

## How to 4 Video Narrative

In “How to 4,” we will determine if an element is a metal, nonmetal, or metalloid by its placement on the Periodic Table.

Notice the dark stair-stepped or zigzag line. This line divides the Periodic Table into metals, nonmetals, and metalloids. Elements in each of the three groupings have similar properties to other elements in that group. Take, for example, the metals. They are located on the left side of the zigzag line.

Metals have many physical properties in common. Metals are malleable. That means they can be hammered into a shape. They’re also ductile, which means they can be pulled into a wire. Metals are good conductors of heat and electricity, and most metals have a shiny or metallic luster and are solid. The only liquid metal is mercury. Notice that hydrogen, located on the top left-hand side of the Periodic Table, is not a metal. Hydrogen does not fit into many patterns of the Periodic Table.

Let’s talk about nonmetals. Nonmetals are located on the right side of the zigzag line. Notice that hydrogen in the top left-hand corner of the Periodic Table is a nonmetal. Nonmetals also have several physical properties in common. Nonmetals are brittle, which means they break or shatter into many small pieces when hit with an object like a hammer. Nonmetals are poor conductors of electricity. Instead, they make great insulators. Nonmetals have a dull luster, and they do not have one common state of matter. Instead, nonmetals are solids, liquids, and gases.

Located adjacent to the stair-stepped line are the metalloids. Metalloids have properties of both metals and nonmetals.

So don’t forget to use the Periodic Table to identify elements as metals, nonmetals, or metalloids!