

ACTIVITY FIVE: JUST FOR FUN! YOUR ECO FOOTPRINT

We all use water every day for things like drinking, cooking and washing. We could not survive without water! This LIFE SCIENCES activity looks at how small or large our eco footprint is.

This activity can be done as a class with you, the teacher, reading the questions and learners writing down their answers, or the learners can work out their eco footprint on their own.

The ever-increasing pressures on our environment will have touched all of us in some way and we need to take a careful look at how the choices we make in our everyday lives impact on the Earth. That is, we need to ask “How big is my ecological footprint?” The following questions will encourage learners to think about different ways they impact on the Earth and ultimately stimulate ideas of ways that we can all make improvements to reduce our ecological footprint.

QUESTIONS TO ASK THE LEARNERS:

1. WATER USE

The amount of water used often depends on whether you have running water in your home, a tap in your yard, or whether you carry water from a river or dam. The way that you use water in your home can sometimes be very wasteful especially when that water is readily available on tap!

When you wash, do you use:

- a. A bucket?
- b. A shower?
- c. A bath?

What points did you get for your answer to question 1?

- a. 0 points
 - b. 5 points
 - c. 20 points
-

2. RE-USING WATER

South Africa is a water-scarce country. It is believed that by the year 2025 we will have insufficient water for use in our homes, for agriculture and for industry.

By using water carefully, you can help to conserve our water sources.

When you have finished washing at home:

- a. Does your water run straight down the drain?
- b. Do you use the water on your plants?

What points did you get for your answer to question 2?

- a. 20 points
 - b. -10 points
-

3. ENERGY USE

Whether you use electricity, coal or paraffin for energy in your home, you are polluting the air – which causes acid rain, global warming and health problems. You can conserve energy by using energy-saving devices (such as a hot box for cooking), solar-powered energy systems, and energy-saving bulbs.

In your home do you have at least one energy-saving method?

- a. Yes
- b. No

What points did you get for your answer to question 3?

- a. -10 points
 - b. 20 points
-

4. INDIGENOUS PLANTS

By growing indigenous plants in your garden, you can contribute to biodiversity because you will attract indigenous insects, birds and other animals. Indigenous plants have many advantages over alien plants, for example, they require less water.

Excluding your home-grown fruit and vegetables*, in your garden at home are:

- a. Most of the plants are indigenous?
- b. More than half the plants are indigenous?
- c. Less than half the plants are indigenous?
- d. None of the plants are indigenous?

What points did you get for your answer to question 4?

- a. -10 points
 - b. 0 points
 - c. 10 points
 - d. 20 points
-

5. ANIMAL-BASED PRODUCTS

Producing animal products (beef, chicken, pork, eggs, fish, dairy etc) puts much more pressure on the environment than producing vegetables. Many people eat more meat than their bodies need. People who eat a lot of meat have more impact on the environment than those who eat less meat or no meat at all.

How often do you eat animal products?

- a. Never
- b. A few times a week
- c. Once a day
- d. Small amounts at every meal
- e. A large part of every meal

What points did you get for your answer to question 5?

- a. -10 points
 - b. 0 points
 - c. 5 points
 - d. 10 points
 - e. 20 points
-

6. LOCALLY GROWN FOOD

Much of the energy cost of food production is spent transporting food from harvest to market, and for processing, packaging and storage. Growing food yourself or buying locally grown, in-season, unprocessed food can therefore reduce energy consumption. Buying food from local farmers can greatly reduce your ecological footprint.

How much of the food that you eat is locally grown, unprocessed and in-season?

- a. Most b. About three quarters c. About half d. About a quarter e. Very little

What points did you get for your answer to question 6?

- a. -10 points b. 0 points c. 5 points d. 10 points
e. 20 points
-

7. LIVING SPACE

An unnecessarily large home uses more materials from the environment (for building and maintenance) and takes up more space (which could be better used for agriculture and nature reserves).

In your home, do you have:

- a. More people than bedrooms?
b. The same number of people and bedrooms?
c. More bedrooms than people?

What points did you get for your answer to question 7?

- a. -10 points b. 5 points c. 20 points
-

8. POISONS IN THE HOME GARDEN

Poisons – more correctly called biocides – are often used to kill rats, insects and weeds. Many of the ingredients in these biocides cause allergies, trigger cancer growth and cause genetic defects.

Frequently we don't actually need to kill in the first place! The flat spider on the wall won't hurt you at all. But if we really do need to kill, we need to decide which option of removal is the most environmentally friendly.

In your home, when you have a problem do you:

- a. Use the strongest insecticide or other poison and use until the problem is solved?
b. Buy specially designed environmentally friendly products?
c. First attempt to solve the problem with a less destructive alternative?

What points did you get for your answer to question 8?

- a. 20 points b. 0 points c. -10 points
-

9. RE-USING

Re-use of some of your waste helps to reduce the impact on the environment; reduces the amount of waste that goes into landfill sites (rubbish dumps) and reduces the amount of raw materials required.

At home do you re-use:

a. PAPER

Never Sometimes Often

b. GLASS

Never Sometimes Often

c. TINS

Never Sometimes Often

d. PLASTICS

Never Sometimes Often

What points did you get for your answers to question 9?

a. Never – 20 points, Sometimes – 5 points, Often - -10 points

b. Never – 20 points, Sometimes – 5 points, Often - -10 points

c. Never – 20 points, Sometimes – 5 points, Often - -10 points

d. Never – 20 points, Sometimes – 5 points, Often - -10 points

10. RECYCLING

Recycling of some of your waste helps to reduce the impact on the environment, reduces the amount of waste that goes into landfill sites (rubbish dumps), and reduces the amount of raw materials required.

At home do you recycle:

- a. PAPER
Never Sometimes Often
- c. GLASS
Never Sometimes Often
- c. TINS
Never Sometimes Often
- d. PLASTICS
Never Sometimes Often

What points did you get for your answers to question 10?

- a. **Never – 20 points, Sometimes – 5 points, Often - -10 points**
b. **Never – 20 points, Sometimes – 5 points, Often - -10 points**
c. **Never – 20 points, Sometimes – 5 points, Often - -10 points**
d. **Never – 20 points, Sometimes – 5 points, Often - -10 points**
-

11. REDUCING

You can reduce your eco footprint by shopping carefully. Buy in bulk to reduce packaging; buy refills (e.g. deodorants); chose well-made articles that will last well and those with recycled content; and avoid over-packaged products.

When you buy products do you:

- a. **Always think of the amount you will throw away?**
b. **Often try – but take into consideration price and brand?**
c. **Sometimes – depending on the price and brand?**
d. **Never think of how goods are packaged or how long they will last?**

What points did you get for your answer to question 11?

- a. **-10 points b. 0 points c. 5 points d. 20 points**
-

12. CONSUMER CHOICES

Some goods available in supermarkets pollute the environment more than others – a roll-on deodorant is better than a spray containing CFCs (which break down the ozone layer); a brightly coloured toilet cleaning liquid is not necessary as that colour doesn't clean the toilet!

When you shop do you choose the least polluting product?

- a. **Always**
b. **Often – depending on price, brand or what you have seen on television**
c. **Sometimes – depending on price, brand or what you have seen on TV**
d. **Never think about such things**

What points did you get for your answer to question 12?

- a. **-10 points b. 0 points c. 5 points d. 20 points**

13. TRAVEL

Poisonous gases and substances released by cars and other motor vehicles include nitrogen oxides, hydrocarbons and lead which contribute to acid rain, smog, health problems and global warming.

How do you get to work/school/college?

- a. **On foot** b. **By bicycle** c. **By taxi** d. **By car**

What points did you get for your answer to question 13?

- a. **-10 points** b. **0 points** c. **5 points** d. **20 points**
-

Add up all your points!!!

Your final ecological footprint

- **Score less than 50: Green Footprint (You have a TINY ecological footprint)**
 - **Score from 51-110: Yellow Footprint (You have a small ecological footprint)**
 - **Score from 111-180: Blue Footprint (You have a medium ecological footprint)**
 - **Score from 181-290: Orange Footprint (You have a large ecological footprint)**
 - **Score from 291-400: Red Footprint (You have a HUGE ecological footprint)**
-

With your class:

- **Each learner to think of one product that they have, or one thing that they consume. What is its impact on the planet?**
- **Discuss ways that our school can practically reduce our ecological footprint.**
- **Discuss ways that our class can reduce our ecological footprint.**
- **Discuss ways that individual learners can reduce their ecological footprint.**

Criteria to assess learners during this life sciences lesson

Criteria	Outstanding	Meritorious	Satisfactory	Adequate	Partial	Inadequate
The learner contributed to the discussion on the impact of products on our environment						