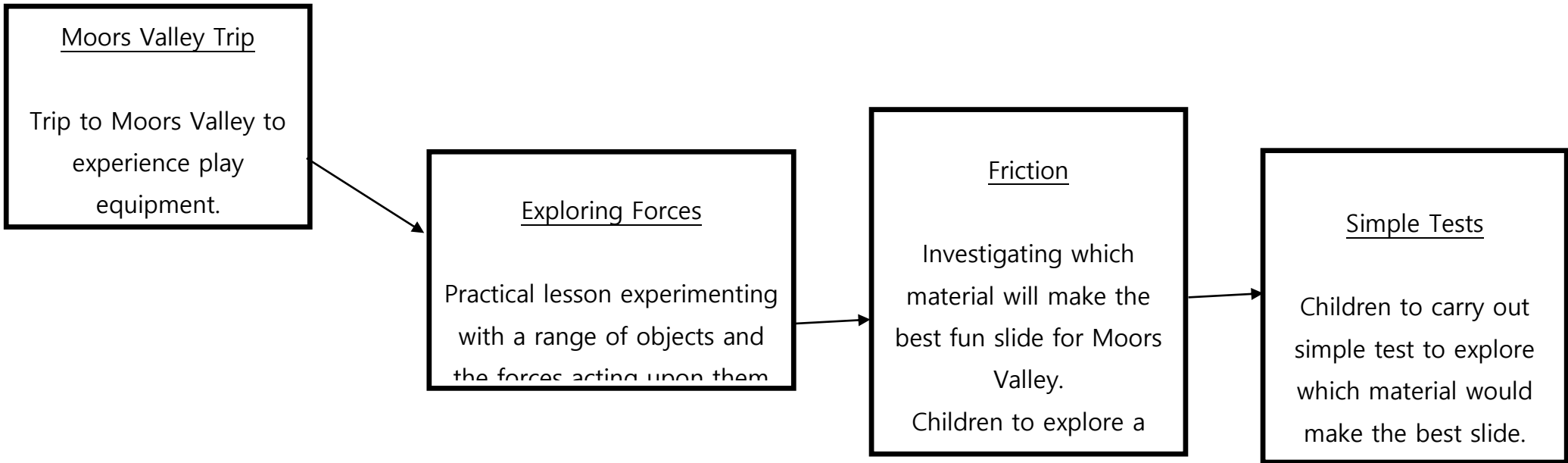


- Vocabulary
- Push
  - Pull
  - Friction
  - Gravity
  - Weight
  - Material
  - Smooth
  - Bumpy
  - Slippery

Prior learning  
Year R – Exploring magnets.  
Floating and sinking – Which objects will float and sink? Why?  
  
National Curriculum - Pupils should be taught to:  
To understand that forces act on play equipment including push, pull,

**Snapshot overview**



## Medium Term Planning

**Year Group:** Year 1    **Term:** Summer 2    **Topic:** Forces

	<b>Learning Objective</b>	<b>Input (including key questions and vocabulary)</b>	<b>Differentiation</b>	<b>Key learning</b>
Session 1	I can experience play equipment and comment	Visit to Moors Valley Country Park. Explore a variety of play structures. Allow children to use them and discuss how they move in different ways on the equipment. Discuss what force is needed to make them move, speed up slow down. Try a range of equipment that shows push, pull and friction in action.	Pre-teaching of new forces vocabulary for emerging children.  Mixed ability groups	To verbally comment on the forces acting upon at least 1 piece of play equipment.

	on the forces acting upon them.			
Session 2	I can recognise examples of push and pull.	<p>Recap Moors Valley trip and the different play equipment that the children saw. Can the children remember which forces were needed to make the equipment move, speed up, slow down etc.</p> <p>Discuss different forces and how a force is a push or a pull that starts something moving. Watch: <a href="https://www.bbc.co.uk/bitesize/topics/zn77hyc/articles/zptckqt">https://www.bbc.co.uk/bitesize/topics/zn77hyc/articles/zptckqt</a></p> <p>Children to practically experience forces (push and pull) Children to take part in 3 roundabout style activities.</p> <ol style="list-style-type: none"> <li>1) In pairs children to roll balls to each other. Ask children to stop the ball with their hands or feet and explain that you have used a push to both move and stop the ball.</li> </ol>	<p>Pre-teaching of vocabulary for emerging children.</p> <p>Mixed-ability groupings.</p>	<p>Identify an example of the force 'push'.</p> <p>Identify an example of the force 'pull'.</p>

		<p>2) Have a set of kitchen scales lent against the wall. Children can push the scales against the wall and measure the force of their push. Can they push harder or lighter to change the level of force? Discuss.</p> <p>3) Pull – Using a lightweight rope, children will experiment with pulling the rope hard and then gently. Attach a small basket to the rope. What kind of pull moved the basket the furthest?</p> <p>Plenary – get children back together and discuss what they have learned and how this applies to the things they do. Challenge: Can the children think other examples when push/pull is used. For example, pushing the door, pulling out your tray etc.</p>		
		<p>Recap previous learning and examples of push and pull.</p>		

<p>Session 3</p>	<p>I can identify examples of friction.</p> <p>I can make a prediction.</p> <p>.</p>	<p>Discuss Moors Valley trip again and the different play equipment that the children saw. Can the children remember which forces were needed to make the equipment move, speed up, slow down etc.</p> <p>Discuss how friction is also a force that we see in effect on different equipment. Ask children to slide across the carpet on their bottoms and spin around. Discuss how the surface allows them to move. Repeat this activity on a plastic chair and again in the school hall. Discuss the differences e.g. it is easier to move on the hall floor because there is less friction and the surface is smooth.</p> <p>Hook - Moors Valley Country Park would like to build a new fun slide. They would like to know which material they should use to let children move in a fun way. (4 different materials available).</p> <p>Split the children into small groups and give them time to explore the different materials and make verbal</p>	<p>Pre-teaching of vocabulary for emerging children.</p>	<p>Give 1 example of friction.</p>
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		predictions as to which material will make the best slide.		
Session 4	I can make a prediction.	<p>Recap of previous learning on forces push, pull and friction. Can the children give examples of these?</p> <p>Recap hook – Moors Valley wants to make a new slide. Which material would make the best slide? Recap the different materials and children to describe what the materials were like. Children to verbalise their predictions for which material would be the best and why?</p> <p>Children to record their predictions in Science books.          'I predict that ___ will be the best material for a slide because ___'</p>	Emerging: Adult to scribe children's predictions in science books.	To make a prediction and explain reasoning for it.
Session 5	I can carry out a simple test.	<p>Recap of previous learning on forces push, pull and friction. Can the children give examples of these?</p> <p>Remind children of the tests that they will be carrying out. Can the children remember their predictions?</p>	Mixed ability groupings.	Identify which material will make the best slide.

		<p>In small groups, children to make slides using each of the different materials. Discuss making the test fair – the slides should be the same length and same height etc.</p> <p>Children to then experiment which material is best. Use objects such as a coin, counter or lego person to act as a person going down the slide. Children to observe what happens. How quickly does the object travel down the slide?</p> <p>(Take pictures to go into books)</p> <p>Plenary: Discuss findings. Were your predictions correct? Which material will make the best slide? How do you know?</p>		
Session 6	I can record my findings.	<p>Recap prior learning and discuss test that children carried out. Give children time to discuss findings in small groups/pairs. Share these findings as a class. What did we find out? Which material was best? How do we know that was best?</p>	Challenge: To write some sentences to explain their findings.	<p>To record my results.</p> <p>To explain my results.</p>

		Children to record findings using in a table in Science books.	Emerging: Adult to scribe explanation of their findings.	
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### Impact

- To be able to name different forces and explain them.
- To be able to recognise a force in action e.g. push, pull and friction.
- To be able to exert a force on an object and explain what they have done.
- To be able to make a prediction, carry out a simple test and record findings.