

**Date:** Friday, October 20, 2023

## Unit: 1

### Forces Around us

#### Learning Outcomes:

- **Salma's Hair (lesson 1 launch)**
- **Inquiry Activity**  
**Explore how the balloon affect; other material;.**

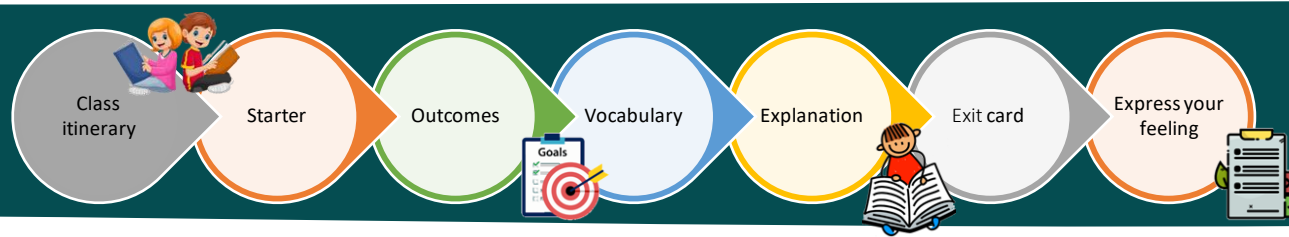
05:00

#### Type of Assessment

- ✓ Self
- ✓ Pre
- ✓ Post
- ✓ group







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#### • Salma's Hair (lesson 1 launch)

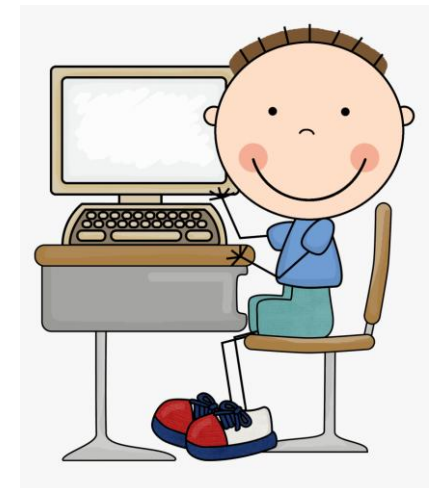
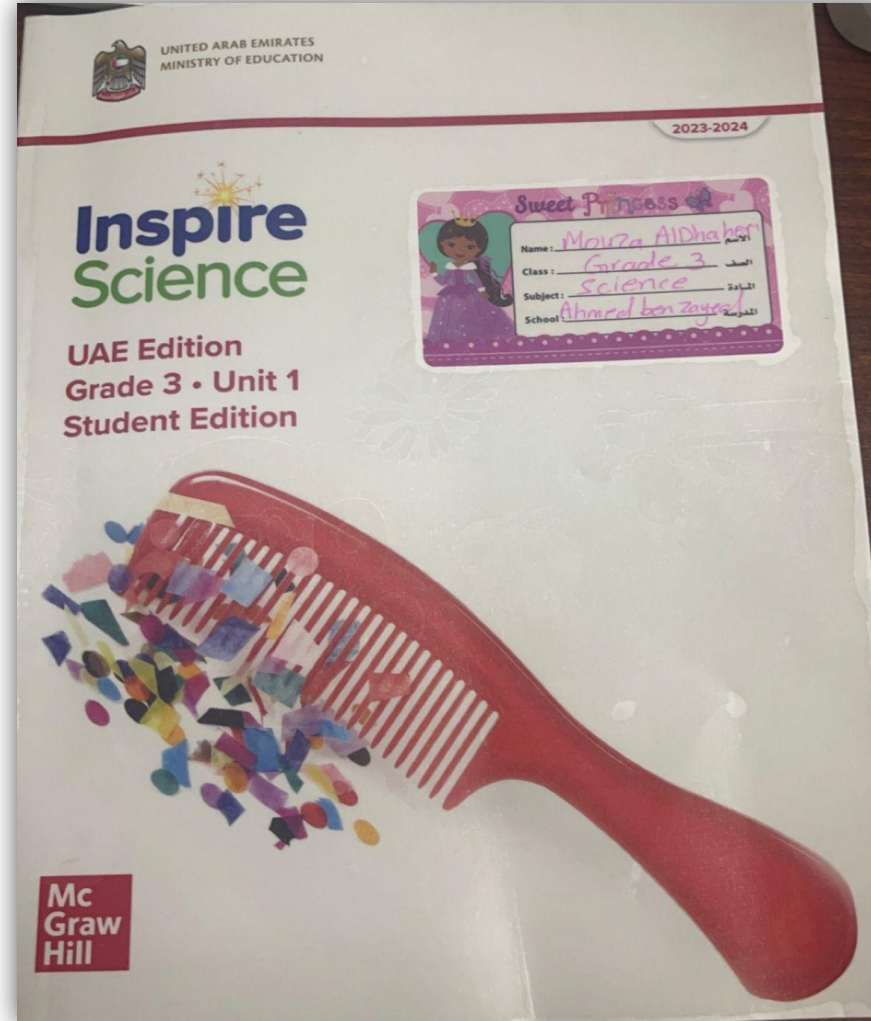
#### • Inquiry Activity Explore how the balloon affect; other materials,



#### Type of Assessment

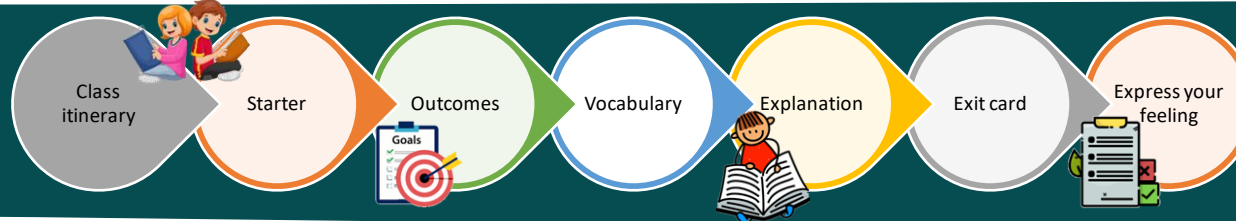
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# You will need:

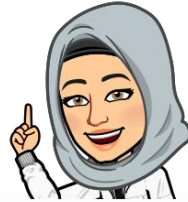




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## RULES



# Classroom Rules

**Unit: 1**

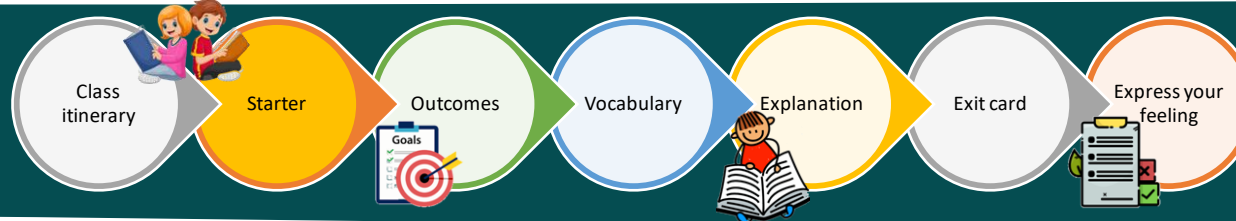
**Forces Around us**

Learning Outcomes:

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**let's DISCUSS**



**LESSON 1 LAUNCH**

**Salma's Hair**



Salma rubbed a balloon on her hair. She then held the balloon over her head. Salma and her friends laughed when her hair went straight up and stuck to the balloon. They each had different ideas about why Salma's hair went up toward the balloon. Here is what they said:

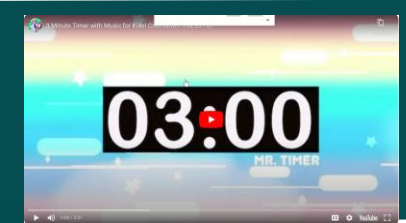
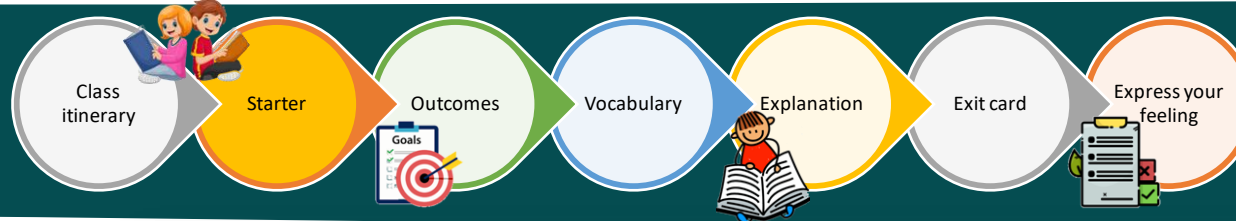
**[Pink box]:** I think the balloon is **[Yellow box]** on my hair.

**[Blue box]:** I think the balloon and hair are **[Yellow box]**.

**[Green box]:** I think the balloon has **[Yellow box]**.



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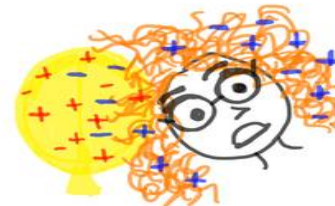
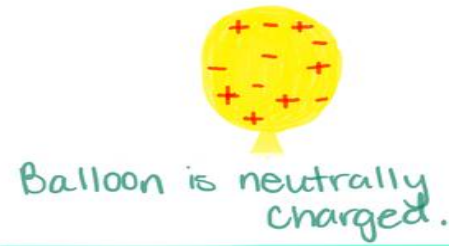
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### Forces Around us

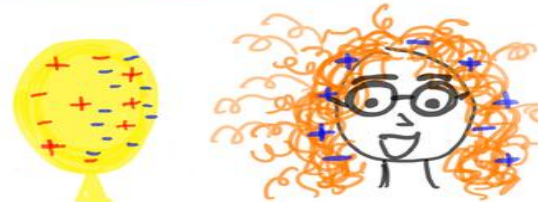
#### Learning Outcomes:

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**Explore how the balloon affects other materials.**

### let's DISCUSS



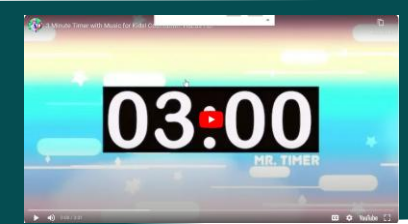
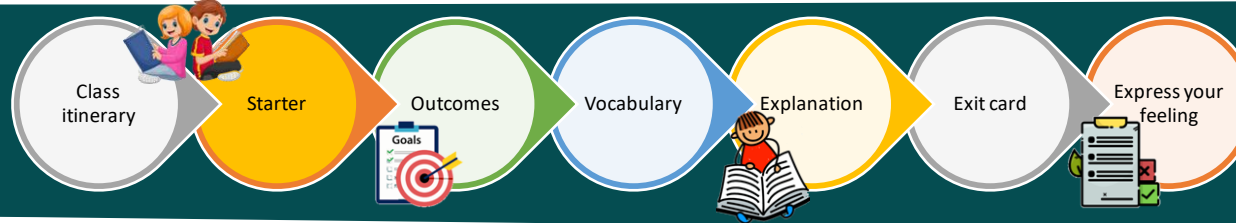
The balloon and hair become charged when electrons transfer due to friction!



Since the hair is now positively charged and the balloon has a net negative charge, and since opposites attract → hair is sticking to the balloon!



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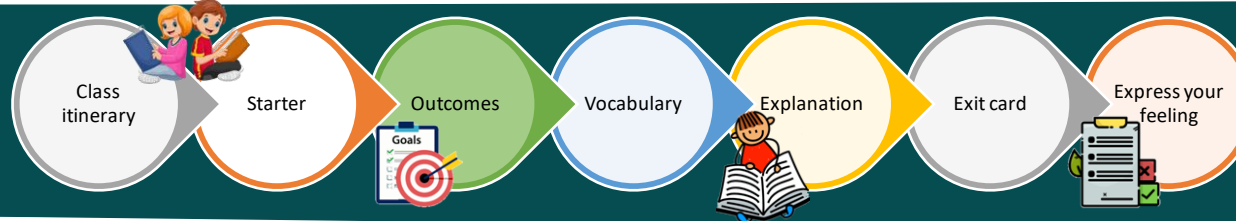
Who do you agree with most?

**Curt**

Explain why you agree.

**When the balloon is rubbed on the hair, electrons move from the hair to the balloon.**





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## Unit 1 : Force Around Us/ Electricity and Magnetism

### Lesson 1: Electricity and Designing Solutions

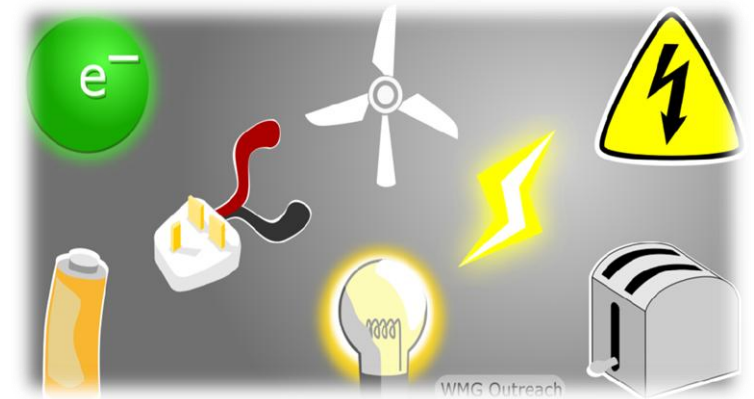
## Learning Objective

**?** **The students will be able to:**



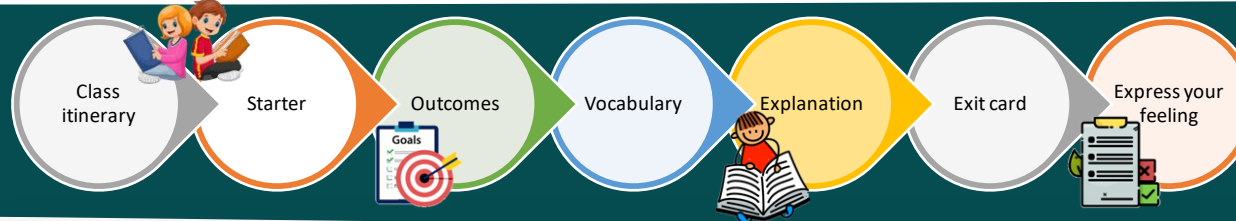
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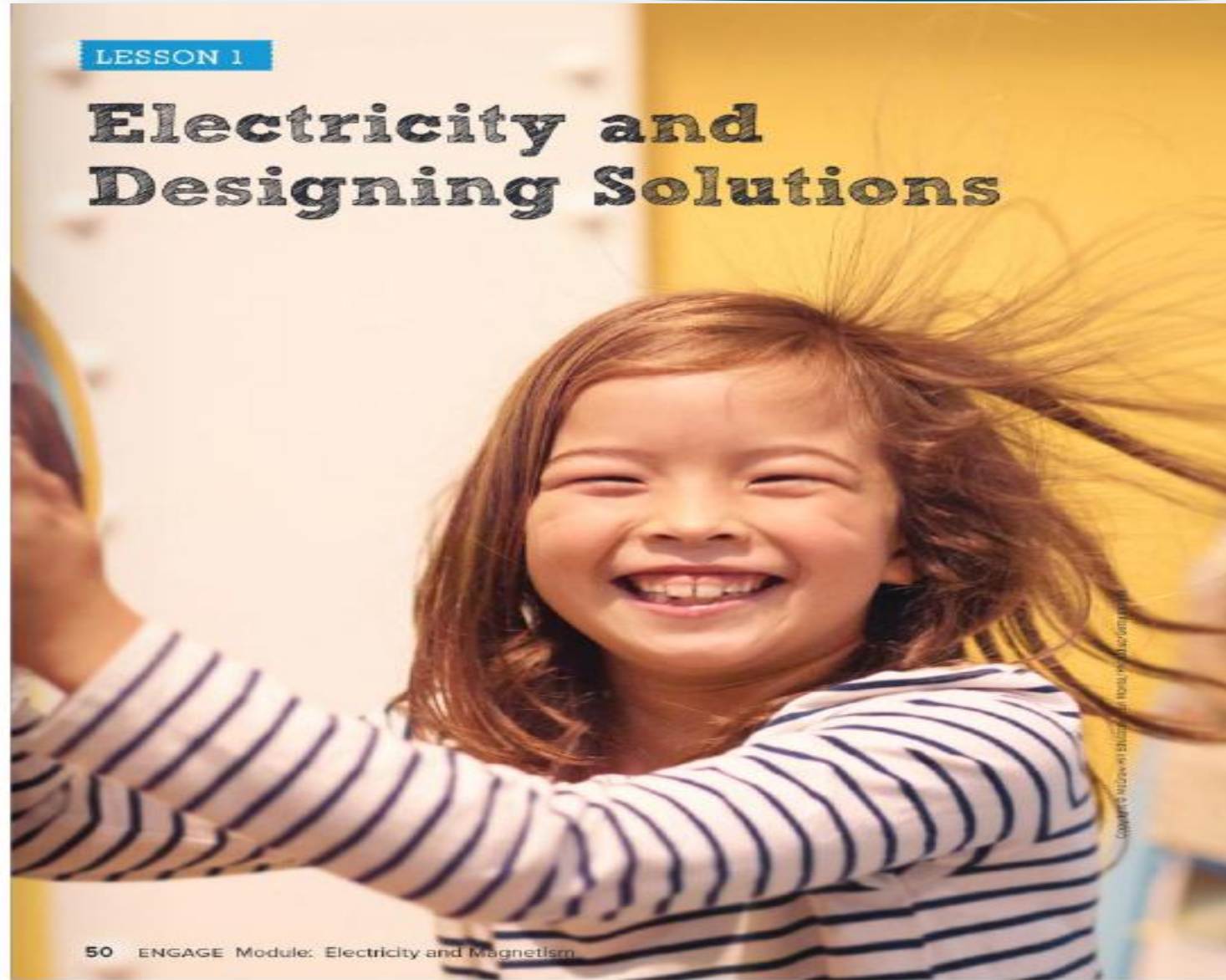


**Unit: 1**

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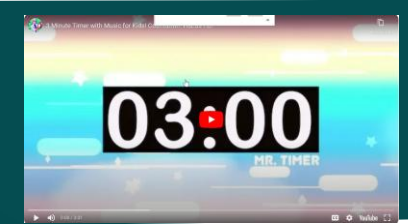
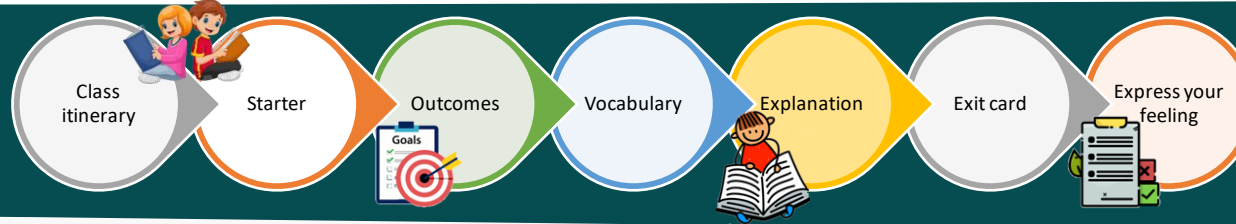
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## INQUIRY ACTIVITY

**Hands On**

### Static Charge

In the Encounter the Phenomenon video, you observed hair rising and falling as a result of static electricity.  
Think about how the balloon affects other materials.

### Materials



2 balloons



water



unflavored gelatin



paper confetti



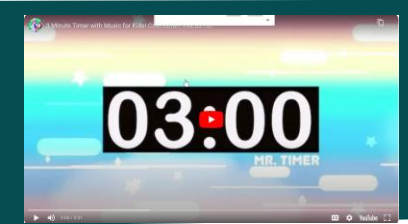
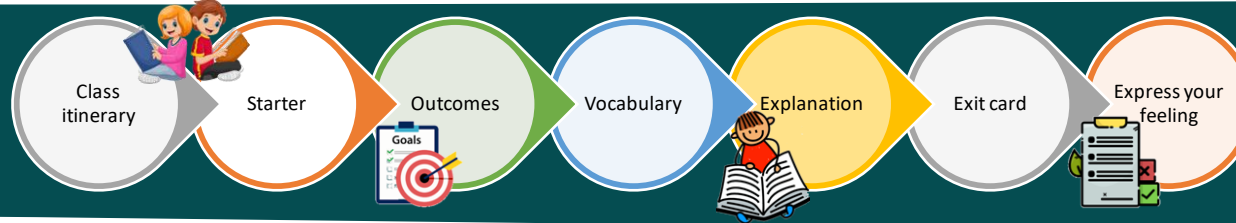
petri dish



wool cloth



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## INQUIRY ACTIVITY

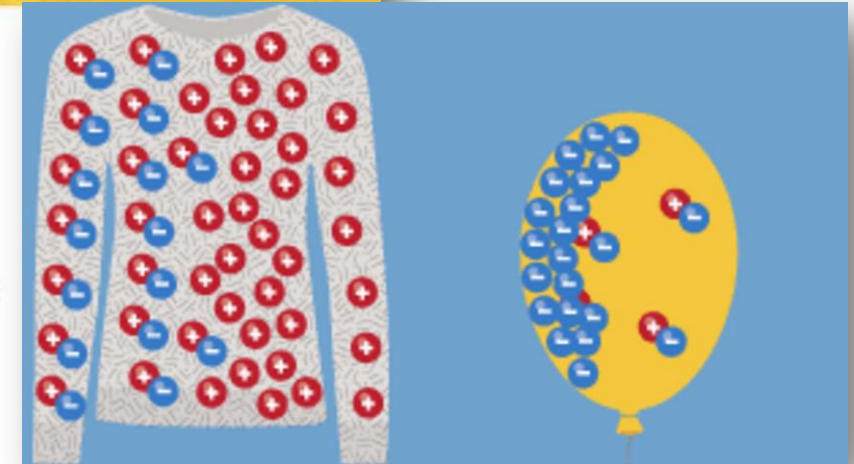
**Hands On**

### Static Charge

In the Encounter the Phenomenon video, you observed hair rising and falling as a result of static electricity. Think about how the balloon affects other materials.

**Make a Prediction** What will happen to a balloon, paper confetti, running water, and gelatin when a balloon that has been rubbed with wool comes near them?

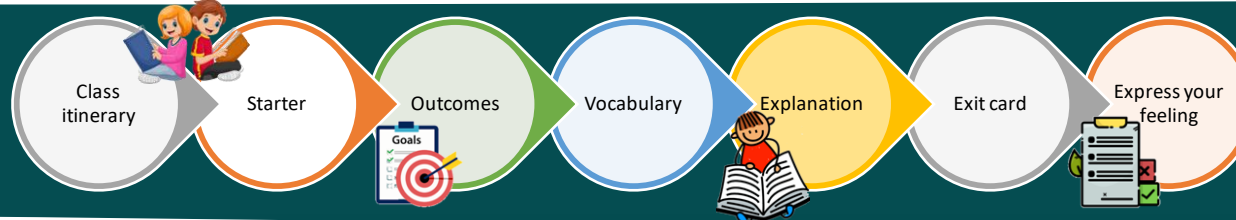
**I think these materials will be attracted to the balloon that was rubbed with wool.**







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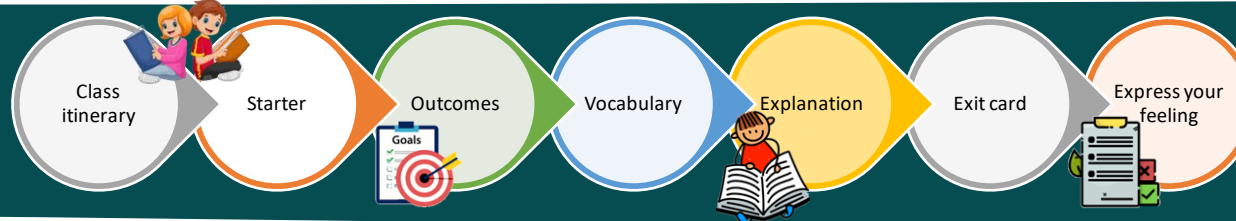
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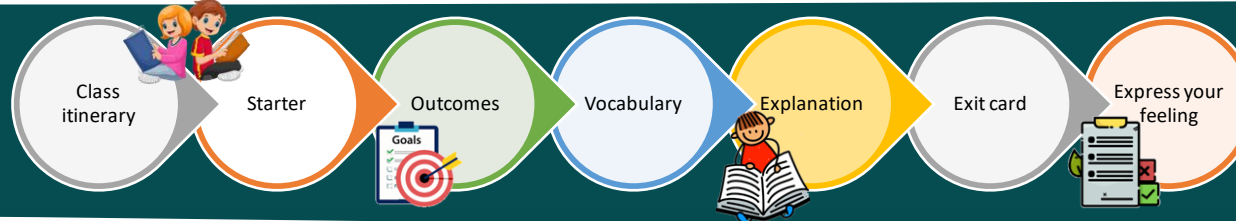
### Carry Out an Investigation

1. Rub one inflated balloon on a piece of wool.
2. Hold the balloon close to the other balloon.
3. **Record Data** Record your observations.
4. Rub a balloon on a piece of wool and slowly bring the balloon close to the paper confetti. Record your observations.
5. Rub a balloon. Hold the balloon above a bowl of gelatin powder. Record your observations.
6. Rub a balloon. Hold the balloon near a thin, steady stream of water. Record your observations.
7. Rubbing the balloon each time, try to stick the balloon to three different surfaces in your classroom. Record the surfaces and your observations.



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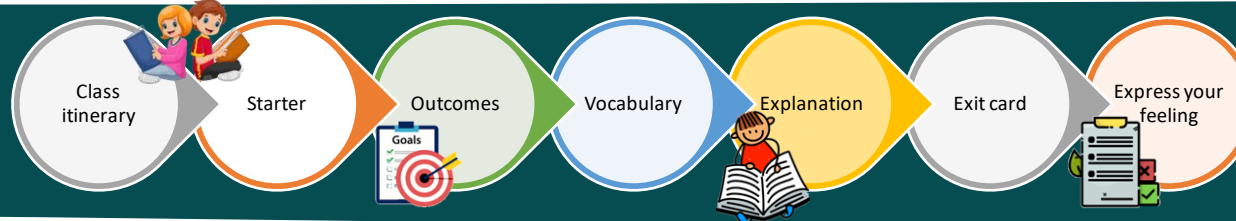
**Learning Outcomes:**

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**Explore how the balloon affects other materials.**

Material	Observations
Balloon	<b>Sticks the wool- rubbed balloon</b>
Confetti	<b>Sticks to the balloon</b>
Gelatin	<b>Sticks to the balloon</b>
Water	<b>Bends toward the balloon</b>



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## INQUIRY ACTIVITY

### Communicate Information

8. Did the results of your investigation support your prediction?

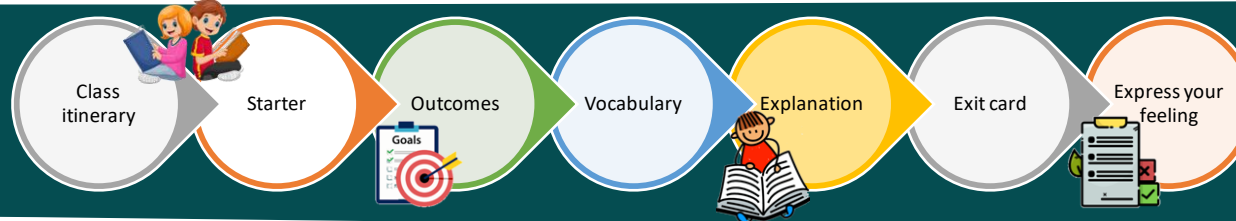
Explain.

**Yes. All the materials were attracted to the balloon that was rubbed with wool.**





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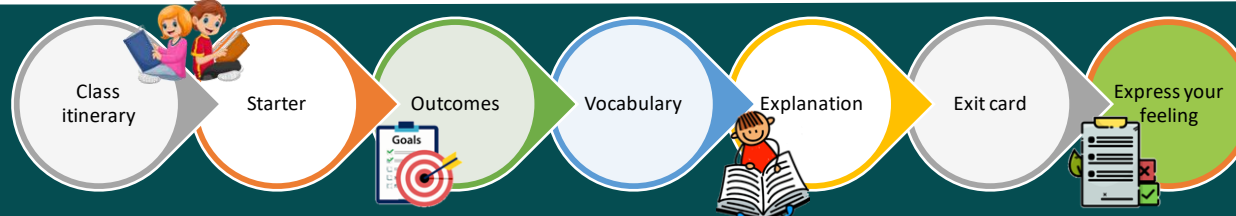
#### Learning Outcomes:

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9. What other questions do you have about this activity?

**Why do some materials move away from the balloon?**

**Are all materials attracted to a balloon that has been rubbed with wool?**



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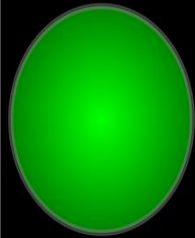
Learning Outcomes:

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(lesson 1 launch)

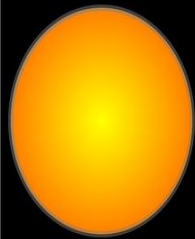
• **Inquiry Activity**  
**Explore how the**  
**balloon affects other**  
**materials.**

# Self Assessment

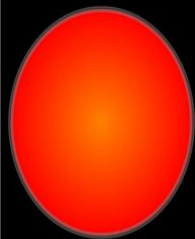
## I can explain how the balloon affects other materials



I can do It!



I am getting there



I need more help

