



Minerals and Metals in Your Life

Minerals and metals are a part of everyday life. They are the original multi-taskers. For example, nickel is in batteries, jet engines, surgical tools, colour televisions, cell phones, and kitchen and bathroom fixtures!

We use minerals and metals to make homes and schools, to generate heat and power, and for everyday comfort items like shampoo and toothpaste. Minerals keep us healthy – we need calcium, iron, magnesium, phosphorus and many more minerals to grow and stay healthy. Minerals help our food grow too – you can find up to 14 minerals in fertilizer. Minerals and metals make our homes and buildings strong and safe – from the floors to the plumbing to the rooftop, construction materials are all based on minerals and metals. We even use minerals and metals to make life beautiful! There are minerals in paint and cosmetics, and we use metals to make jewelry and sculptures. Minerals and metals are also used to help keep our environment clean by improving our cars, and filtering the air we breathe and the water we drink.

Review the supplement, Our Resources at Work, for a comprehensive picture of how common minerals and metals are in your life.

Here is a glance at what some of the mineral samples in the **PDACMM** kits can do:

- **Gypsum** is a great building material because it is a fire retardant. Gypsum is used in drywall, plaster, cement, caulking and paints.
- **Halite**, or salt, is used to flavour food, keep roads safe in the winter, and even to extinguish fires. Halite is also used in glass, paint, plastics, synthetic rubbers and cosmetics.
- Iron is extracted from **Hematite**. Iron can be found in many types of construction materials, like steel, asphalt, cement, paint and plastics. You will find iron in everyday items such as clocks, radios, guitars, bicycles and skateboards.
- **Mica** makes your toothpaste and cosmetics sparkle! Mica is also used in drywall, roofing, plastics and lubricants. A toaster's heating coils are usually insulated from the metal framework by mica because it has excellent thermal and electrically-insulating properties.
- **Talc** is used in pesticides and water treatments because it is highly absorbent. You will also find talc in paint and paper to add colour and texture. Talc is also in talcum powder, cosmetics and lotions.

The Case of the Metal Mystery

How many metals can you find in your home? Challenge your students to investigate how important metals are in their everyday lives by sending them on a scavenger hunt for all things metal. Armed with pencil and paper, have your students scour their homes for even the minutest metal-based objects they can find. Students are given a chance on the next day to consolidate their individual lists into one monster-sized master list.