



## SMOKE ALARMS

Did you know that scientists have spent many years working on smoke alarms to keep us safe? One of the most common types is an ionization smoke alarm. Here's how it works:

- 1 Inside the smoke alarm, there are two tiny metal plates called electrodes that are connected to a battery. This is called a circuit.
  - move toward the negative plate. This movement creates a complete circuit or path of electricity.
- 2 There is also a substance called Americium-241. Americium-241 converts air molecules into positive and negative ions. Because opposites attract, the negative ions move toward the positive plate and the positive ions
  - When smoke enters the smoke alarm, the ions bond with the smoke, breaking the path of electricity.
- 3
  - When the flow of electricity is reduced, the alarm goes off.
- 4

