



The good microbes

Background knowledge

Microbes, or microorganisms, are living things that are often too small to be seen. Common types of microbes are bacteria, viruses, and some fungi. These organisms need food, warmth, and moisture to grow and reproduce. Some microbes feed on things that were once living, such as fallen leaves and dead animals, causing them to breakdown or decay. The decayed materials mix with soil, providing essential nutrients for plants to use. Without this process, the nutrients in the soil would run out. These types of organisms are called *decomposers*. They are the natural recyclers of living things on our planet. Microbes also help us make some of our foods, such as bread, cheese, yogurt, beer, and wine. They feed on the sugar in grain, fruit, or milk, giving these foods a special texture and taste.

Science activity

Donna put the following items into a large polythene bag. She took them out again after two weeks. In the boxes below, write **D** for the items that would have decayed and **U** for those that would be unchanged.

Grass

Tangerine

Plastic spoon

Bread

Apple peel

Leaves

Cola can

Nylon tights



Why have some of the items not decayed?

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Science investigation

Take a large coffee can and obtain some soil, food samples, and non-food items. Bury the food and non-food items in different layers of soil placed in the coffee can. Add about 1/4 cup of water. Place a cover with punched holes on top of the can so air can get in. After 2–3 months, determine what has decayed.



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- | | | | |
|----------------------------|---------------|----------------------------|--------------|
| <input type="checkbox"/> D | Grass | <input type="checkbox"/> D | Tangerine |
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| <input type="checkbox"/> D | Apple peel | <input type="checkbox"/> D | Leaves |
| <input type="checkbox"/> U | Cola can | <input type="checkbox"/> U | Nylon tights |



Why have some of the items not decayed?

The items in the bag that were non-living could not be decayed by the microbes. Those were the items still in the bag.

Science investigation

The child should carefully record observations of selected items in a data table before burying them. Generally, only dead things decay. Let the items sit for about 1–3 months or longer. The child should then note how the buried items have changed.