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.
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)

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)

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)

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)

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.
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)