

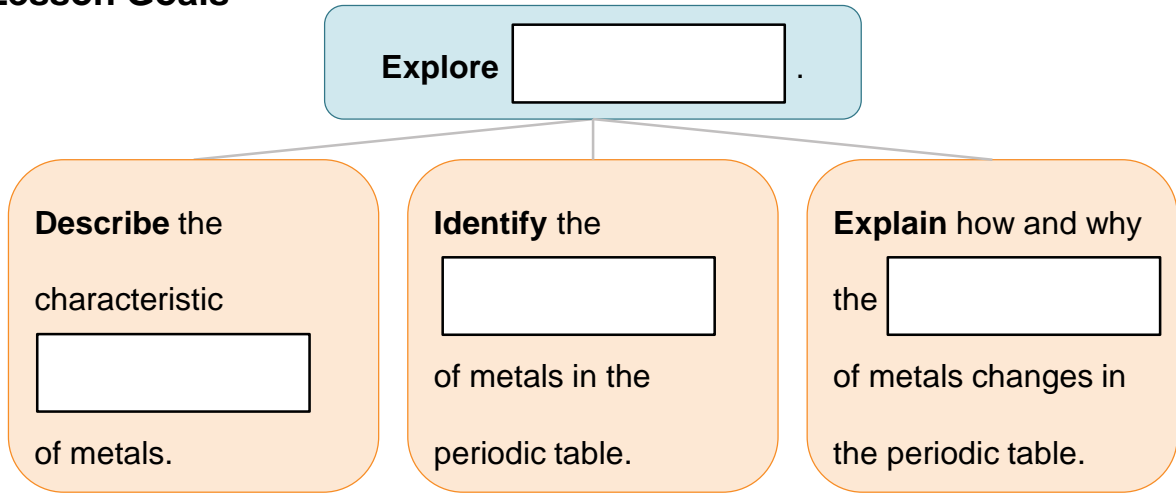
Warm-Up | Metals



Lesson Question



Lesson Goals



Words to Know

Fill in this table as you work through the lesson. You may also use the glossary to help you.

	having a shiny appearance
	a measure of how well a substance allows heat to pass through it
	able to be stretched into long, thin shapes without breaking
	does not allow light to pass through; unable to be seen through
	able to be shaped (as with a mallet) without breaking
	a measure of how well a substance allows electric current to flow through it



Organization of the Periodic Table

- Columns of the periodic table are called .
- Elements in a group have similar chemical .
- Rows of the periodic table are called .
- Elements in a period have the same of electron shells.
- The number increases from left to right.

Instruction | Metals

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Physical Properties of Metals: Shape

- :
 - Can be shaped
 - Does not break easily
- :
 - Can be pulled into long, thin shapes

Physical Properties of Metals: Conductivity

- Thermal :
 - Allows heat to pass easily
- conductivity:
 - Allows the easy flow of electric current

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More Physical Properties of Metals

- :
 - Shiny to the eye
- :
 - Does not allow light to pass through
- High points (with some exceptions)

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Metals and the Periodic Table

Periodic table groups include:

- metals.
- earth metals.
- metals (many groups).

Alkali Metals

Group 1

-
-
- Extremely
- valence electron
- Examples
 - Lithium
 - Sodium

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Alkaline Earth Metals

Group 2

- Very shiny,
- Harder, more
- Less
- valence electrons
- Examples
 - Magnesium
 - Calcium

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Comparison

Alkali Metals Group 1	Alkaline Earth Metals Group 2
Shiny <input type="text"/>	Very shiny, <input type="text"/> appearance
Soft	<input type="text"/> , more dense
<input type="text"/> reactive	Less <input type="text"/>
<input type="text"/> valence electron	<input type="text"/> valence electrons
Lithium, <input type="text"/>	Magnesium, <input type="text"/>

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Metals and the Periodic Table: Transition Metals

Transition metals:

- are in 3 to 12.
- begin in the 4th .
- can form more than one kind of .
- are less reactive than metals in groups and .

Metals and the Periodic Table: Colorful Compounds

- Colorful compounds of transition metals
 - Potassium
 - chloride
 - sulfate
- Colors result of electron structure of these elements

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Reactivity Trends in Periods of the Periodic Table

COMPARING GROUP 1 AND GROUP 2 ELEMENTS

- Chemical reactions are determined by or valence electrons to form a complete shell.
- If it is easier for an atom to lose electrons than to gain them, then it will electrons and become a ion.
- The elements have the valence electrons, so they are reactive.
- A major chemical property of metals is that they form ions.

Reactivity Trends in Periods of the Periodic Table

COMPARING PERIOD 3 AND PERIOD 6 ELEMENTS

- Elements in the same have the same number of electrons.
- Ions from the same group have the same and exhibit similar behavior.
- The valence electrons are from the , the easier it is to them.
- As you move down a group, an electron shell is with each period.
- Elements at the of the table are reactive than those at the top.

**Lesson
Question**

How are metals identified?

**Answer**

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2**Review: Key Concepts**

Properties of metals:

- Malleable,
- , opaque
- Good at thermal and electrical

Groups containing metals:

- metals
- earth metals
- metals

Summary

Metals

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Trends in reactivity:

- from right to left in a period
- Increase from top to bottom in a

Use this space to write any questions or thoughts about this lesson.