

Grade 4 Science  
Week of October 26 – October 30

Matter

**What is Matter?**

**Matter** is all around us. The air we breathe, the food in the fridge, even the clothes you wear.

Different types of **matter** can be described by their **mass**. The mass of an object is the amount of material that makes up the object. A ball, for example, has more mass than a beach ball.

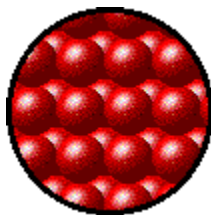


Matter Comparison: <https://youtu.be/wyRy8kowsM8>

**Solid**

Solids are easy to recognize. They have a fixed size, shape and volume. Your desk is a solid. It is made up of tiny **molecules** called **atoms**.

In a solid, molecules are packed together, and it keeps its shape.



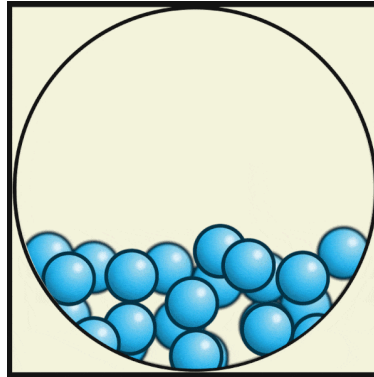
Here is an example of what molecules look like in a solid.



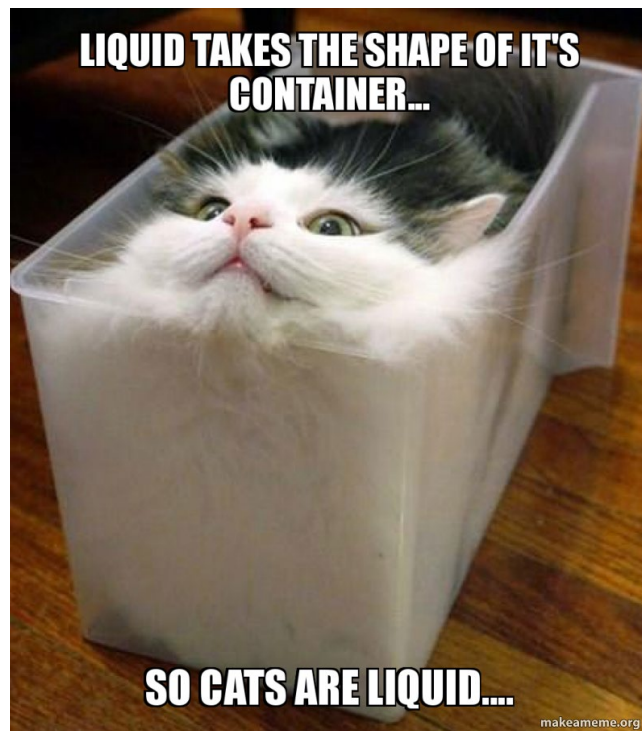
What is a Solid? <https://youtu.be/aHvJ5v0zhoQ>

## Liquid

Liquids are a type of matter that changes shape depending on the shape of its container. For example, when you pour milk into a cup, it takes up the cup's inner shape.



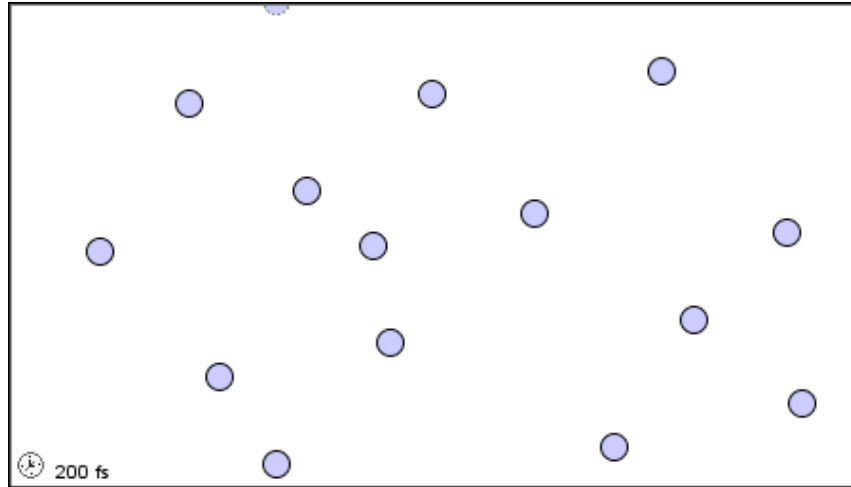
Here are what molecules look like in a liquid.



(Pssst! If you're thinking cats aren't reeeeeally liquid, you'd be correct.)

## Gas

Matter that spreads out to take up all the space available in the container is called a gas. Air is a gas. So is helium, which is put inside birthday party balloons.



Here is what gas molecules look like.



What is a Gas? <https://youtu.be/EDTF6l2WhYo>

## Properties of Matter



Study Jams – Properties of Matter: <https://youtu.be/6jYVpMDULVY>

***Four properties of matter are:***

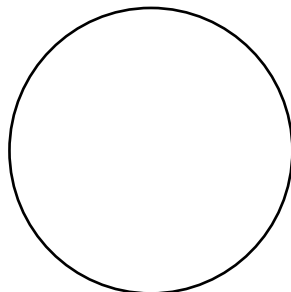
1. **mass** - how much matter is contained in an object  
- is measured in grams or ounces
2. **weight** - measured in pounds
3. **volume** - how much space it takes up
4. **density** - how heavy or light an object is for its size

**Chemistry ~ Learning Guide Name: \_\_\_\_\_****Instructions:**

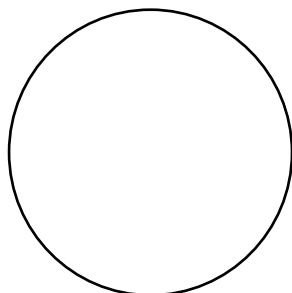
Using a pencil, complete the following notes as you work through the related lessons. Show ALL work as is explained in the lessons. You are required to have this package completed BEFORE you write your unit test. Do your best and ask questions if you don't understand anything!

**2.1 Matter**

1. What is an example of matter?
2. Matter is anything that has \_\_\_\_\_ and takes up \_\_\_\_\_.
3. A solid has a fixed \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
4. The three basic forms of matter are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
5. What do molecules in a solid look like:



6. What are 3 examples of a solid:
  - a.
  - b.
  - c.
7. Liquids change depending on \_\_\_\_\_.
8. What do molecules in a liquid look like:

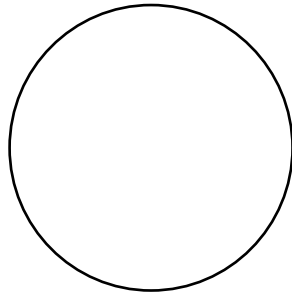


9. What are three examples of a liquid (cats are not a liquid!!)

- a.
- b.
- c.

10. Gas is a matter that spreads out and takes up \_\_\_\_\_ in a container.

11. What do gas molecules look like?



12. What are 2 examples of a gas?

- a.
- b.

13. Tell whether each is a solid, liquid or gas.

milk - \_\_\_\_\_ cookie - \_\_\_\_\_

oxygen - \_\_\_\_\_ fish - \_\_\_\_\_

pencil - \_\_\_\_\_ maple syrup - \_\_\_\_\_

shampoo - \_\_\_\_\_ carbon dioxide - \_\_\_\_\_

ice cube - \_\_\_\_\_ paint - \_\_\_\_\_

oil - \_\_\_\_\_ salt - \_\_\_\_\_

water vapor - \_\_\_\_\_ gasoline - \_\_\_\_\_

14. Why does a golf ball weigh more than a beach ball?

15. What are the four properties of matter?

16. True or False: Mass is measured in pounds.
17. True or False: Density is how heavy or light an object is for its size
18. True or False: Volume is how much space an object takes up.