

Homo, Lyra May C.  
BMSEE 2A

**Lesson Overview**

**Content: Force** *Understanding how forces can change the shape of objects.*

**Question/Problems:** How can we tell if a force has changed the shape of an object?

Content		
Big Idea	Content Standard	Learning Competency
Changing the movements of an object requires a net force to be acting on it.	Pushes and pulls can change the position and shape of objects.	7. Determine how forces can change the shape of objects such as when they are pushed, pulled, stretched, bent, twisted, or squeezed;

Topics to be Covered	Discussion of Concepts	Links to Teaching and Learning Resources
7. Determine how forces can change the shape of objects such as when they are pushed, pulled, stretched, bent, twisted, or squeezed;	<p><b>Force</b> - is a push or a pull acting on an object due to its interaction with another object. It causes a stationary object to move and a moving object to come to a stop. Force is a vector quantity that has both magnitude and direction.</p> <p>Different Kinds of Force: They are broadly divided into <b>contact forces</b>, which require physical interaction, and <b>non-contact</b></p>	<p><a href="https://www.sciencefacts.net/types-of-forces.html">https://www.sciencefacts.net/types-of-forces.html</a></p> <p>Department of Education (DepEd), Republic of the Philippines. <i>Science Curriculum Guide - Grade 4</i>. K to 12 Curriculum Guide (2016 version). [Also supported by general physical</p>

	<p><b>(action-at-a-distance) forces</b>, which act without direct contact.</p> <p><b>Non-Contact (Action-at-a-Distance) Forces</b></p> <ol style="list-style-type: none"><li><b>1. Gravitational Force</b> An attractive force between objects with mass. It's responsible for keeping planets in orbit and objects grounded on Earth.</li><li><b>2. Electromagnetic Force</b> A combination of electric and magnetic forces. It governs interactions between charged particles and is fundamental to electricity, magnetism, and light.</li></ol> <p><b>Contact Forces</b></p> <ol style="list-style-type: none"><li><b>1. Applied Force</b> A force exerted by a person or another object. For example, pushing a door open.</li><li><b>2. Frictional Force</b> The resistance force that occurs when two surfaces slide against each other. It opposes motion.</li><li><b>3. Normal Force</b> The support force exerted upon an object in contact with another stable object, like a book resting on a table.</li></ol>	<p>science concepts found in: Exploring Creation with Physical Science by Jay Wile, and Cambridge Primary Science Learner's Book 4.]</p> <p><a href="https://www.slideshare.net/slideshow/q3-lesson-44-effects-of-force-on-the-shape-of-an-object-bevspptx/257151135?utm_source=chatgpt.com">https://www.slideshare.net/slideshow/q3-lesson-44-effects-of-force-on-the-shape-of-an-object-bevspptx/257151135?utm_source=chatgpt.com</a></p> <p><a href="https://www.slideshare.net/slideshow/q3-lesson-44-effects-of-force-on-the-shape-of-an-object-bevspptx/257151135">https://www.slideshare.net/slideshow/q3-lesson-44-effects-of-force-on-the-shape-of-an-object-bevspptx/257151135</a></p>
--	--	--

4. **Tension Force**

Transmitted through a string, rope, or wire when it is pulled tight by forces acting from opposite ends.

5. **Spring (Elastic) Force**

Exerted by a compressed or stretched spring upon any object that is attached to it.

6. **Air Resistance (Drag) Force**

A type of frictional force that acts upon objects as they travel through the air, opposing the motion.

All the forces mentioned above can be traced back to four fundamental interactions:

- **Gravitational Force**
- **Electromagnetic Force**

These fundamental forces are the building blocks of all interactions in the universe.

How forces change the shape on object such as when they are:

**Pushing**

When you push an object, like squashing a sponge, a soft object like clay can be easily shaped by pushing it.

**Pulling**

Pulling can stretch or lengthen an object. For

example, when you pull on a rubber band, it becomes longer and thinner.

**Stretching**

Stretching means pulling an object from both ends. This force makes the object longer. Clothes made of elastic can stretch when we wear them.

**Bending**

Bending happens when we apply force in such a way that the object curves. For instance, a plastic ruler may bend if you press it down from both ends.

**Twisting**

Twisting means turning the object in opposite directions at both ends. A good example is wringing out a wet towel — you twist it to get the water out.

**Squeezing**

Squeezing applies force from two or more sides to make something smaller or more compact. For example, squeezing a soft ball flattens or compresses it.

--	--	--

### Next Generation Science Standards (NGSS) Alignment

<p><b>Performance Expectation/Standard</b></p> <p>Students who demonstrate understanding can:</p> <p>K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. [Clarification Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.] [Assessment Boundary: Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.]</p>		
<b>Science and Engineering Practices</b>	<b>Disciplinary Core Idea</b>	<b>Crosscutting Concepts</b>
<p><b>Planning and carrying out investigations</b></p> <p>Planning and carrying out investigations to answer questions or test solutions to problems in K-2 builds on prior</p>	<p><b>PS2.A: Forces and Motion</b></p> <ul style="list-style-type: none"> <li>▪ Pushes and pulls can have different strengths and directions. (K-PS2-1),(K-PS2-2)</li> <li>▪ Pushing or pulling on an object can change the speed or direction</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>▪ Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1),(K-PS2-2)</li> </ul>

<p>experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>• With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1)</li> </ul> <p>.....</p> <p><b>Connections to Nature of Science</b>  <b>Scientific Investigations Use a Variety of Methods</b></p> <ul style="list-style-type: none"> <li>• Scientists use different ways to study the world. (K-PS2-1)</li> </ul>	<p>of its motion and can start or stop it. (K-PS2-1),(K-PS2-2)</p> <p><b>PS2.B: Types of Interactions</b></p> <ul style="list-style-type: none"> <li>▪ When objects touch or collide, they push on one another and can change motion. (K-PS2-1)</li> </ul>	
---	--	--

<b>Math Connections</b>	<b>TLE Connections</b>	<b>Government Thrusts</b>
<p>Mathematics helps students observe, compare, and measure the changes in object shape after applying different forces. This strengthens their skills in basic measurement and comparison.</p> <ul style="list-style-type: none"> <li>• Measure and compare how much objects stretch, bend, or shrink after force is applied.</li> <li>• Sort and group objects according to whether they changed shape or not, using tallies or simple bar graphs.</li> </ul>	<p>In TLE, students apply what they learned by using materials properly based on their flexibility, durability, and use in real-life projects. This develops skills in material selection and safe handling.</p> <ul style="list-style-type: none"> <li>• Identify which materials (soft or rigid) are best used in making simple crafts like a container, toy, or holder.</li> <li>• Practice proper use of tools and materials in applying force (cutting, folding, twisting, shaping).</li> </ul>	<p><b>REPUBLIC ACT NO. 10533</b>  <b>Enhanced Basic Education Act of 2013</b></p> <ul style="list-style-type: none"> <li>• This law strengthens the K–12 curriculum and promotes the use of inquiry-based learning in science, where students observe, test, and explain how forces affect different objects and materials.</li> <li>• It supports learners in developing scientific thinking by doing hands-on activities.</li> </ul> <p><b>DEPED K TO 12 SCIENCE CURRICULUM (MATATAG)</b></p>

<ul style="list-style-type: none"><li>• Use non-standard or standard units (ruler, cube blocks, paper clips) to measure the object's shape before and after applying force.</li></ul>	<ul style="list-style-type: none"><li>• Understand how knowing an object's response to force helps in choosing safe and effective materials for household and school use.</li></ul>	<ul style="list-style-type: none"><li>• The revised MATATAG curriculum highlights real-life application of scientific concepts through exploration and discovery.</li><li>• This promotes learning through observation, experimentation, and reflection.</li></ul> <p><b>REPUBLIC ACT NO. 10612</b> <b>Fast-Tracker Science and Technology Scholarship Act of 2013</b></p> <ul style="list-style-type: none"><li>• This law improves STEM education by supporting the development of quality science instruction in basic education.</li><li>• It encourages science classrooms to provide meaningful experiences to students by allowing them to explore how things work</li></ul>
---	---	---

## Detailed 7E's Lesson Plan in Science 4

### I. OBJECTIVES

At the end of the lesson, the students will be able to:

- A. Identify and describe the effects of force such as push, pull, bend, stretch, twist, and squeeze on different objects;
- B. Perform a short group skit that demonstrates different types of force and how they affect the shape, size, or movement of objects;  
and
- C. Demonstrate the effects of force on the shape of objects.

### II. SUBJECT MATTER

**Topic:** Effects of Force on Objects

**References:** DepEd Marikina Science 4/ Quarter 3 - Module 1

**Materials:** PowerPoint Presentation, Real Objects, Pictures, Laptop, Tv

**Valuing:** Appreciate the value of teamwork and cooperation in activities involving force.

### III. PROCEDURE

Phases	Learning Activities		Open
	Teacher's Activity	Pupil's Activity	
<b>A. Preliminary Activities</b>			
	<b>1. Prayer</b>		

	<p>Before we begin our class today, let us invite God into our hearts and minds to guide our learning today. Kindly stand, close your eyes, and bow your heads.</p> <p>(The teacher will play a video.) <a href="https://youtu.be/A5Tq-2fSTFY?feature=shared">https://youtu.be/A5Tq-2fSTFY?feature=shared</a></p> <p><b>2. Greetings</b></p> <p>Good morning, Grade 4!</p> <p>I am glad to see you here today, are you ready to learn?</p> <p>Very good!</p> <p>Before we begin, take a quick look around you. Make sure your chairs are properly arranged, your bags are under your chairs, and there's no trash on the floor.</p> <p>Very good, class!</p> <p><b>3. Checking of Attendance</b></p> <p>Before we start our lesson, let's check who is absent for today. Say present when your name is called.</p> <p>Great job, class! No absences today.</p>	<p>(The students will stand, close their eyes, and bow their heads.)</p> <p>(The students will pray using the video provided by the teacher.)</p> <p>“Good morning, Teacher Lyra!”</p> <p>“Yes, we are!”</p> <p>(Students will adjust their chairs and bags.)</p> <p>(The students will listen quietly and say present when their names are called.)</p>	
--	--	--	--

	<p><b>4. Classroom Management</b></p> <p>Before we begin with our lesson, let's go over our classroom rules together.</p> <p>What are some of the rules we follow in our classroom?</p> <p>(The teacher will call students who raised their hands.)</p> <p>Yes, (name of the student)?</p> <p>Very good, (name of the student), next?</p> <p>Yes, (name of the student)?</p> <p>Very good, (name of the student)! Next!</p> <p>Yes, (name of the student)?</p> <p>Very good, (name of the student)!</p> <p>Very good, everyone! I'm glad that you still remember our classroom rules. This tells me that you're ready to learn and behave responsibly.</p>	<p>(The students will raise their hands)</p> <p>"Listen when the teacher is speaking."</p> <p>"Raise your hand if you have a question or if you want to answer."</p> <p>"Be respectful to others."</p>	
<b>B. Developmental Activities</b>			
1	Elicit To start our lesson, I have prepared a short activity to help us discover what you already know		

about today's topic.  
I will read the directions first before we proceed to the activity.

**“KWL CHART”**

**Direction:** Get your KWL chart. In the K (Know) column, write what you already know about force and how it can affect objects. In the W (Want to Know) column, write the questions or things you want to learn about force. After our lesson, we'll fill in the L (Learned) column with the new knowledge you gained.

Are we clear on instructions clear?

“Yes, teacher!”

Before we proceed, let's recall what are our rules when doing activities like this?

(Students raise their hands.)

(Calling students who raised their hands.)

Yes, (name of the student)!

“Work quietly and seriously.”

Very good, (name of the student)!

Another one!

Yes, (name of the student)!

“Ask questions politely if confused.”

Very good, (name of the student)!

last!

Yes, (name of the student)!

“Respect everyone's answers.”

Very good! I'm glad you still remember our activity rules. Now let's begin.

(The teacher will start asking guiding questions to activate prior knowledge.)

- What do you already know about force?
- Can you give me an example of something you push or pull every day?
- What happens when you push or pull something?"
- Do you think force can change how an object looks or moves?

(The students will answer based on what they know.)

Topic: \_\_\_\_\_ Name: \_\_\_\_\_

K What I already know	W What I want to know	L What I learned

		<p><i>After 4-5 minutes.....</i></p> <p>Now, what do you want to know about force? List the things you want to know, it can be in a form of question or information.</p> <p><i>After 3 minutes.....</i></p> <p>Well done, Grade 4! Give yourselves a round of applause.  <a href="https://youtu.be/M0IaxJ3ekFc?si=cJ8zNMB89Yrq4zn-">https://youtu.be/M0IaxJ3ekFc?si=cJ8zNMB89Yrq4zn-</a></p> <p>Now that you've completed the first two parts of your KWL chart, it's time to move forward.</p> <p>I've prepared an exciting activity where we'll explore how force works and how it affects objects around us.</p> <p>Are you ready to learn more about how pushing, pulling, twisting, and squeezing can change the shape, size, or movement of things?</p> <p>Great! Let's continue our lesson and see how force plays a big role in our daily lives.</p>	<p>(The students will give themselves a big round of applause.)</p> <p>“Yes, teacher Lyra!”</p>	
2	Explore	<p>Today, we are going to learn something exciting—how forces can change the shape or movement of different objects. To begin, I have prepared a short and interesting video, watch closely and think about how the objects in the video change when force is applied to them.</p> <p>Are you ready, class?</p>	<p>“Yes, teacher!”</p>	<p>Video link:  <a href="https://youtu.be/M0IaxJ3ekFc?si=cJ8zNMB89Yrq4zn-">https://youtu.be/M0IaxJ3ekFc?si=cJ8zNMB89Yrq4zn-</a></p>

	<p>Alright, let's watch and learn! (The teacher will start playing the video.)</p> <p>Video link:</p> <p><i>After 3 minutes....</i></p> <p>So, what did you notice in the video? What happens to the objects when force is used on them?</p> <p>(The teacher will call students who raised their hands.)</p> <p>Very good! Another one?</p> <p>Yes, (name of the student)</p> <p>Great observation! Now, who can tell me what force means?</p> <p>Yes, (name of the student)?</p> <p>Very good, (name of the student)! Now let me ask you—have you ever bent, twisted, or squeezed something before? What happened to it?</p> <p>Do you think force is important in our daily life?</p> <p>Yes, (name of the student)?</p>	<p>(The students will watch the video quietly.)</p> <p>(The students will raise their hands.)</p> <p>“Teacher, I saw that some things were pushed and they moved.”</p> <p>“One object was stretched and it became longer.”</p> <p>(The students will raise their hands.)</p> <p>“Teacher, it's like a push or pull that makes something move or change.”</p> <p>“Yes, teacher! When I squeezed my clay toy, it became flat!”</p> <p>(The students will raise their hands.)</p>	
--	--	--	--

	<p>That's right! Force is everywhere.</p> <p>Now let me ask, do you think it would be possible to live without using force?</p> <p>Yes, (name of the student)?</p> <p>Very good! Without force, we couldn't walk, play, or even eat! That's why we need to understand how different forces affect things around us.</p> <p>Thank you for sharing what you observed. You're all curious and observant, that's the scientist in you! Forces are all around us, and today, we'll explore how they can change the shape, size, or movement of objects.</p> <p>Give yourselves a clap for being great observers!</p>	<p>"Yes, teacher! We use force to open doors, carry bags, or play games."</p> <p>(The students will raise their hands.)</p> <p>"No, teacher, because we need force to move and do things."</p> <p>(The students will give themselves a happy clap.)</p>	
3 Engage	<p>Class, a while ago we watched how forces like push, pull, twist, bend, and squeeze can change how an object looks or moves. Now, it's your turn to explore these changes using real objects.</p> <p>I have prepared another activity, we're going to explore how force affects different objects. For this activity, I will divide you into two groups. Both of you will be using the same materials, but each group will have a different activity. Listen carefully to your group's instructions.</p>		

(The teacher will divide the students into two groups.)

The first group will do the activity entitled "Effects of Force on the Shape of an Object."

**“What Happens When We Apply Force?”**

For Group 1, your task is to find out how force changes the shape of different objects.

Procedure

1. Each group will receive a complete set of materials.
2. The teacher will explain that students will perform specific actions on each object and observe what changes occur.
3. Students will perform the following tasks:
  - Bend the wire
  - Press the clay
  - Twist the sponge
  - Stretch the rubber band
  - Squeeze the cloth
4. After each task, students will describe what happened to the object and record their observations in a table like this:

Object	Force Applied	Did the shape change? (✓ or X)	Describe the change
Wire	bend		
Clay	press		
Sponge	twist		
Rubber band	stretch		
Cloth	squeeze		

Work together, and remember to describe clearly what you observe.

Are we clear, group 1?

As for the second group, Group 2, are you ready for your challenge?

Great!

Group 2, Today, you will use your creativity and teamwork. I want you to become little scientists and sculptors! You will be using force to change objects and then use those changed objects to form something creative!

“Yes, teacher!”

“Yes, teacher!”

**“Force Challenge: Shape It, Change It!”**

**Instructions**

1. As for our instruction, you will receive the same materials as Group 1:
  - Bend the wire
  - Press the clay
  - Twist the sponge
  - Stretch the rubber band
  - Squeeze the cloth
  
2. Use your hands and safe tools (if needed) to apply force to these materials.
  - You can press, stretch, twist, bend, squeeze, or pound the items.
  
  - Your goal is to change their shape or size and turn them into a creative mini figure or display.
  
3. After creating your “Force Figure,” write or draw your answers on a short activity card.

<b>Our Group’s Figure Force :</b>	
<b>Materials we used :</b>	
<b>What forces did we apply?</b>	

	<table border="1" data-bbox="508 228 1064 293"> <tr> <td data-bbox="508 228 787 293"><b>What changed?</b></td> <td data-bbox="787 228 1064 293"></td> </tr> </table> <p>Is my instruction clear, group 2?</p> <p>Very good!</p> <p>You only have 10 minutes to do the activity, after that each group will be given another 5 minutes to present and explain your observations.</p> <p>Are we clear?</p> <p>Are you ready?</p> <p>Very good!</p> <p>You may start your activity</p> <p><i>After 10 minutes.....</i></p> <p>Okay class, time's up! Let's wrap up our group activities. Please return all materials neatly to your group tray and face the front.</p> <p>Great job, everyone! You all looked like real scientists while exploring how force affects objects."</p> <p>Now, let's hear what you've discovered. Let's start with Group 1.</p>	<b>What changed?</b>		<p>"Yes, teacher!"</p> <p>"Yes, teacher!"</p> <p>"Yes, we are!"</p> <p>(The students will go to their prospective group and do the activity.)</p> <p>(The students will return all the materials and go back to their chairs.)</p> <p>(The group 1 leader will present and explain their observations and experience.)</p>	
<b>What changed?</b>					

	<p><i>After the presentation of group 1..</i> <i>(The teacher acts as a facilitator for the question and answer portion.)</i></p> <p>Great job, group 1, You did an amazing job observing how force can change the shape of different objects. I saw how focused you were—carefully bending, pressing, twisting, and squeezing each material. You were like real young scientists, using your eyes, hands, and minds to see what changes happened.</p> <p>Let's give group 1 a big round of applause!</p> <p>And now, let's call on group 2 to present their works and explain their observations.</p> <p><i>After 5 minutes....</i></p> <p>Thank you, group 2!</p> <p>You did such an amazing job showing us how force can change not just the shape or size of objects—but how it can turn everyday materials into creative Force Figures! I loved how you pressed, twisted, stretched, and bent your materials to form something fun and unique.</p> <p>You didn't just observe force—you used it with imagination. That takes both creativity and scientific thinking, and I'm so proud of how you</p>	<p>(The students will give them a big round of applause.)</p> <p>(The group 2 leader/representative will start presenting their work and explain their observations.)</p>	
--	--	---	--

		<p>worked together as a team.</p> <p>Alright, let's give group 2 a big round of applause.</p> <p>I am so proud of all of you today. Both Group 1 and Group 2 worked hard, used their minds, and explored like real scientists.</p> <p>Today, you didn't just play with materials, you learned through experience. You observed, tested, shared, and discovered. That's what science is all about!</p>	<p>(The students will give them a big round of applause.)</p>	
4	Explain	<p>Now, let's proceed to our main discussion.</p> <p>(The teacher will start presenting the PPT for discussion.)</p> <p style="text-align: center;"><b>“What is Force?”</b></p> <p><b>Force</b> - is a <i>push</i> or a <i>pull</i> acting on an object due to its interaction with another object. It causes a stationary object to move and a moving object to come to a stop. Force is a vector quantity that has both magnitude and direction.</p> <p>How forces change the shape on object such as when they are:</p> <p><b>Pushing</b> When you push an object, like squashing a sponge, a soft object like clay can be easily</p>	<p>(Listening and taking notes.)</p>	

shaped by pushing it.

**Pulling**

Pulling can stretch or lengthen an object. For example, when you pull on a rubber band, it becomes longer and thinner.

**Stretching**

Stretching means pulling an object from both ends. This force makes the object longer. Clothes made of elastic can stretch when we wear them.

**Bending**

Bending happens when we apply force in such a way that the object curves. For instance, a plastic ruler may bend if you press it down from both ends.

**Twisting**

Twisting means turning the object in opposite directions at both ends. A good example is wringing out a wet towel — you twist it to get the water out.

**Squeezing**

Squeezing applies force from two or more sides to make something smaller or more compact. For example, squeezing a soft ball flattens or compresses it.

Alright class, now that we've finished our main

discussion and you already know how force can change the shape of an object, let's see how well you understood!

When we say force, we are talking about a push or a pull.

Can you say that with me, class?

Force is a push or pull.

Very good!

Now, I have here some pictures of different objects where force was applied. I'll show you one picture at a time, and I will choose someone to answer. All you have to do is tell me 'What kind of change happened?'

(The teacher will show the picture.)



What did you notice in the picture?

Yes, (name of the student)?

Force is a push or pull!

(The students will raise their hands.)

"The girl is playing clay, teacher!"

Very good! Now, what happened to the clay?

That's right! Very good, (name of the student).

next

(The teacher will show the next picture.)



Okay, look at this. Who can tell me—what happened to the object here?

Yes, (name of the student)?

Very good! And for the last one

(The teacher will show the next picture.)

The clay was pressed, and its shape changed.

(The students will raise their hands.)

The rubber became longer because the boy was stretching it.



Okay, for the last picture, who can tell me—what happened to the object here?

Yes, (name of the student)?

Very good!

Great job, class! I'm really proud of how well you listened and participated in our discussion. You were able to connect what you did in the activity to what we learned today.

You now know that force is not just something we hear about—it's something we see, feel, and use every day.

(The students will raise their hands.)

It is not straight anymore, it became curvy and twisty because the girl was bending it.

5 Elaborate

Great job, class! You've done so well

	<p>understanding how force can change the shape, size, or movement of objects. Now it's time for you to apply what you've learned in a fun and creative way!</p> <p>For our next activity, we will do a group performance "Force Skit: Act It, Show It!"</p> <p>I will group you into 3 groups. Each group will think of a short scene that shows three different types of force—for example, pushing a cart, twisting a bottle cap, or squeezing a sponge.</p> <p>But here's the twist: You're not allowed to name the force during your skit. You will act it out, and after your performance, the class will guess what types of force were used and what changed in the object.</p> <p>Each group will be given 10 minutes to plan and practice their skit, and another 2 minutes to perform their skit.</p> <p>Are you ready to become actors and scientists in one?</p> <p><b>Procedure</b></p> <ul style="list-style-type: none"><li>• Groups will choose or create a simple real-life scenario that includes at least 3 types of force (push, pull, twist, stretch, squeeze, bend, press).</li><li>• They will practice their skit quietly in their groups.</li></ul>	<p>Yes, teacher!</p>	
--	---	----------------------	--

	<ul style="list-style-type: none"><li>• Each group will perform their skit in front of the class.</li><li>• They should act out the use of force clearly without saying the type of force used. After each skit, the teacher will ask:<ol style="list-style-type: none"><li>1. "What types of force did you see?"</li><li>2. "What changed—shape, size, or movement?"</li></ol></li></ul> <p><i>After 10 minutes.....</i></p> <p>Time's up! It's now time to see how well you can apply what you've learned.</p> <p>Let's begin our presentations! Group 1, you may now perform.</p> <p>Very nice performance, Group 1!</p> <p>Now class, can you tell me what types of force you saw in their skit?</p> <p>Very good!</p> <p>(Repeat for Group 2 and Group 3)</p>	<p>Yes, teacher!</p> <p>(The students start to perform their skits.)</p> <p>(They act out different scenarios involving force without naming them.)</p> <p>"Push! Twist! Squeeze!"</p>	
--	--	--	--

		<p>Great job, everyone! You were all able to show different types of force clearly through your actions. You also explained what changed—shape, size, or movement. That’s exactly what scientists do: observe, explain, and apply.</p> <p>Give yourself a big round of applause!</p>	<p>(The students will give themselves a big round of applause.)</p>	
6	Evaluate	<p>Now it’s time to check how well you understood our lesson today.</p> <p>You’ve already seen, felt, and acted out how force can change the shape, size, or movement of objects. Now, I want you to answer a few short questions based on what we learned.</p> <p>PART A: Multiple Choice (Write only the letter of the correct answer)</p> <ol style="list-style-type: none"> <li>1. What is force?       <ol style="list-style-type: none"> <li>a. A kind of food</li> <li>b. A shape of an object</li> <li>c. A push or pull</li> <li>d. A type of game</li> </ol> </li> <li>2. What will happen when you squeeze a sponge?       <ol style="list-style-type: none"> <li>a. It becomes bigger</li> <li>b. It changes shape</li> <li>c. It moves faster</li> <li>d. Nothing happens</li> </ol> </li> <li>3. Which of these is an example of force changing</li> </ol>		

	<p>size? a. Pressing clay b. Pulling a door c. Stretching a rubber band d. Throwing a ball</p> <p>PART B: Short Answer Give one example of the force you used today.</p> <p>What changed in the object—its shape, size, or movement?</p> <ul style="list-style-type: none"><li>• Give one example of the force you used today.</li><li>• What changed in the object—its shape, size, or movement?</li></ul> <p><i>After 10 minutes.....</i></p> <p><i>Alright, are you done, class?</i></p> <p>Very good! Kindly pass your paper in front.</p> <p><b>B.</b> Now, class, let's take a moment to reflect on what we've learned today. Please get your KWL chart. You will now fill in the "L" column, which stands for "What I Learned."</p> <p>I want you to write at least two things you learned from our lesson about the effects of force on objects. Take your time — you will have 5 minutes.</p>	<p>(The students will start answering the quiz.)</p> <p>Yes, teacher!</p> <p>(The students will pass their papers.)</p> <p>(The students will get their KWL charts and begin writing quietly in the "L" column.)</p>	
--	--	--	--

	<p>After 5 minutes</p> <p>I will call a few of you to share what you wrote. Who would like to go first?</p> <p>Yes, _____?</p> <p>Very good, _____! That's correct. Force can truly affect the shape, size, or movement of an object depending on how it is applied.</p> <p>Let's hear from one more student. How about you, _____?</p> <p>Excellent answer! You all did great reflecting on what we've learned. Please give yourselves a round of applause!</p> <p>Now, kindly pass your KWL charts forward.</p>	<p>(The students will raise their hands and volunteers will read their answers.)</p> <p>"I learned that force can change the shape and size of objects."</p> <p>"I learned that stretching, pressing, and squeezing are all types of force."</p> <p>(The students will clap and pass their KWL charts to the front.)</p>	
7	<p>Extend</p> <p>Now that you know what force is and how it can change the shape, size, or movement of objects, let's have some fun and get creative!</p> <p>For our Extend activity, I want you to imagine this:</p> <p style="text-align: center;"><b>"If I had a force superpower..."</b></p> <p>You will create a superhero or super-tool that uses at least one type of force — like pressing,</p>	<p>(The students will listen to the teacher.)</p>	

	<p>stretching, pushing, pulling, squeezing, or twisting.</p> <p>You can either draw your character or invention and describe it, or write a short paragraph about it.</p> <p><b>Instruction</b></p> <p>Imagine you have a superpower that uses any type of force — like push, pull, press, stretch, squeeze, or twist.</p> <p>What would your superpower be? How would you use it in real life to help others or solve problems? Think about these guide questions:</p> <ul style="list-style-type: none"><li>• What is your force superpower?</li><li>• What object do you use it on?</li><li>• What changes — shape, size, or movement?</li><li>• How does it help people in real life?</li></ul> <p>Are we clear with the instruction?</p> <p>Alright, class — that brings us to the end of our lesson today. You did a fantastic job exploring, observing, performing, and applying everything we learned about force.</p> <p>That's all for today, class. Thank you for being focused and active.</p>	<p>“Yes, teacher!”</p> <p>“Thank you, teacher!”</p>	
--	--	---	--

Phase	TPACK	GRP
Elicit	I use printed or digital KWL charts to activate students' prior knowledge and interest. I also use oral questioning strategies with scaffolding to help students reflect and share what they already know and want to learn about force.	I ensure every learner has the chance to participate by calling on different students from various groups and allowing both boys and girls to express their ideas. I use inclusive and encouraging language during Q&A to create a safe space for all.
Engage	I use a short educational video from YouTube to stimulate curiosity and build context for the topic. I pause for questioning and guide students in observing changes caused by force. This visual aid supports multiple learning styles.	I ask open-ended questions to include more voices. I encourage everyone to participate in the discussion and give equal opportunities to boys and girls to share their observations and thoughts.
Explore	I provide students with hands-on materials and a structured observation table or activity card to explore how force affects different objects. This helps them construct meaning through discovery and collaboration.	I assign mixed-gender groups and ensure each student has a role. I walk around during the activity to check that everyone is contributing, and I give equal recognition to the efforts of both groups.
Explain	I use a PowerPoint presentation with visuals and step-by-step definitions to explain the different types of force and their effects. I reinforce learning with object images and encourage student interaction.	I make sure to call on a variety of students and use gender-neutral language. I praise all responses equally and promote a respectful environment for both boys and girls to share confidently.
Elaborate	I facilitate a group performance activity where students apply their knowledge by acting out different forces. I use a timer and structured guide questions to support presentation and peer analysis.	I divide students into balanced groups and assign roles that encourage participation from everyone. I ensure that both boys and girls have leadership or speaking roles in the presentation.
Evaluate	I use a written assessment (multiple choice + short answer) and a KWL chart reflection to check understanding. I may also use simple digital platforms if available for faster collection of responses.	I offer multiple ways for students to show learning: written, oral, or visual. I randomly select students for sharing to avoid bias and encourage everyone to reflect, regardless of background or confidence level.

Extend	I offer a creative application task where students design a superhero or tool that uses force. They may write or draw their ideas. I allow the use of digital or paper-based formats depending on resources.	I provide students the choice to write or draw to support different learning styles. I celebrate creativity equally and ensure that all students, regardless of gender or ability, are acknowledged and appreciated for their effort.
--------	--	---