

Metals, Nonmetals, and Metalloids

Activity 1: Properties

Question Group 1

Question 1

I am an element that conducts both electricity and heat. Scientists refer to me as a _____.

Metal

Nonmetal

Metalloid

Question 2

I am an element that does NOT conduct electricity nor heat. Scientists refer to me as a _____.

Metal

Nonmetal

Metalloid

Question Group 2

Question 3

When you tap me with a hammer I do NOT shatter. And I am easily drawn into wires. Scientists refer to me as a _____.

Metal

Nonmetal

Metalloid

Question 4

When you tap me with a hammer I do shatter. And anyone who knows me would never even attempt to make a wire out of me. Scientists refer to me as a _____.

Metal

Nonmetal

Metalloid

Question Group 3

Question 5

I am an element with a high melting point, a solid at room temperature, and have a shine to me that is quite striking. Scientists refer to me as a _____.

Metal

Nonmetal

Metalloid

Question 6

I am an element with a low melting point and low boiling point. I happen to be a gas at room temperature. Scientists refer to me as a _____.

Metal

Nonmetal

Metalloid

Question Group 4

Question 7

I am an element that shatters when struck with a hammer. I make up for this because I am a great conductor of electricity. But when it comes to conducting heat, I am not the element for the job. Scientists refer to me as a _____.

Metal

Nonmetal

Metalloid

Question 8

I am an element that is very lustrous. I have a high melting point and form a solid at room temperature. I am neither ductile or malleable so don't even think of forming a wire out of me or a hammering me into a sheet. Scientists refer to me as a _____.

Metal

Nonmetal

Metalloid

Activity 2: Triple Play

Question Group 5

Question 9

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Aluminum (Al)

Silicon (Si)

Sulfur (S)

Question 10

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Gallium (Ga)

Arsenic (As)

Bromine (Br)

Question 11

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Tin (Sn)

Antimony (Sb)

Iodine (I)

Question Group 6

Question 12

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Carbon (C)

Germanium (Ge)

Lead (Pb)

Question 13

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Nitrogen (N)

Antimony (Sb)

Bismuth (Bi)

Question 14

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Oxygen (O)

Tellurium (Te)

Lead (Pb)

Question Group 7

Question 15

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Calcium (Ca)

Arsenic (As)

Nitrogen (N)

Question 16

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Silver (Ag)

Antimony (Sb)

Sulfur (S)

Question 17

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Thallium (Tl)

Boron (B)

Oxygen (O)

Question Group 8

Question 18

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Osmium (Os)

Germanium (Ge)

Fluorine (F)

Question 19

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Mercury (Hg)

Antimony (Sb)

Bromine (Br)

Question 20

Of the three elements listed below, one is a metal, one is a nonmetal, and one is a metalloid. Identify which category the three elements fall into.

Zinc (Zn)

Tellurium (Te)

Radon (Rn)

Activity 3: Classification Challenge

Question Group 9

Question 21

Consider the list of eight elements. Identify all the elements that are **metals**.

Bromine (Br)

Carbon (C)

Mercury (Hg)

Neon (Ne)

Potassium (K)

Thallium (Tl)

Uranium (U)

Zirconium (Zr)

Question 22

Consider the list of eight elements. Identify all the elements that are **metals**.

Argon (Ar)

Chlorine (Cl)

Cobalt (Co)

Lead (Pb)

Magnesium (Mg)

Nitrogen (N)

Plutonium (Pu)

Silicon (Si)

Question Group 10

Question 23

Consider the list of eight elements. Identify all the elements that are **metals**.

Arsenic (As)

Boron (B)

Fluorine (F)

Krypton (Kr)

Sodium (Na)

Technetium (Tc)

Tin (Sn)

Titanium (Ti)

Question 24

Consider the list of eight elements. Identify all the elements that are **metals**.

Bismuth (Bi)

Iodine (I)
Iron (Fe)
Manganese (Mn)
Radon (Rn)
Selenium (Se)
Strontium (Sr)
Tellurium (Te)

Question Group 11

Question 25

Consider the list of eight elements. Identify all the elements that are **nonmetals**.

Bromine (Br)
Gallium (Ga)
Helium (He)
Lanthanum (La)
Lead (Pb)
Nickel (Ni)
Oxygen (O)
Potassium (K)

Question 26

Consider the list of eight elements. Identify all the elements that are **nonmetals**.

Actinium (Ac)
Cobalt (Co)
Indium (In)
Iodine (I)
Neon (Ne)
Nitrogen (N)
Sodium (Na)
Tin (Sn)

Question Group 12

Question 27

Consider the list of eight elements. Identify all the elements that are **metalloids**.

Boron (B)
Iodine (I)
Lanthanum (La)

Oxygen (O)
Silicon (Si)
Sodium (Na)
Sulfur (S)
Vanadium (V)

Question 28

Consider the list of eight elements. Identify all the elements that are **metalloids**.

Actinium (Ac)
Antimony (Sb)
Argon (Ar)
Barium (Ba)
Calcium (Ca)
Chromium (Cr)
Germanium (Ge)
Sulfur (S)