Investigating the biodegradability of drinking straws in soil

Aim:

To compare how well different types of drinking straws break down in soil over time.

Equipment:

- Several types of straws (e.g. paper, plastic, biodegradable plastic, bamboo)
- Plant pots or plastic containers (one per straw type)
- Garden soil (soil taken from outside is important because it contains bacteria that carry out decay)
- Ruler
- Scissors
- Labels or marker pen
- Tongs or tweezers (for hygiene when removing straws)

Method:

1. Label each container with the type of straw it will contain.
2. Fill each container with the same amount of soil (e.g. 500 g or to a marked line).
3. Cut each straw to the same length (e.g. 5 cm) and bury one piece of each straw about 5 cm deep in its labelled container.
4. Water the soil lightly (keep it moist, not soaked).
5. Place the containers in the same location (e.g. a windowsill or outside) to ensure equal exposure to temperature and light.
6. Check the straws weekly for signs of change. Carefully remove each straw, observe its condition (e.g. softness, cracks, discolouration), and measure any loss of length or shape. Then re-bury the straw in the same pot.
7. Record your observations in a results table each week and take photos if possible.
8. Continue the experiment for 4–6 weeks or longer if time allows.

Safety Notes:

- Wash hands after handling soil and straw pieces.