

# Chemistry in Action



Grade Level: High school

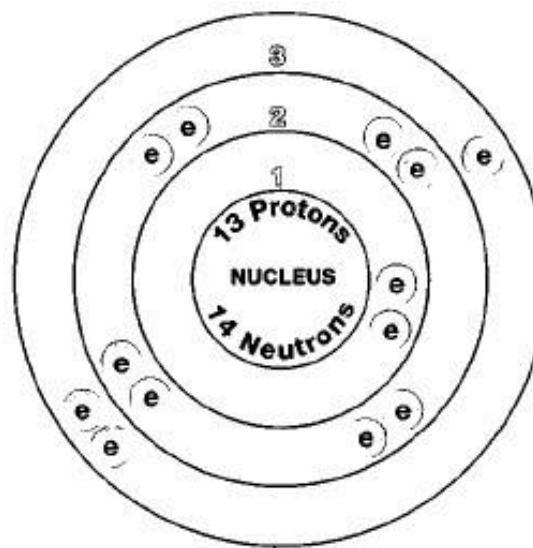
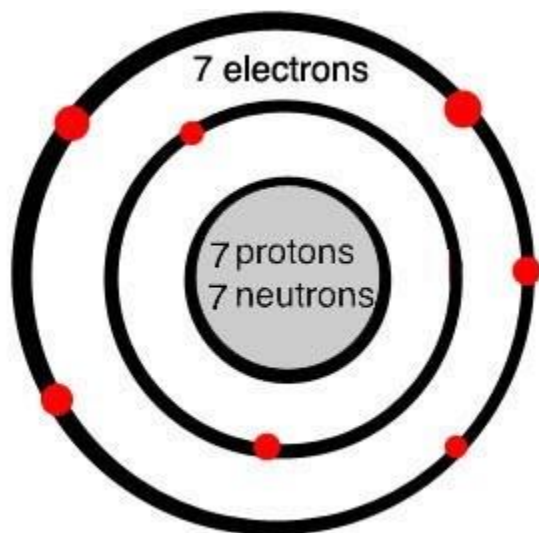
Using a periodical chart with your knowledge about elements, compounds and alloys, complete the following questions.

## Chemical Elements

A chemical element is a substance that cannot be broken down by chemical means. Elements are defined by the number of protons they possess.

1. Using your periodic chart, name three chemical elements you find in a race car.
2. For each of element, give its chemical symbol and atomic weight.
3. Identify the elements in the illustrations on the following page.





## Chemical Compounds

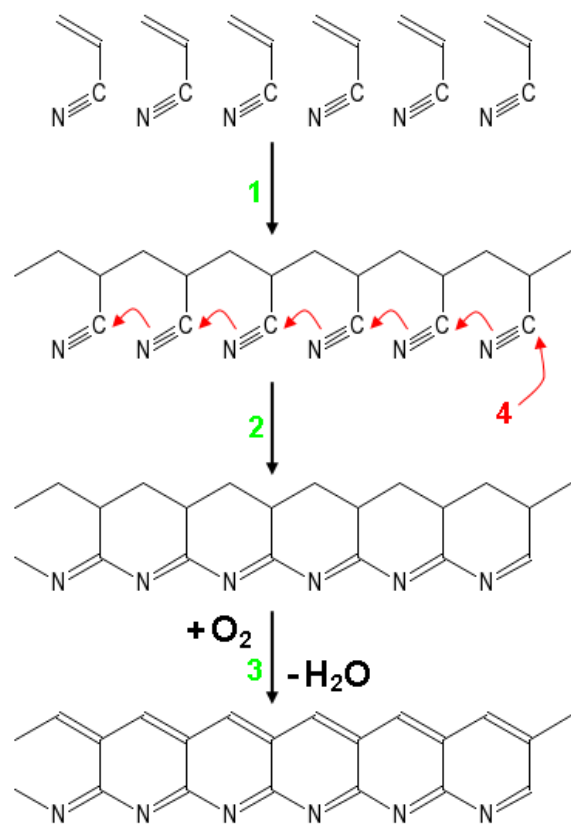
A chemical compound is a chemical substance consisting of two or more different chemically bonded chemical elements, with a fixed ratio determining the composition.

1. Identify the elements in the chemical formula below for lexan.  
Polyethylene terephthalate, commonly abbreviated PET, PETE, or the obsolete PETP or PET-P, is the most common thermoplastic polymer resin of the polyester family and is used in fibers for clothing.  
**Formula:**  $(C_{10}H_8O_4)_n$   
**Melting point:**  $500^{\circ}F$  ( $260^{\circ}C$ )  
**Density:**  $1.38 \text{ g/cm}^3$





2. Identify the elements in the compound for carbon fiber from type 1 to type 2 to type 3.





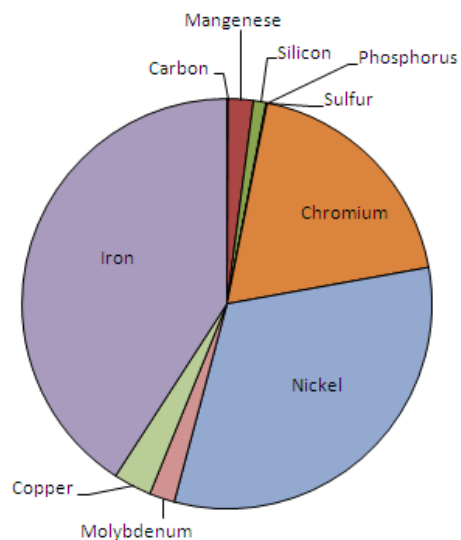
## Chemical Alloy

An alloy is a substance made by melting two or more elements together with at least one of them being a metal.

How many of the substances in the illustrations of the two alloys are elements?

Name one location/part on a race car composed of these alloys.

### Alloy 20



### Carbon Steel

