

Warm Up – Scientific Investigation

How do you describe an object?

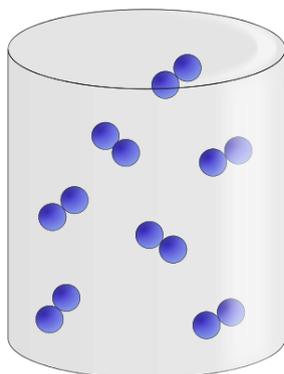
Can you write the opposite (antonym) to the words below?

| | | |
|--------|---|--|
| HOT | → | |
| SOFT | → | |
| SMOOTH | → | |
| SHORT | → | |
| THIN | → | |
| SMALL | → | |

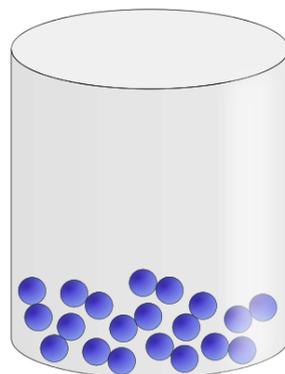
Mini-lesson

What properties do we use to identify objects?

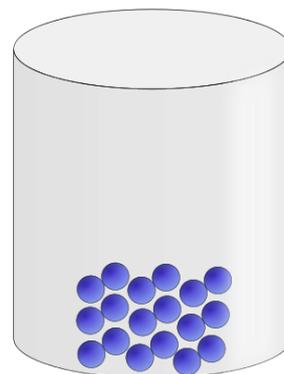
List some examples of solids, liquids and gases.



Gas



Liquid



Solid

Lesson 3.1 - Properties of Matter

Student Workbook Component

| Gas | Liquid | Solid |
|-----|--------|-------|
| | | |

Mini-lesson

What properties do we use to identify objects?

In the space below, identify two objects that can change material properties. Is the change reversible or irreversible?

| | Object 1: _____ | Object 2: _____ |
|---|-----------------|-----------------|
| How can the properties be changed? | | |

Lesson 3.1 - Properties of Matter

Student Workbook Component

| | | |
|---|--|--|
| <p>Is the change reversible or irreversible?</p> | | |
|---|--|--|

Match the keyword to its correct description.

| | |
|---|--|
| <div style="border: 1px solid black; padding: 5px; width: 100px; margin: 10px auto;">solid</div> <div style="border: 1px solid black; padding: 5px; width: 100px; margin: 10px auto;">liquid</div> <div style="border: 1px solid black; padding: 5px; width: 100px; margin: 10px auto;">gas</div> <div style="border: 1px solid black; padding: 5px; width: 100px; margin: 10px auto;">matter</div> | <div style="border: 1px solid black; padding: 10px; width: 250px; margin: 10px auto;">all objects are made up of this and it is tiny particles</div> <div style="border: 1px solid black; padding: 10px; width: 300px; margin: 10px auto;">are all around us and we may not be able to see them all and they move all the time and change shape</div> <div style="border: 1px solid black; padding: 10px; width: 200px; margin: 10px auto;">objects have one shape depending on the object and are easy to hold and feel</div> <div style="border: 1px solid black; padding: 10px; width: 200px; margin: 10px auto;">have no fixed shape and flow within the object holding it</div> |
|---|--|

Challenge 1

Create a SAM system to capture the change in a materials properties

Plan your system

1. What blocks do you need?

| | |
|---|---|
|  CAMERA 1x | The Camera block is the output within this system and will take the picture when the input tells it to. The image will be stored straight to the devices folder for pictures. |
|  TIME TRIGGER 5x | The Time Trigger block allows the input to be set to a particular time, we can set the time the camera will go off within the settings of this block |

2. Sketch your plan: Think about the SAM system you want to create and use the space below to draw it out.

- Which are your inputs and outputs? (*Remember inputs on the left connected to your output on the right*)
- How will they be connected together?
- What settings do you need to edit?

Lesson 3.1 - Properties of Matter

Student Workbook Component

Why do you think the order of steps important?

We can use transitional phrases to talk about the order events or actions that take place. Practice by using transitional phrases in order to present your system.

| Time & Sequence | Compare (+) | Contrast (-) | Cause and Effect |
|------------------------------|--------------------|---|-------------------------|
| first/second/third | also | but | because |
| next | equally | however | so |
| after | likewise | otherwise | therefore |
| then | in addition | on one hand... ...on the other hand | as a result |
| finally/overall/to sum up | similarly | opposite | due to |