

GRADE 8

3a

## Structure of Matter

Each of the more than 100 elements have distinct properties and a distinct atomic structure. All forms of matter are composed of one or more of the elements. As a basis for understanding this concept:

Students know the structure of the atom and know it is composed of protons, neutrons and electrons.



## Structure of Matter

Each of the more than 100 elements have distinct properties and a distinct atomic structure. All forms of matter are composed of one or more of the elements. As a basis for understanding this concept:

Students know compounds are formed by combining two or more different elements and that compounds have properties that are different from their constituent elements.

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3C

## Structure of Matter

Each of the more than 100 elements have distinct properties and a distinct atomic structure. All forms of matter are composed of one or more of the elements. As a basis for understanding this concept:

Students know atoms and molecules form solids by building up repeating patterns, such as the crystal structure of NaCl or long-chain polymers.

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3d

## Structure of Matter

Each of the more than 100 elements have distinct properties and a distinct atomic structure. All forms of matter are composed of one or more of the elements. As a basis for understanding this concept:

Students know the states of matter (solid, liquid, gas) depend on molecular motion.



## Structure of Matter

Each of the more than 100 elements have distinct properties and a distinct atomic structure. All forms of matter are composed of one or more of the elements. As a basis for understanding this concept:

Students know that in solids the atoms are closely locked in position and can only vibrate; in liquids the atoms and molecules are more loosely connected and can collide with and move past one another; and in gases the atoms and molecules are free to move independently, colliding frequently.

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3f

## Structure of Matter

Each of the more than 100 elements have distinct properties and a distinct atomic structure. All forms of matter are composed of one or more of the elements. As a basis for understanding this concept:

Students know how to use the periodic table to identify elements in simple compounds.