

Approximately 90 elements occur naturally on Earth, and in recent years, chemists have made more than 25 new elements. Based on their properties, all the elements can be divided into three classes: metals, non-metals, and metalloids.

PART 1 (Use the terms given below to complete the following statements.)

- 1
- 11
- 17
- 5
- acids
- air/water
- brightly coloured
- brittle (X2)
- ductile
- dull
- Earth
- electricity
- good
- grey (X2)
- heat
- liquid
- malleable
- metals
- non-metals
- poor
- semiconductors
- shiny (X2)
- silver
- solids (X2)

METALS

- ▶ make up most of the elements found on _____
- ▶ most are _____ and _____ or _____ in colour (except gold and copper)
- ▶ they are _____ conductors of _____ and heat
- ▶ they are _____ at room temperature (except mercury which is a _____)
- ▶ most are _____ and _____
- ▶ some react with _____, but most react with _____

NON-METALS

- ▶ there are _____ elements in total
- ▶ they are grouped together mainly because they do not resemble _____
- ▶ _____ are gases, _____ are solids and _____ is a liquid (bromine)
- ▶ most solid non-metals are _____ but some are _____ (sulphur)
- ▶ the solid non-metals are _____
- ▶ they are usually _____ conductors of electricity and _____

METALLOIDS

- ▶ they have properties in between those of metals and _____
- ▶ they are _____ at room temperature
- ▶ they conduct electricity but not very well - often referred to as _____
- ▶ most are _____ and _____, but unlike a metal, are _____

PART 2 (Answer the following questions on the back of this sheet or a separate sheet.)

1. Why do different elements have different properties?
2. How are all these elements organized?
3. What makes mercury different from other metal elements?
4. Read "Some Common Elements" / P.183-185 and make some brief notes re characteristic physical and chemical properties for the elements iron (Fe), carbon (C), hydrogen (H), oxygen (O), sodium (Na), and chlorine (Cl).