**1.5 Everyday Chemical Changes,**

**Read. p. 20-21 in your textbook and fill in the blanks.**

**You have learned that different substances have different physical and**

**chemical properties that determine their uses.**

**One chemical property that has great economic importance is the slow chemical reaction of a metal with oxygen from the air.**

**This is also called corrosion.**

**Rusting is a specific example of corrosion which involves the corrosion of**

**iron.**

**Iron reacts with oxygen from the air, water and other chemical substances dissolved in the water.**

**Rust, or iron oxide, is the product of this chemical change.**

**List 6 things that can be damaged by rust: vehicles, buildings, bridges, bicycles, shovels, wheel barrow, pipes, etc.**

**A physical property of rust is it is porous and absorbs water like a sponge. The rust eventually flakes off exposing fresh metal underneath to oxygen. This process continues until the rust has eaten through the metal.**

**Aluminum also reacts with oxygen. But, the aluminum oxide that forms is strong and unaffected by water.**

**The oxide layer protects the aluminum from any further corrosion.**

**The corrosion of silver results in a surface coating, or tarnish. The black layer can be removed by polishing the silver.**

**Preventing Corrosion**

**Every way to prevent corrosion involves protecting the metal surface from oxygen gas.**

**List three ways to protect metal objects such as bridges and cars from corrosion.**

1. **Paint metal surfaces**
2. **Spray with oil**
3. **Use materials that do not react with oxygen gas, e.g. plastic.**