



Y3 Science – Light

Science Ladders (light) ladders

I can recognise that we need light in order to see things

I can describe what happens when there is an absence of light

I can describe what happens when light hits a reflective surface

I can describe how light from the sun can be dangerous and the ways that I can protect my eyes

I can recognise how shadows are formed when a solid object blocks the light

I can investigate how the size of shadows change

I can find patterns in the way that the size of shadows change

Working Scientifically Ladders

I can talk about criteria for grouping, sorting and classifying, and use a simple key.

I can identify differences, similarities or changes to simple scientific ideas and processes.

I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.

I can gather, record, classify and present data in a variety of ways to help answer questions.

Lessons	Order of Study – Spring 2
	Grammarsaurus Unit Topic Page KWL Pre-assessment – use this as post assessment also. Knowledge Organiser – shrink down so that it appears as an A4 sheet.
1	Big Question: What is light? LI: I can recognise that we need light in order to see things LI: I can describe what happens when there is an absence of light W/S: I can talk about criteria for grouping, sorting and classifying, and use a simple key. Complete the mind map starter – write down as many things as they can about what they already know about light. Discuss the differences between light and dark – pose the question: What is the absence of light? Task 1: Partner sorting activity. Sorting the objects into light sources/ not light sources. Any they are not sure about, just put to one side. Go through the answers with them. Independent activity – for LA/SEND children – they have a table that already has the title on, the other activity does not. Using their learning from the partner task, they can draw some of the objects in the correct side of the sorting table. Plenary – children talk to each other to answer the questions about what they now know. Challenge activity: Questioned posed from a scientist. Children to explain. Marking task in the folder.
2	Big Question: What light is reflected? LI: I can describe what happens when light hits a reflective surface What does the word reflect mean? Work through the information about reflective light, how we see and reflective surfaces.

	Look at the objects, are they light sources or do they reflect light? Allow the class to discuss and then come back together to discuss their answers. Look at the poem: Shining things by Elizabeth Gould. Children need a copy in their books. Underline all reflective objects in blue and all light sources in red. Then discuss the poem as a class. Discuss why reflective materials are useful – where they are used and why they are good idea. Show the children the picture – can they spot and reflective materials? – discover the answers together. Independent activity: Design a poster to encourage younger people/children to wear something reflective outside. Talk about the suggestions. LA/SEND: Poster template with bullet points of what they could include. Plenary – look at your partner's poster – what do you like/what could be improved? Challenge task/marking task: Explain what is happening in the picture.
3	Big Question: Is the sun dangerous? <u>LI: I can describe how light from the sun can be dangerous and the ways that I can protect my eyes</u> Recap last lesson- we now know that we can see things because light is reflected and that some materials are better than others. Partner Talk about the difference between a light source and an object that reflects light – can they give examples? Share information about the sun. Q: How can we protect ourselves from the sun? Share ideas of how we can protect ourselves from the sun. Independent activity – short leaflet that explain ways we can protect ourselves from the sun. LA/SEND: Leaflet template with missing parts/some sub-headings given. Challenge: Wearing sunglasses is a waste of time! The Sun is millions of miles away from us! It's too far away to hurt our eyes! What do you think? Next steps – marking task: How do you think tears, eyelids and eyelashes protect our eyes?
4	For this lesson you will need: a variety of translucent, opaque and transparent objects and a torch. Big Question: What is a shadow? <u>LI: I can recognise how shadows are formed when a solid object blocks the light.</u> <u>LI: I can recognise how shadows are formed when a solid object blocks the light</u> <u>W/S: I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</u> Thinking time: What happens when an object blocks the light travelling in straight lines? Introduce the concept of a shadow and how they are made. New vocabulary – translucent, opaque and transparent. Can the children think of any other materials that could fall into the categories? Gather some objects that the children can use to form shadows – everyday classroom objects but there must be a variety. Take pictures of the children carrying out this activity. Plenary: What have we found out so far? What did you most enjoy about this lesson?



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	Tell me one thing you have learnt. Did you find anything difficult? Challenge/marking task in the folder.
5	Big Question: Does moving the light source change the shadow? <u>LI: I can investigate how the size of shadows change</u> <u>LI: I can find patterns in the way that the size of shadows change</u> <u>W/S: I can gather, record, classify and present data in a variety of ways to help answer questions.</u> Recap what we know about shadows. Can we remember the three new words from the last lesson - what do each of them mean? We know that the sun is a very bright light source – have the children recognised that the sun moves? Why? Explain the facts of the sun. Use the Ariane Grande 'tweet' for them to investigate. Her dilemma: Practising for my tour & I love having a tall shadow on stage! Does that mean the stage lights have to be further away? #ArianaShadowGrande SEND/LA task and marking task in folder.
6	Complete KWL Post-assess in a few days time.