

Observing Chemical Reactions

Use with textbook pages 88-90.

Identify a visible sign that a chemical reaction has occurred in each description below.

1. A candle burns.

2. A leftover sandwich starts to rot and smell.

3. Potassium is added to a beaker of water and a flame appears.

4. Exploding fireworks produce an array of beautiful colours and loud sounds.

5. Wood is placed in a campfire. It starts to burn, and smoke and black ashes form.

6. An iron chain left outside in the rain starts to rust, resulting in a reddish-brown colour.

7. A piece of calcium metal is placed in a beaker of water. Bubbles of hydrogen gas form in the water.

8. Colourless hydrochloric acid is poured into a beaker with a red solution of cobalt(II) nitrate. The solution turns blue.

9. Dough is wrapped around a stick and roasted over an open fire. The bannock turns brown and is cooked all the way through.

10. A solution of clear reddish-orange sodium dichromate is added to a colourless solution of lead nitrate. A yellow insoluble solid forms.

Physical and Chemical Properties

Use with textbook pages 88-90.

Identify the physical or chemical property that is described in each statement.

1. Salt dissolves in water. _____
2. Copper produces a green flame. _____
3. An ice cube turns into water at 0 °C. _____
4. Sandpaper feels rough and gritty to the touch. _____
5. Dry Christmas trees can catch fire and burn easily. _____
6. The handle of a metal frying pan is too hot to touch. _____
7. Water heated in a kettle will turn to steam at 100 °C. _____
8. A spoonful of honey will pour slower than a spoonful of vegetable oil.

9. Gold is very soft and can be hammered into thin sheets to make jewellery.

10. Bubbles form and a gas is given off when vinegar is added to baking soda.

11. A copper penny becomes dull brown over time and eventually turns to dull light green.

12. Most elements can exist as a solid, a liquid, and a gas, depending on the temperature and pressure.

13. The strong triple bond between the atoms of a nitrogen molecule is the reason why nitrogen gas is unreactive.
