



Blowing up your World

Curriculum Links: Science (Earth & Beyond, Life & Living
S & E (Place & Space, Active Citizenship)
English (Listening)

Outcomes: *Students will understand that –*

- there are different types of resources and how these are conserved, used, re-used or recycled can affect future sustainability
- human impacts on the environment affects ecological sustainability and there are ways to care for the environment to minimise negative effects
- social action requires a critical reflection cycle
- they can choose personal actions to minimise negative environmental impact
- they need to listen carefully and critically.

Preparation:

You will require a pair of safety glasses and a balloon (spares would be a good idea).

Students require pen and paper on desk

(Note: This activity could also be done in groups in which case each group needs a balloon and glasses and a group leader to ensure all members contribute sensibly. Ensure person with the balloon is standing to the side so balloon can not burst in anyone's face. Don't have groups too small unless you know they are very environmentally unaware or there will be little pressure on your balloon.)

Class Activity:

NOTE: This activity illustrates that an individual's everyday decisions and behaviours affect the environment.

Use this activity as a quick introduction to a variety of environmental topics or as an opener for discussions of personal responsibility for protecting the planet's resources and sustainability. It can also be used to demonstrate the possibility of mankind exceeding the limits of the planet to provide the resources demanded.

This active can be moving and children have been known to cry so it is important to let air out of the balloon for good environmental behaviour. Explain that the balloon is a symbol and our collective behaviours are most unlikely to cause the world to literally "blow up".

1. Select one student to put on safety glasses, stand at the front of the room and blow up a balloon to its full size. Do not tie a knot, but hold the top tightly.
2. Explain to the class that this represents the earth. Students should note that it is already tight with the environmental stress that their parents and grandparents have put on it.
3. The planet we all depend on is in danger of being stretched beyond its limits by our growing population's over consumption of resources and

pollution of the air, soil and water. We need to see how good a job the students, as individuals, are doing.

4. Ask each of the questions below. For each response count the number of hands up and number of hands down (2 students could be allocated this task – don't forget to count themselves)

For every 3-5 students whose behaviour damages the environment, the balloon blower adds one big breath into the balloon. For every 3 – 5 students whose behaviour is good for the environment, let air out of the balloon

5. With each question have the students record their points, if any, on a piece of paper.
6. Tell students to listen carefully before deciding to raise their hands or not. To discourage children from repeatedly raising their hands in an effort to blow up the balloon, a hands up response is sometimes a good behaviour and sometimes a damaging behaviour.
7. **These are sample questions. Adapt/change/have the children make them up.**

The Questions:

1. *How many of you leave the tap running when you are cleaning your teeth?*
(Hands down get 2 points)

Discussion: Only 3% of the world's water is fresh. Only 1% of that is available for use. The world's water is finite. How else can we avoid wasting water?

2. *How many of you walked, cycled or took public transport to get to school today?*
(Hands up get 3 points)

Discussion: Our reliance on cars that burn fossil fuels is one of the major causes of increased carbon dioxide in the atmosphere and the primary cause of urban smog.

3. *How many of you leave your bedroom light on when you are not in the room?*
(Hands down get 3 points)

Discussion: Turning off lights saves energy as well as money. Ask where electricity comes from. The more electricity we use, the more fossil fuel that is burned, increasing the levels of carbon dioxide in the atmosphere. Explain & discuss the Greenhouse Effect.

4. *How many of you, when you drink a soft drink, throw the container into the rubbish bin?*
(Hands down get 3 points)

Discussion: Throwing away any kind of container wastes energy and resources and adds to our waste problem. Many places are running out of landfill sites. Discuss landfill – good or bad use of land. Time taken for items to break down. Recycle / reuse instead.

5. *How many of you eat potatoes grown in your family's garden or by local farmers instead of those that are mass produced (from the supermarket or packaged frozen or canned)?* (Hands up get 4 points)

Discussion: The average potato plant grown on a large farm has been sprayed up to 10 times with different pesticides. Some pesticides have been linked to causing cancer. Transportation and packaging both also contribute to the use of fossil fuels and the production of pollution. Packaging adds to the waste problem.

6. How many of you, when you go to the store, get a bag for your purchases – even if it's only 1 or 2 small things? (Hands down get 3 points)

Discussion: The production of paper and / or plastic bags uses energy and resources. The bags add to our litter and waste problems. Plastic does not break down and will remain in the environment for thousands of years. Recycling is **not** the best answer because collecting and recycling materials requires energy. Carry a reusable cloth bag or backpack with you.

7. How many of you carry your lunch to school in a lunch box or reusable container? (Hands up get 3 points) **See Discussion on question 6 above.**

8. How many of you eat take away or café food served in a foam or plastic container? (Hands down get 10 points)

Discussion: Polystyrene and other plastic containers are made from petrochemicals, do not decompose in landfills and release toxic gases when burnt in incinerators etc.

9. How many of you use cloth towels instead of paper towels to clean up a mess? (Hands up get 2 points)

Discussion: Paper comes from trees. The more of it we use, the more trees get cut down. Discuss why it is important to conserve our forests – include the importance of the forests as water catchments, and their role in preventing erosion and salinity etc.

10. How many of you have belongings you do not use or need? (Hands down get 2 points)

Discussion: Before you purchase something, think carefully about whether or not you need it or are like to use it for a long time. Shopping wisely and reducing our consumption are the first lines of defence in protecting the environment.

11. How many of you walk your dog **AND** scoop its poop for disposal by burying or putting in the bin? (Hands up get 3 points. Those who don't have a dog get none)

Discussion: Dog poo is a big contributor to phosphorous in the storm water and river systems –especially after the first winter rains.

12. Is your sewage system treated before it flows into the ocean? (Hands up get 3 points. Those who don't know get 0)

Discussion: Raw sewage running into a body of water pollutes it.

Water is one of our most valuable resources, yet many towns do not have waste treatment facilities. These towns have septic systems. In some parts of the world, raw sewage is dumped into lakes, rivers and oceans – they are using them as a toilet. Would you want to be drinking a glass of water in these places? Less than 1 % of the world's water is drinkable and it is constantly being recycled. Every glass of water contains at least 2 molecules of water that at one time were part of someone else's body.

SCORING:

Students add up their scores and you tell them how they did according to this scale.

31 – 40 points
lifestyle.

Very good: you're living an environmentally – friendly

21-30 points

Good: you're starting to save the world

11 – 20 points

Lots of room for improvement

1 -10 points

You're exiled to the town dump!

Follow up: Did your balloon blow up?

Point out to students that the earth is very resilient and will survive. It is mankind and other species we endanger by damaging our environment.

Discuss with the class what each of them can do personally to protect the environment.

Have students write a pledge to change one of the behaviours for which they did not receive points by the end of term (or other specified time frame)

**Based on an activity by Tom Goldsmith in Teaching Green: The Middle Years.
(New Society Publishers.)**