

Elements, Compounds, and Mixtures

Early in the year, we defined **matter** as anything that has mass and takes up space. We've also talked about the **kinetic theory of matter** which states that matter is made of tiny moving particles. The smallest particle of matter that you can make without using a nuclear reactor or million-dollar particle accelerator is called an **atom**. In the universe around us, there are atoms of about 100 different types, each with different properties.

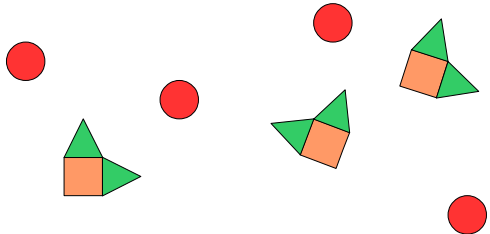
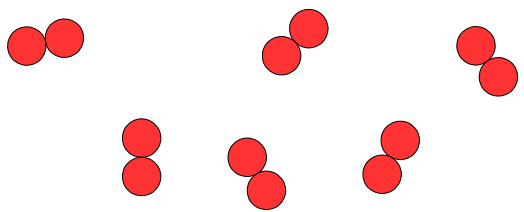
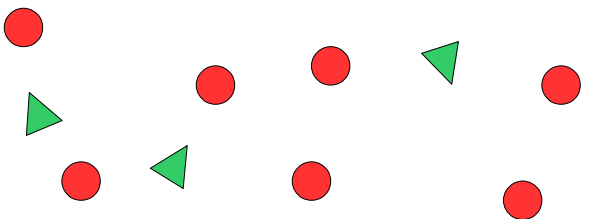
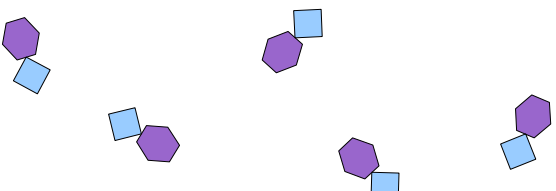
Scientists use these terms to categorize matter:

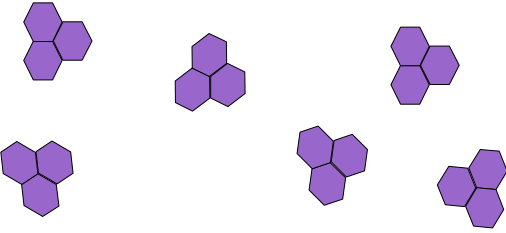
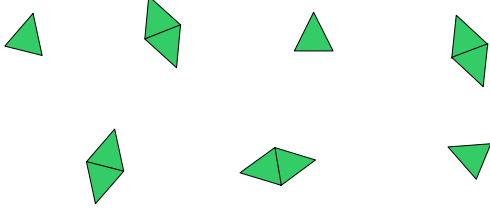
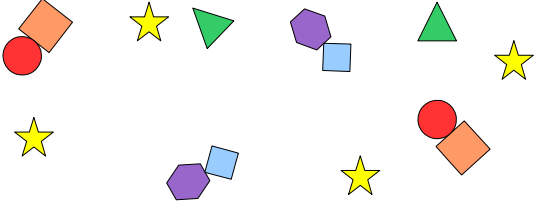
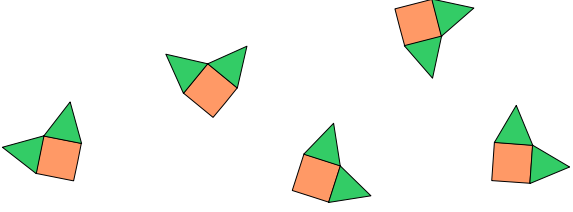
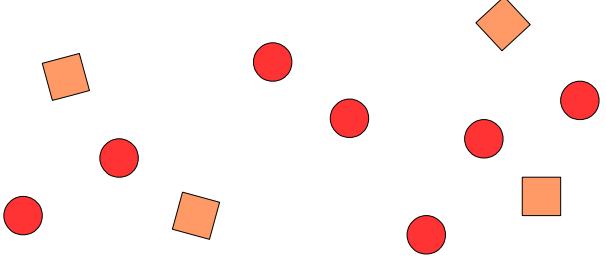
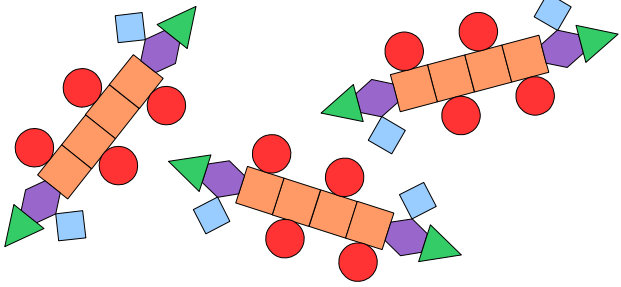
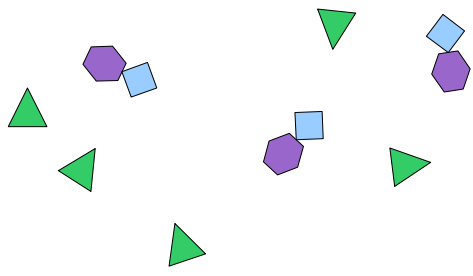
<u>Element:</u>	
<u>Mixture:</u>	
<u>Compound:</u>	

Elements and compounds are both referred to as **pure substances**. Mixtures are not pure.

Activity

For each particle diagram below, count how many types of atom you see and how many types of substance you see. Then classify the matter as either an element, a mixture, or a compound.

 <p>Types of atom: ____ Types of substance: ____</p> <p>Classification: _____</p>	 <p>Types of atom: ____ Types of substance: ____</p> <p>Classification: _____</p>
 <p>Types of atom: ____ Types of substance: ____</p> <p>Classification: _____</p>	 <p>Types of atom: ____ Types of substance: ____</p> <p>Classification: _____</p>

 <p>Types of atom: ____ Types of substance: ____</p> <p>Classification: _____</p>	 <p>Types of atom: ____ Types of substance: ____</p> <p>Classification: _____</p>
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 <p>Types of atom: ____ Types of substance: ____</p> <p>Classification: _____</p>	<p><i>[Make up and draw your own here!]</i></p> <p>Types of atom: ____ Types of substance: ____</p> <p>Classification: _____</p>