

Dear Parents/ Carers,

Please find below information about what your child is learning this term- we call it a 'Knowledge Organiser' for our new Connected Curriculum. The last section of the Knowledge Organiser offers ideas of how adults can support children at home and gives information about homework.



Please speak to your child's class teacher if you have any questions.

## Knowledge Organiser for Year 4 Unit - How do I see? How do I hear?

### Baseline assessment and experience of learners (Learner conversation & KWL grid)

Children knew that the sun is bright and allows us to see and that light can't go through us so that is how we get a shadow.

#### Pre-requisite knowledge:

- recognise that they need light in order to see things and that dark is the absence of light.
- notice that light is reflected from surfaces.
- recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- recognise that shadows are formed when the light from a light source is blocked by a solid object.
- find patterns in the way that the size of shadows change.

### Knowledge to be secured (What do learners need to know and understand?)

- Identify how sounds are made, associating some of them with something vibrating.
- recognise that vibrations from sounds travel through a medium to the ear
- find patterns between the pitch of a sound and features of the object that produced it
- find patterns between the volume of a sound and the strength of the vibrations that produced it
- Recognise that sounds get fainter as the distance from the sound source increases.

### Terminology and vocabulary

Day	Night
Distance	Midday
Longer	Dark
Shorter	Light
Length	Light Source
Material	Torch
Dim	Bright
Block	Sun
Object	Position
Clear	Higher
Opaque	Shadow
Transparent	Direction
Translucent	

<p><b>Possible misconceptions that may arise or things which these learners may find difficult</b></p> <ul style="list-style-type: none"> <li>- Sight is purely an active human process 'I am looking at something, which is why I can see it' or that eyes give out a form of light to enable us to see</li> <li>- Reflective surfaces emit light</li> <li>- Only shiny surfaces or water reflect light</li> <li>- Opaque objects do not reflect light</li> <li>- Opaque surfaces give out colour or 'darkness'</li> </ul>	
<p><b>Skills to be secured (What do learners need to be able to do?) Know how to...</b></p> <p>Ask relevant questions and use different types of scientific enquiry to answer them.  Set up simple and practical enquires comparative and fair tests.  Take accurate measurements using standard units.  Research and develop designs  Class discussions  Evaluate products</p>	<p><b>Links to other learning to be made (previous learning in the same subject and cross-curricular / life applications)</b></p> <p>Using shadows- Art  Silhouettes and landscapes –Art  Research – Computing  Symmetry- Maths  Design ear muffs- Design and Technology</p>
<p><b>The journey...</b></p> <p>Starting point- Children receive a letter from Edi a factory worker, who struggles to sleep during the day as he works night shifts. Their job is solve his problem through learning about light and sound.</p> <p>Finishing point – Children will have designed a product to solve Edi’s problem, which will allow him to sleep in comfort. They will be able to explain how the product works using scientific vocabulary.</p>	<p><b>Planned or possible experiences, investigations or enquiries (link to any entitlement lists drawn up by the school)</b></p> <p>DJ ( if available)</p>
<p><b>Probing or comparative questions / challenges</b></p> <p>How will you...?  How does this affect...?  What equipment will you use?  How could you solve this?  Why do you think that?  How else could you?</p>	<p><b>Writing opportunities and related skills</b></p> <p>Report writing  Creative poetry  Letter writing</p>

<p><b>Resource guidance</b></p> <p>Useful websites  <a href="https://www.bbc.co.uk/bitesize/topics/z3nnb9q">https://www.bbc.co.uk/bitesize/topics/z3nnb9q</a>  <a href="http://www.watchknowlearn.org/Category.aspx?CategoryID=633">http://www.watchknowlearn.org/Category.aspx?CategoryID=633</a>  <a href="http://www.sciencekids.co.nz/light.html">http://www.sciencekids.co.nz/light.html</a>  <a href="https://www.youtube.com/watch?v=Un-BdBSOGKY">https://www.youtube.com/watch?v=Un-BdBSOGKY</a> – Flipbook video</p>	<p><b>Agreed outcomes</b></p> <p>Group learning in our connected curriculum books containing reports, results of experiments, information collected and stories written.</p>
<p><b>Homework</b></p> <p>In Year 4 children are expected to read 5 times a week, this will be monitored regularly and checked every Monday. Your child will also be given My Maths weekly homework to complete online, which will support their learning in class. If they are unable to access the internet at home, they can go to homework club during their lunch break. Every Friday, we will be sharing topical news items from the local area and around the world and would like your child to do some research of their own to share news with the rest of the class.</p> <p>We do not do weekly spelling or multiplication tests, we do something called Fast Spelling &amp; Fast Maths, which involves regular targeted practice in class. Please support your child with learning the words and sounds listed on the knowledge organiser below and ensuring your child know their multiplication tables. <b>Year 4 children are expected to know all of their multiplication tables up to 12 x 12 by the end of the year.</b></p> <p>Here are some suggestions of activities you can do at home:  Be visible in the dark - Design a jacket/school bag to enable schoolchildren to be more visible in the dark when walking home from school.  Secret messages - Write a secret message to a friend using a mirror to help you reverse the letters/words so it can only be read using another mirror.  Sounds at home - Go into an empty room. Sit quietly and listen. What can you hear? Represent sounds on a spider diagram.  Draw an eye - Use a mirror closely observe your eye. Use a landscape piece of paper; make a large detailed drawing using pencil/charcoal.  Make a flip book – See YouTube video on how to make your own flip book.</p> <p><b>PE</b> – PE days are Tuesday and Friday. Please ensure that their PE kits are in school for these days and make sure earrings are not worn on PE days too.</p> <p>During this school year please help your child to achieve the following five challenges – they could be recorded in reading records or by photograph and sent into school:</p> <p>Explore a cave.  Walk through a forest.  Swim outside.  Learn to sew on a button.  Go hiking.</p>	

Common exception words for this term:	Spelling sound patterns the children will learn this term:
accident accidentally actual actually address although answer appear arrive believe bicycle breath breathe	busy business calendar caught centre century certain complete circle complete consider continue decide describe different  Homophones, 'ee' spelt ee, ea e-e 'u' spelt ou, 'oo' spelt ui, 'i' spelt y