INVESTIGATING OUR SHARE OF THE EARTH

WHAT YOU NEED

→ A piece of chalk

WHAT YOU DO**In the classroom**

Calculate how many of the Earth's people each of your students represents. For example, there are about 6 billion people on Earth, and so if you have 24 students they each represent 1/4 billion people.

Outside

Draw a large circle representing the Earth in chalk on a hard surface outdoors (like the all-weather playground). You could use string and chalk like a compass to get a good circle. To pick the best size, visualise your whole class all squashed together very uncomfortably and make the circle about 20 times bigger than the area they would take up.

- 1 Begin by telling the students this is the Earth's surface. Let them wander freely around feeling how big it is.
- 2 Divide the circle in quarters with a chalk line. Tell the students that three of the quarters represent water. Ask them all to stand on the one remaining quarter.
- 3 Cut that quarter in half with a chalk mark. One half is ice, mountains or swamps and we can't live there. Ask the students to crowd onto the remaining piece.
- 4 Divide the last tiny piece into four. Only one piece is suitable for growing food. Can they all fit onto that piece?



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Continued →

- 5 Ask the students to think about all trying to stay on the tiny piece together, to hold each other on and avoid falling outside the line.
- 6 Now ask them to think about what would happen if this piece got even smaller? What if we damaged some of it and left ourselves with less? What if we increased the number of people involved without changing the size of the area to stand on?

Indoor demonstration version

This activity can also be done as an indoor demonstration conducted by the teacher. This version could also be used as a follow-up to the outdoor activity to allow for further discussion.

WHAT YOU NEED

- 2 apples
- A knife

WHAT YOU DO

- 1 (Hold up one apple) This represents the Earth. How much of it is soil in which we could grow our food?
- 2 (Cut the apple into 4 parts) 3 parts represent the Earth's oceans, 1 part represents the land (put aside 3 ocean parts)
- 3 (Cut the land portion in half) 1 part is deserts, swamps, Antarctica/the arctic and mountains. The other part is where people live and grow food.

- 4 (Slice into 4 parts the piece that represents land where food may be grown) 3 parts are too rocky, wet, hot or developed, or have soil quality that is too poor for growing food.
- 5 (Peel the last piece) this small piece of peel represents the Earth's soil on which people depend for food production. This isn't going to change—if anything it is just going to get smaller (hold up little piece and compare to the second, intact apple.)

Questions

- 1 What if it got smaller? What if there were more people to share this piece?