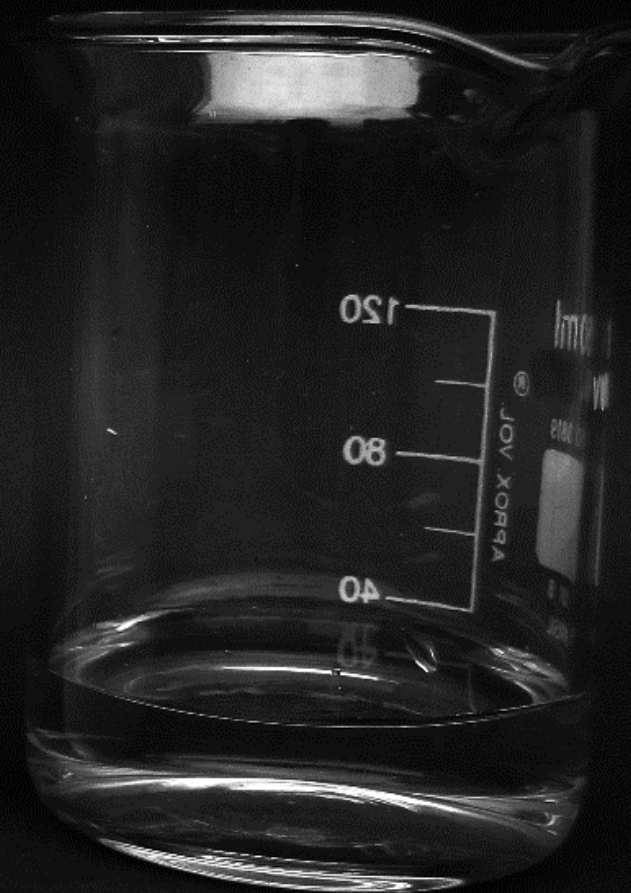


# Physical and chemical changes

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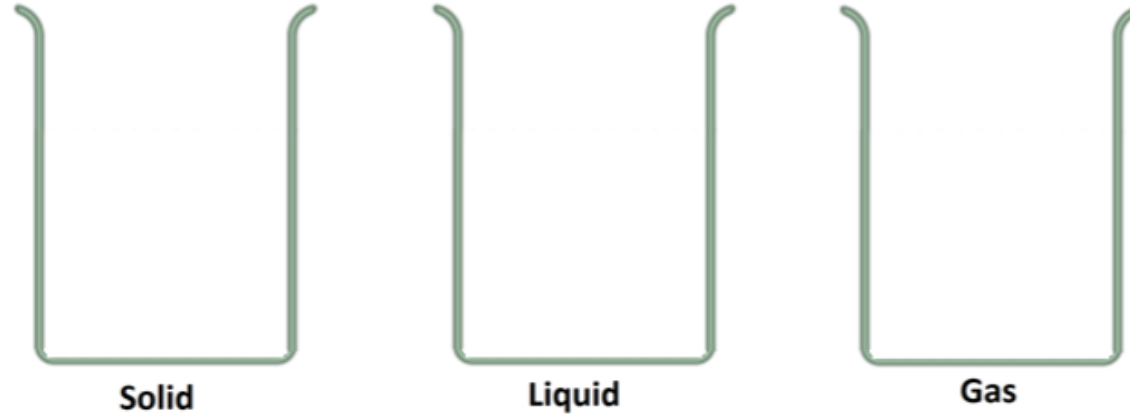
# LESSON TWO

*What are physical changes and how can we identify them?*

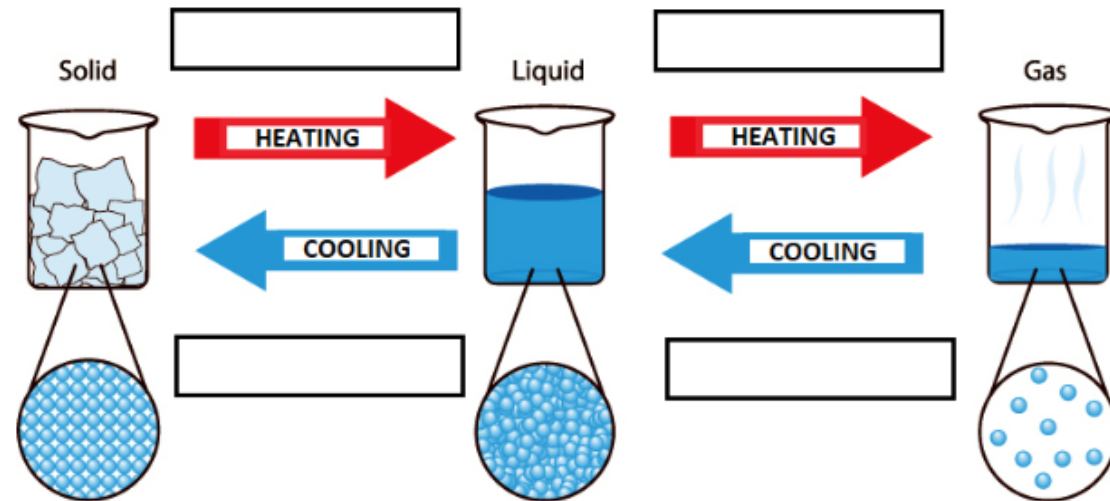


**Do Now – Retrieval practice**

**1. Draw the particles for a solid, liquid and gas**



**2. Fill in the gaps:**





**Read the following passage about physical changes**

When substances go through a change, there are two types of changes that can take place: physical changes and chemical changes. Physical changes are when a substance changes form or arrangement (such as changing state or being mixed with another substance) but the change is usually reversible. That means, no matter what the change is, it can be returned to the way it was in the first place.



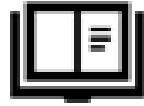
**What is a physical change?**

**A physical change is when \_\_\_\_\_**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.



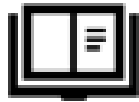
## Read the following passage about physical changes

There are a number of examples of physical changes. Any change in state such as melting, boiling, condensing or freezing is a physical change as the substance can be returned to its original form. For example, ice can be melted to make water but it can be returned to make ice again if it is frozen.



**What is kind of physical change shown where ice is changed to water?**

**This is an example of a physical change where the substance c\_\_\_\_\_ s\_\_\_\_\_.**



**Read the following passage about physical changes**

Dissolving a substance or mixing substances together are examples of physical changes. This means when you mixed salt and sand with water, this was a physical change and in this case once again the change is reversible. The sand can be separated and filtered out, the water can be removed (and collected if have the right equipment) which leaves the salt as a white powder again.



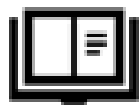
**What are two further examples of physical changes?**

**Two further examples of physical changes are when \_\_\_\_\_**

\_\_\_\_\_

**or \_\_\_\_\_**

\_\_\_\_\_.



## Read the following passage about physical changes

Finally, some physical changes mean you have a change in shape that is difficult to reverse. Examples of this include tearing up paper and breaking glass. In both cases, the substance is the same (even if it is in much smaller pieces) but it is difficult to get it to be exactly the way that it was.



**What are two examples of physical changes that are not easily reversible?**

1) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Watch the examples of physical changes that your teacher demonstrates. Write down what you observe and if the physical change is reversible or not.

| Example       | What did you observe? | Reversible or not? |
|---------------|-----------------------|--------------------|
| Ice and water | <hr/> <hr/>           |                    |
| Chocolate     | <hr/> <hr/>           |                    |
| Paper         | <hr/> <hr/>           |                    |
| Dissolving    | <hr/> <hr/>           |                    |





**Why would it NOT be a physical change if the teacher were to burn the paper instead of cutting it up?**

If the paper were to be burned, this would not be a physical change because the paper would \_\_\_\_\_.



**Discuss with a partner and decide whether each of the following examples are PHYSICAL changes or not and circle the correct answer**

- when ice cream melts - this is reversible/irreversible
- When sugar is mixed in to tea - this is reversible/irreversible
- When an egg is cooked - this is reversible/irreversible
- When water boils - this is reversible/irreversible
- When a pond freezes - this is reversible/irreversible
- When wood is burned on a fire - this is reversible/irreversible
- when a mug is dropped and smashes - this is reversible/irreversible

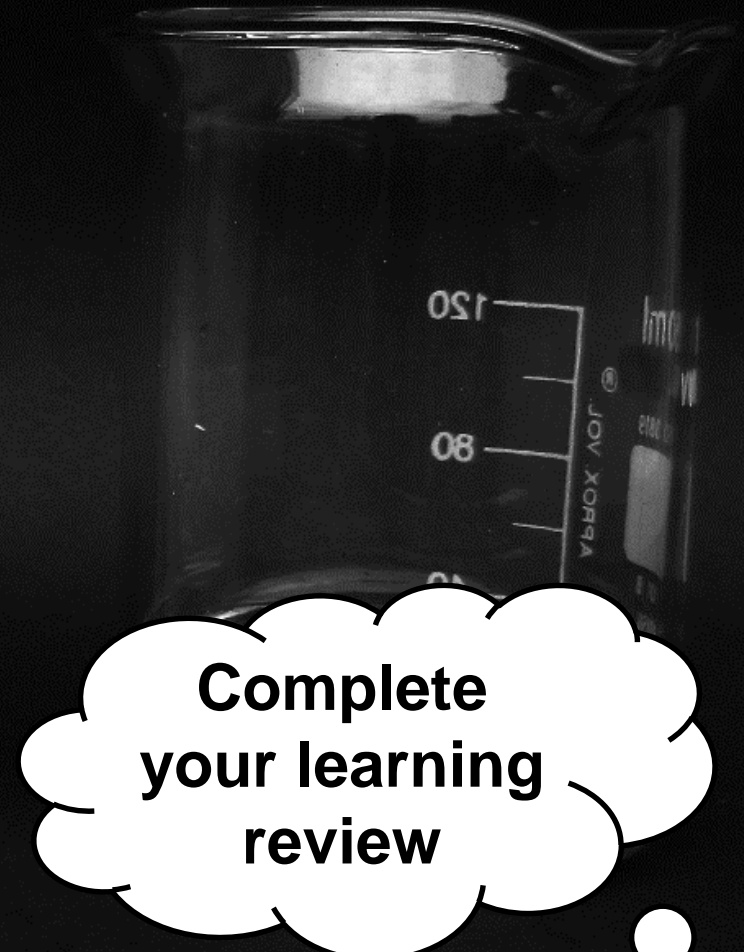
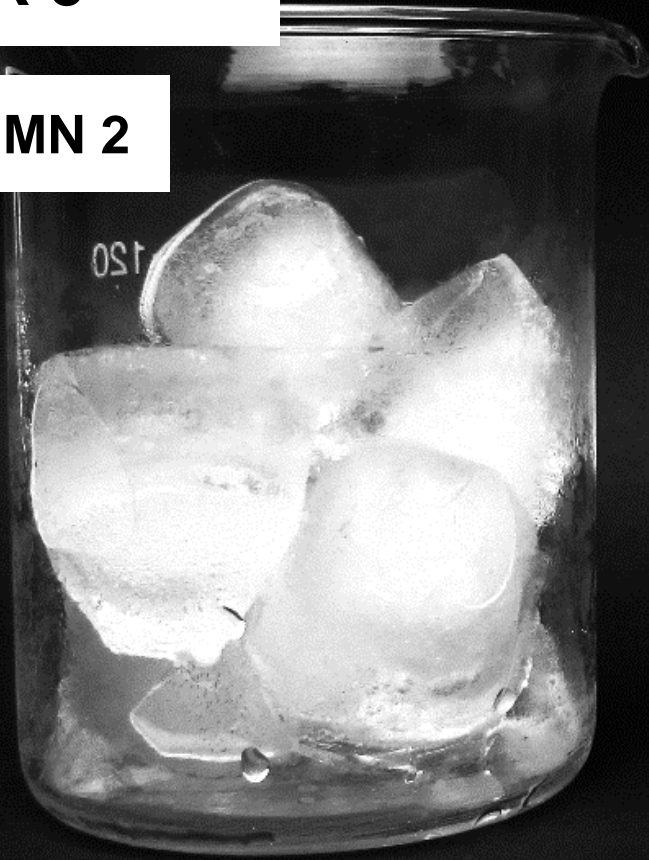


**Can you think of any physical changes that take place during preparation of food or cooking?**

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