

Objective	Milestone 1 Indicators	INPUT Inc. FS2	Basic Activities	Advanced Activities	Deep Activities	PLENARY Inc. FS2
To investigate the effect gravity has on everyday objects.	<p>To work scientifically</p> <ul style="list-style-type: none"> • Observe closely, using simple equipment. <p>Ask simple questions.</p> <ul style="list-style-type: none"> • Perform simple tests. • Use observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions. 	<p>Show the children the image of Isaac Newton on the slides. Why is he famous? Record what the children know and what they want to find out on a mindmap - this will be added to in each lesson and will be the focus of the plenary in lesson six.</p> <ul style="list-style-type: none"> • Go through the information introducing Isaac Newton on the slides. What is gravity? What would you like to find out about it? Children think, pair, share then add ideas to mindmap. • Explain to the children that gravity is the force that makes things fall to the ground and stops things from floating around in the air. • Introduce the challenge for the lesson! 	<p>Provide the children with the Equipment listed and the Spinner Template. The children will be challenged to drop two spinners at the same time to find out which one lands on the floor first. They will collect their speed by comparison information on worksheet 1A and answer questions about their results.</p>	<p>Provide the children with the Equipment listed and the Spinner Template. The children will be challenged to drop two spinners at the same time to find out which one lands on the floor first. They will collect their speed by comparison information on worksheet 1B and then begin to come to conclusions about the results, deciding if the weight of the object affected the speed it fell to the floor.</p>	<p>Provide the children with the Equipment listed and the Spinner Template. The children will be challenged to time their spinners as they fall to floor from a height of one metre. They will record their results on worksheet 1C and then begin to come to conclusions about the results.</p>	<p>Set up a smooth wooden ramp on the floor in the classroom. Hold a toy car at the top of it. What do you think will happen if I let go? Show the children, then repeat asking a child to time the car rolling down the hill. Agree with the children a starting line and a finishing line. Then mark them using masking tape. Record the time on the slide. Repeat with the remaining ramps that are the same size but have different surfaces. What do you notice?</p>
To investigate what happens to light when it	<p>To work scientifically</p> <ul style="list-style-type: none"> • Observe 	<p>Show the children the image of Isaac Newton on the slides. Who is he? Why is he famous? What did he discover? Add what the children know and what they want to find</p>	<p>Provide the children with the Equipment as listed above and worksheet 2A. In groups get the</p>	<p>Provide the children with the Equipment as listed above and worksheet 2B. In groups get the children</p>	<p>Provide the children with the Equipment as listed above, coloured paper and</p>	

<p>passes through different transparent objects.</p>	<p>closely, using simple equipment.</p> <p>Ask simple questions.</p> <ul style="list-style-type: none"> • Perform simple tests. • Use observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions. 	<p>out to the mindmap that was started in lesson one. The mindmap will be the focus of the plenary in lesson six.</p> <ul style="list-style-type: none"> • Explain that Isaac Newton didn't just stop when he discovered his theory of gravity. He kept looking scientifically at the world around him and discovered lots more interesting things. Go through the information on the slides detailing his discoveries on light. • Then introduce the challenge for the lesson! 	<p>children to explore what happens when they shine the light through a variety of prisms.</p> <p>Then record their results on worksheet 2A.</p>	<p>to explore what happens when they shine the light through a variety of prisms. Can they turn the rainbow back into white light? The children can record their results on worksheet 2B.</p>	<p>worksheet 2C. In groups get the children to explore what happens when they shine the light through a variety of prisms. Does the colour of the surface the light falls on affect it at all? The children can record their results on worksheet 2C.</p>	<p>through the water at an angle. What do you think will happen when I shine my torch at the mirror? Encourage the children to think about when it rains and the sun is out. Shine the torch at the mirror, through the water and show the children the rainbow on the wall. Does changing the height/angle of the torch change the rainbow?</p>
<p>Science challenge for the week in provision: Explore the light resources and prisms, torches and colour films</p>						
<p>To investigate whether sound can pass through materials.</p>	<p>To work scientifically</p> <ul style="list-style-type: none"> • Observe closely, using simple equipment. <p>Ask simple questions.</p> <ul style="list-style-type: none"> • Perform 	<p>Show the children the image of Alexander Graham Bell on the slides. Why is he famous? What did he invent? Add what the children know and what they want to find out to the mindmap that was started in lesson one. The mindmap will be the focus of the plenary in lesson six.</p> <ul style="list-style-type: none"> • Explain that Bell became interested in acoustics when his mother began to go deaf. He looked scientifically at the world 	<p>Provide the children with the Equipment as listed above and worksheet 3A. In pairs get the children to make their string telephones and then use their phone to answer the questions on their worksheet.</p>	<p>Provide the children with the Equipment as listed above and worksheet 3B. Get the children to make their telephones using different length strings. They then use their phones to answer the questions on their worksheet.</p>	<p>Provide the children with the Equipment as listed above and worksheet 3C. In pairs get the children to make two telephones, one using string and one with wool. Then get the children to answer the questions on their</p>	<p>Show the images on the slides of an old phone and a new phone. How has the telephone changed since Alexander Graham Bell invented it? Tell the children the problems that users would have had with the first phones. Think, pair, share, are there any problems with phones today?</p>

	<p>simple tests.</p> <ul style="list-style-type: none"> • Use observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions. 	<p>around him and began to become especially interested in experimenting with sounds. Go through the information on the slides detailing his work on the telephone.</p> <ul style="list-style-type: none"> • Then introduce the challenge for the lesson! 			worksheet.	
<p>To investigate our senses and reflexes</p>	<p>To work scientifically</p> <ul style="list-style-type: none"> • Observe closely, using simple equipment. <p>Ask simple questions.</p> <ul style="list-style-type: none"> • Perform simple tests. • Use observations and ideas to suggest answers to questions. 	<p>Show the children the image of the children on the slide. What can your body do? Add what the children know and what they want to find out to the mindmap that was started in lesson one. The mindmap will be the focus of the plenary in lesson six.</p> <ul style="list-style-type: none"> • Tell them that scientists in the past spent a long time finding out about the human body and that scientists are still discovering new things about the body. Go through the information on the slides showing a brief history of medical discoveries. • Then explain we are going to test our bodies today to contribute to scientific research. Introduce the challenge for the lesson! 	<p>Before starting this activity you should reassure the children that they will not be touching or tasting anything that isn't safe or will hurt them.</p> <ul style="list-style-type: none"> • Set up a touch area in the classroom with a variety of feely bags or boxes containing different objects, a smell area and a taste area. In the smell area have strongly scented items like coffee on damp cotton wool in covered plastic cups. In the taste area have a variety of fruits and vegetables to taste. • Touch: Ask the children to put their hand into each box or bag and guess what they are feeling. They can record their predictions on worksheet 4D. • Smell: Ask the children to smell each cup and guess what they are smelling. They can record their predictions on worksheet 4D. • Taste: Ask the children to close their eyes and taste each item, then guess what they are. Reveal which items were which then ask the children to taste an item again. Does it taste the same? 	<p>Show the children the images on the slides and tell them that doctors spend a lot of time trying to find out what makes us ill. Explain you are going to find out if there are germs on our hands. Go through the information about the bread experiment on the slides and follow the steps with your class.</p>		

	<ul style="list-style-type: none"> • Gather and record data to help in answering questions. 			
To investigate how germs are transferred by touching things.	<p>To work scientifically</p> <ul style="list-style-type: none"> • Observe closely, using simple equipment. <p>Ask simple questions.</p> <ul style="list-style-type: none"> • Perform simple tests. • Use observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions. 	<p>Show the children the images of Florence Nightingale, Alexander Fleming and Louis Pasteur. Explain they all made discoveries about what makes us ill. What makes us ill? Add what the children know and what they want to find out to the mindmap that was started in lesson one. The mindmap will be the focus of the plenary in lesson six.</p> <ul style="list-style-type: none"> • Go through the information about each person and what they discovered in relation to germs. • Have a look at the bread experiment from lesson four. Explain that if there were any germs on your hands they would have been transferred to the bread when it was touched. Which bread had grown the mould? Why? Which had the least? Why? • Then explain we are going to be looking at the importance of washing our hands. 	<p>Set up a basin with water in it and a few paper towels on each table.</p> <ul style="list-style-type: none"> • Sit the children in a circle and show them the container of glitter or cinnamon. Explain that germs are all around us but that they are too small to see. Explain that the glitter or cinnamon represents the germs we cannot see. • Put a small amount of cooking oil on your hand and some 'germs'. Shake hands with the children sitting either side of you and get them to shake hands with the person next to them. What has happened? Why? You may need to repeat this at different points around your circle to make sure all the children have some 'germs' on their hands. • Send the children to their tables to wash their hand in the basin of water on their table. Are their hands clean? Have all the 'germs' come off? Have any 'germs' ended up on the paper towels? • Ask the children to suggest a better way of washing their hands. Teach them the Washing Hands Rhyme sending them in small groups to wash their hands in the sinks using warm water and soap. <p>In groups children record a video on the ipads to show the importance of washing your hands!</p> <p>Science challenge for the week in provision:</p> <ul style="list-style-type: none"> • explore using the UV torches and yellow highlighter pens • water xylophone sound experiment outside 	<p>Show the children the slides about Joseph Lister and go through the information. Why is it important to have a clean sterile area for surgeries? What would have happened if no one had discovered why soldiers were getting ill in Florence's hospital?</p>

<p>To investigate electrical circuits to make a lightbulb light up.</p>	<p>To work scientifically</p> <ul style="list-style-type: none"> • Observe closely, using simple equipment. <p>Ask simple questions.</p> <ul style="list-style-type: none"> • Perform simple tests. • Use observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions. 	<p>Show the children the image of Thomas Edison. What did he invent? Add what the children know and what they want to find out to the mindmap that was started in lesson one. The mindmap will be the focus of the plenary in this lesson.</p> <ul style="list-style-type: none"> • Go through the information on the slides explaining his work with the lightbulb. • Show the children how a circuit containing a lightbulb works using the images on the slides, then demonstrate it practically making sure to mistakenly forget to complete the circuit so the children can explain why your bulb isn't working and what you need to do to fix it. • If you are doing the Main Activity go through the slides demonstrating how to make the quiz machine 	<p>Provide the children with the Equipment listed above, worksheet 6F and the Symbol Key. Providing the children with the Symbol Key is optional and depends on if you think they will be ready for it.</p> <ul style="list-style-type: none"> • Give the children some time to create their own working circuit that uses one bulb then challenge them to record it on worksheet 6F. • To extend the children ask them: Does anything happen if you add extra bulbs? Does anything happen if you make your circuit bigger by using more wires? Does anything happen if you use more batteries? <p>Science challenge for the week in provision:</p> <ul style="list-style-type: none"> • using bulbs batteries and wires answer the questions of the science quiz - if you get it right the bulb will light - adult to set up the activity as in the slides from this session • salt water experiment outdoors • growing crystals 	<p>Review the mindmap you have been creating with the children during this scheme of work. Do we know the answers to any of the questions we asked? Are there any questions we still want to find the answers to? Explain the best scientists never stop asking questions. Why do you think Albert Einstein said, "The more I learn, the more I realise how much I don't know."?</p>
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