

Build a filter

Focus

This activity can be used in various contexts. When students are considering the natural water cycle, the concept of infiltration compared to runoff is important as it affects their development of a full picture about how rainfall adds to the surface water (or not) and how it returns to the cycle through harvesting of our groundwater sources.

Materials

For each group:

- Five similar sized soft drink bottles. Coke bottles are best for this activity.
- Empty plastic milk bottle with lid.
- Plastic tube about thirty cm (or straw if needed)
- Sealant
- Gauze
- String
- Soil (quantity)
- Sand (quantity)
- Pebbles (quantity)
- Pointed knife
- Scissors
- Sealant



Preparation

- Cut off 4 Coke bottles along the line just up from the base. Use the pointed knife to start then get the children using the scissors to cut around the line. This will leave four bottles without a base.
- Cut one bottle around the line closest to the top of the bottle. This will leave a bottle without a neck.
- Cut squares of gauze to cover the neck of the bottle and tie in place with string.
- Drill a hole in the side of the bottle without a top about half way up. Seal in place.
- This bottle will be the base.
- Place a neck bottle upside down into base and seal around edge.
- Place gravel into this bottle to half way.
- Place a neck bottle upside down into base and seal around edge.
- Place sand into this bottle to half way.
- Place a neck bottle upside down into base and seal around edge.
- Half fill with soil and sand mixture.
- Place a neck bottle upside down into base and seal around edge.
- Allow drying time before half filling with soil.

Resources

This filter can be used in the following activities:

- TA1-15a, 15b Where does the rain go?

