

Write one important fact from each paragraph in this space.

Science Shorts -6

It's Elementary, My Dear Watson

Matter is anything that has mass and takes up space. Matter is made of tiny particles called atoms. Scientists have developed a model of what they believe an atom looks like. They have also developed ideas of how atoms behave.

Sometimes atoms join together. When several of the same kinds of atom join together, a special kind of matter is created. It is called an element. An **element** is matter made of one kind of atom.

Every atom in an element is just like the other atoms in that element. Gold is one kind of element. Every atom in gold is just like every other atom in gold. Iron is another element; so all the atoms in iron are exactly the same.

Every atom in one element however is different from every atom in a different kind of element. Silver and mercury are both elements. The atoms in silver are different from the atoms in mercury.

Scientists believe there are 118 different kinds of elements. Ninety of these elements have been made by nature. They can be found in the earth's crust and atmosphere. Twenty-five elements have been made in science laboratories. Scientists are still looking for more elements. They are still trying to make more of them in their labs as well.

Scientists love to classify. They love to make groups and see how things fit into those groups. This is one way to make their studies more organized and easier. Elements are no different. Scientists have found a way to classify all the known elements. They have developed the Periodic Table of the Elements.

Scientists all over the world use the Periodic Table. When new discoveries are made, the information can be shared in a way that all scientists can understand, no matter what language they speak.

Answer the following questions using the information from the reading.

1. What is matter?

- a. a model for thinking about the universe
- b. anything that has mass and takes up space
- c. made up of one atom
- d. a chart used by scientists

2. What is an element?

- a. a chart used by scientists
- b. a model for thinking about the universe
- c. a special kind of matter
- d. anything that has mass and takes up space

3. What is an atom?

- a. anything that has mass and takes up space
- b. a model for thinking about the universe
- c. what matter is made up of
- d. a chart used by scientists

4. What are two ways elements can be made?

- a. by nature and in the science laboratory
- b. by cooling and heating
- c. by mixing two liquids or two solids
- d. by boiling and freezing

5. What is the Periodic Table of Elements?

- a. anything that has mass and takes up space
- b. a model for thinking about the universe
- c. what matter is made up of
- d. a chart used by scientists