

## **CREATING BIOENERGY EXPERIMENT**

Design and conduct an experiment to determine the best conditions for producing methane gas from food waste.

Possible variables for investigation:

- Light exposure
- Temperature
- Organic components
- Water
- pH levels
- Optimal carbon-nitrogen ratios for increasing methane production

### **Materials**

16-oz or 32-oz plastic bottle with cap (any soda, electrolyte water, or water bottle will do)

Balloon

½ to 1 cup shredded food scraps (vegetables, fruits, or even leftover lunch)

3 to 4 teaspoons organic soil

1 beef stock cube

Water

Add the shredded food scraps, the organic soil, and the beef stock cube into the plastic bottle.

Next add a little water. Finally, place a balloon over the bottle.

Put the bottle with the mixture in a warm place and let the fermentation begin.

Observe what happens over the next few days. Note any changes.