




Topic:	Goosebumps
Main Subject	Science
Linked Subjects	DT (Structures/mechanisms)
NC objective	Science - Light
Main subject key knowledge and skills	<p><u>Scientific Knowledge</u></p> <ul style="list-style-type: none"> <li>*I recognise that I need light in order to see things and that dark is the absence of light.</li> <li>* I can notice that light is reflected from surfaces.</li> <li>*I recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</li> <li>*I recognise that shadows are formed when the light from a light source is blocked by a solid object.</li> <li>* I can find patterns in the way that the size of shadows change.</li> </ul> <p><u>Scientific Enquiry</u></p> <ul style="list-style-type: none"> <li>*I can ask questions and use different types of scientific enquiries to answer them.</li> <li>*I can set up simple practical enquiries, comparative and fair tests.</li> <li>*I can make observations and take measurements using standard units, using a range of equipment to measure the size of shadows.</li> <li>*I can gather, record, classify and present data in a variety of ways to help in answering questions.</li> <li>*I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</li> <li>*I can report on findings from enquiries, including spoken and written explanations, displays or presentations of results and conclusions.</li> <li>*I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</li> <li>*I can explain differences, similarities or changes related to simple scientific ideas and processes.</li> <li>*I can use straightforward scientific evidence to answer questions or to support my findings.</li> </ul>
Linked subject key knowledge and skills	<p><u>DT</u></p> <ul style="list-style-type: none"> <li>*I can prove that my design meets some set criteria.</li> <li>*I can make a product, which uses both electrical and mechanical components.</li> <li>*I can build structures, exploring how they can be made stronger, stiffer and more stable. (Y2 20/21)</li> <li>*I can explore and use mechanisms, in their products. (Y2 20/21)</li> <li>oI know why a model has, or has not, been successful.</li> <li>* I know how to strengthen a product by stiffening a given part of the structure.</li> </ul>
Discrete Subjects	<p>Geography - Local studies</p> <p>PSHE - Celebrating difference</p> <p>French - Ice cream</p>

Main Text	<p style="text-align: center;">Goosebumps</p> 	Spiderwick Chronicles (Pleasure for reading)
Main Writing Genre	Scary Stories	
Enrichment	Goosebumps film	
Weekly overview	<p><u>WK1 SCIENCE</u>  <u>TLC: Can I show that light is reflected from surfaces?</u></p> <p><u>TLC: Can I record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables?</u>  <u>TLC: Can I explain that I need light in order to see things and that dark is the absence of light?</u></p> <p><u>TLC: Can I explain differences, similarities or changes related to simple scientific ideas and processes?</u>  TLC: Can I show how shadows are formed when the light from a light source is blocked by a solid object?</p> <p><u>WK2 SCIENCE</u></p> <p>TLC: Can I show how shadows are formed when the light from a light source is blocked by a solid object?</p> <p>TLC: Can I can gather, record, classify, and present data in a variety of ways to help with answering questions?  TLC: Can I show that there are patterns in the way that the size of shadows change?</p> <p>TLC: Can I use straightforward scientific evidence to answer questions or to support my findings?</p> <p><u>WK3 - D.T</u>  *T.L.C Can I put together a plan which shows the equipment and tools I need?  T.L.C Can I describe a design using an accurately labelled diagram/ annotated sketch?  <u>T.L.C. Can I use a range of tools and equipment accurately?</u>  <u>T.L.C Can I measure, mark out, assemble and join materials and components with some accuracy?</u>  <u>T.L.C Can I explain how to join things in a different way?</u>  <u>T.L.C I can suggest a change that could be made to improve a product.</u>  <u>T.L.C I can evaluate my own products.</u></p>	

WK 4 PSHE

We are learning that everyone is different and everyone is special

We are learning about ways to keep safe at home

We are learning to recognise and describe different feelings in ourselves and others

WK5 - 5 LOCAL STUDIES

TLC: Can I identify the history of why the park was built?

TLC: Can I identify what the park looks like on a map?

TLC: Can I understand how to follow a route on a map?

TLC: Can I locate historical figures within the park on a map?

TLC: Can I identify the main people aspects and events within a historical period?

TLC: Do I know my locality has been shaped by what has happened in the past?

TLC: Can I use 4 compass points to follow and give directions?

WK6- LOCAL STUDIES

TLC: Can I go to the park and locate objects on a map?

TLC: Can I use coordinates to locate features of the park on the map?





TLC: Can I draw a map of a short route?

TLC: Can I begin to use standard symbols on a map?

Reflection of Learning

Sticky Knowledge

We see objects because our eyes can sense light. Dark is the absence of light. We cannot see anything in complete darkness. Some objects, for example, the sun, light bulbs and candles are sources of light. Objects are easier to see if there is more light. Some surfaces reflect light. Objects are easier to see when there is less light if they are reflective. The light from the sun can damage our eyes and therefore we should not look directly at the sun and can protect our eyes by wearing sunglasses or a sunhat in bright light. Shadows are formed on a surface when an opaque or translucent object is between a light source and the surface and blocks some of the light. The size of the shadow depends on the position of the source, object and surface.

British values/citizenship	Mutual respect for different ways of living Tolerance of those who live in different ways.
Maths links	Science - measuring length of shadow; time of day - M19, M23 DT - measure in cm/mm - M19
Computing Links	<a href="https://www.oddizzi.com/">https://www.oddizzi.com/</a> <a href="https://digimapforschools.edina.ac.uk/">https://digimapforschools.edina.ac.uk/</a>
Outdoor learning	Measuring shadows: Mapping the park Researching statues in the park
Home learning	* knowledge mats
	<p style="text-align: center;">  <b>Alexandra Park Junior School</b>      Year 3      Unit of Learning: Light and shadows      Knowledge Organiser </p> <div style="display: flex; justify-content: space-between;"> <div style="border: 2px solid red; padding: 5px; width: 45%;"> <p><b>What have I previously learned?</b></p> <ul style="list-style-type: none"> <li>- Explore the natural world around them.</li> <li>- Describe what they see, hear and feel whilst outside. (Reception - Seasonal changes)</li> <li>- Understand the effect of changing seasons on the natural world around them. (Reception - Seasonal changes)</li> </ul> </div> <div style="border: 2px solid orange; padding: 5px; width: 45%;"> <p><b>Sticky Knowledge</b></p> <ul style="list-style-type: none"> <li>We see objects because our eyes can sense light. Dark is the absence of light. We cannot see anything in complete darkness. Some objects, for example, the sun, light bulbs and candles are sources of light.</li> <li>Objects are easier to see if there is <u>more</u> light. Some surfaces reflect light. Objects are easier to see when there is less light if they are reflective.</li> <li>The light from the sun can damage our eyes and therefore we should not look directly at the sun and can protect our eyes by wearing sunglasses or sunhats in bright light.</li> <li>Shadows are formed on a surface when an opaque or translucent object is between a light source and the surface and blocks some of the light. The size of the shadow depends on the position of the source, <u>object</u> and surface.</li> </ul> </div> </div> <div style="border: 2px solid green; padding: 5px; margin-top: 10px;"> <p><b>Vocabulary - Goldilocks words</b></p> <p>Light- any object which emits light. Shadow- a dark area or shape produced by a body coming between rays of light and a surface. Transparent- allowing light to pass through so that objects behind can be distinctly seen. Translucent- permitting the passage of light. Opaque- not letting light through. Light source- any object which emits light is called source of light.</p> </div> <div style="border: 2px solid purple; padding: 5px; margin-top: 10px;"> <p><b>Useful links</b></p> <p><a href="https://www.youtube.com/watch?v=fy7eoMef3e8">https://www.youtube.com/watch?v=fy7eoMef3e8</a> Light - Year 3 Science - BBC Bitesize</p> </div> <div style="border: 2px solid blue; padding: 5px; margin-top: 10px;"> <p><b>Prompts to help me in my learning:</b></p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px; font-size: 8px;"> <b>LARGE SHADOW</b> when the toy is close to the light. </div> <div style="border: 1px solid black; padding: 2px; font-size: 8px;"> <b>SMALLER SHADOW</b> when the toy is further from the light. </div> <div style="border: 1px solid black; padding: 2px; font-size: 8px;"> <b>TINY SHADOW</b> when the toy is a long way from the light. </div> </div> </div>

**What have I previously learned?**

I can use my understanding of materials and their properties to strengthen, stiffen or reinforce products.  
 I can explore objects to identify lines and shapes of the design.  
 I can suggest improvements to existing designs.  
 I can evaluate my design or product against my own design criteria.

**Vocabulary – Goldilocks words**

designs	The shapes and arrangements of the parts of an object.
plans	A drawing or model of an object, showing its appearance, including its dimensions and proportions.
equipment	The items or processes used in an activity.
join	A place or line where two or more things are connected or fastened together.
improve	To make (something) be better.
evaluate	To judge or determine the significance, worth or quality of something.
accurately	With high accuracy or precision.
associated	Connected with or concerning something or someone.
safe	Secure from liability for harm, injury, damage, or loss.

Useful links  
 Making Shadow Puppets - STEM Activity -

**Sticky Knowledge**

- **Research** - knowing all the different types of shadow puppets develops and communicate design ideas using contextual situations.
- To be able to design and make their own shadow puppets using different joining techniques.
- **Annotating and understanding** the drawings so that it is clear to follow.
- **Making** - making sure that they know what equipment is needed.
- **How to be safe** during this process.
- **Task** - evaluate checking it has one moving part using a joining technique.
- **Making sure** I understand if something went wrong and how I can improve on it.

**Prompts to help me in my learning**



**What have I previously learned?**

- \* Why sleep is important; medicines and keeping healthy; keeping teeth healthy; managing feelings and asking for help
- \* Growing older, naming body parts, moving class or year.
- \* Safety in different environments: risk and safety at home: emergencies.

**Vocabulary – Goldilocks words**

Word	Definition
Health	the <b>condition</b> of the <b>body</b> and the <b>degree</b> to which it is <b>free</b> from <b>illness</b> , or the <b>state</b> of being well
Feelings	the <b>fact</b> of feeling something <b>physical</b> :
Setbacks	the <b>fact</b> of feeling something <b>physical</b>
Hazards	something that is <b>dangerous</b> , and <b>likely</b> to <b>cause damage</b>
Environment	the <b>conditions</b> that you <b>live</b> or <b>work</b> in and the way that they <b>influence</b> how you <b>feel</b> or how <b>effectively</b> you can <b>work</b>
Wellbeing	the <b>state</b> of feeling <b>healthy</b> and <b>happy</b> .

Useful links:

**Sticky Knowledge**

- What are healthy choices and habits.
- What affects feelings; expressing feelings.
- What are personal strength and achievements.
- How to manage setbacks.
- Understand risks and hazards;
- Recognise safety in the local environment and unfamiliar places.

**Prompts to help me in my learning**

Your roles could be:

- Director**
  - They have to be in charge of the whole show.
  - They have to be in charge of the actors.
  - They have to be in charge of the props.
- Writer**
  - They have to write the script.
  - They have to write the dialogue.
  - They have to write the lyrics.
- Designer**
  - They have to design the set.
  - They have to design the costumes.
  - They have to design the props.
- Actor**
  - They have to be in charge of the performance.
  - They have to be in charge of the audience.
  - They have to be in charge of the feedback.

One thing to describe me...

Say one sentence to describe something about how you look.

- My hair is...
- My eyes are...
- I am...
- I have...
- I wear...

