Topic Title: Lights! Camera! Action! Year 3 Term: Spring 2

Key questions?

How can we make shadows longer and shorter?

Skills Taught:

- 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.
- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Working scientifically observe how size of a saucepan lid impacts on the sound made or the thickness of an elastic band – look at how this translates to instruments

Big Questions:

What happens when there is an object in the way of a light source?

What happens to a shadow when the light source moves further away?

How can we protect our eyes from bright light?

How does sound travel?

How can we insulate against or muffle sounds?

Immersion Activities/Provocation:

To make an insulated box to hold an alarm clock - with different materials to see which absorbs sound best – Create a Fair Test

To make a Periscope –See James Dyson site link below

Topic Title: Lights! Camera! Action!

Enquiry Question: Can you feel it, how can you illustrate in your film that sound is vibration? (Link to investigation ideas below)

Focus Texts: Until I Met Dudley

	Skills and Knowledge
Some children will:	• Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes. • Observe and name a variety of sources of sound, noticing that we hear with our ears.
Most children will:	• 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. • Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes. • Find patterns in the way that the size of shadows change. • Identify how sounds are made, associating some of them with something vibrating. • Recognise that vibration from sounds travel through a medium to the ear.
Some children will progress further and will:	• Find pattern between the pitch of a sound and features of the objects that produced it. • Find patterns between the volume of a sound and the strength of the vibrations that produced.

Enrichment/Outdoor Learning: Create a sun dial/ Shadow Clock and test its accuracy

Animations, resource inks and videos:

https://www.youtube.com/watch?v=YuUJCNzfoBw

https://www.youtube.com/watch?v=1PsHHKwtXQU

https://www.youtube.com/watch?v=27a26e2CnuM

https://www.jamesdysonfoundation.co.uk/resources/challenge-cards.html?gclid=EAIaIQobChMIx7aErZz77QIVDLDtCh0hrAGJEAAYASAAEgJgVfD_BwE

https://www.tes.com/teaching-resource/sound-investigation-ideas-6124200

Previously on….(Links to prior learning)

Link to Seasonal Changes – Daylight hours

Our Bodies – Senses – Hearing with our ears and seeing with our eyes

Materials – Insulated Ice Cream Tub creation – absorbent sound/ liquid

Materials – reflective/ transparent/ opaque/ translucent

Key Vocabulary:

Light/ Source/ Reflect/ Mirror/ Reflection/ Sun/ Shadow/ Transparent/ Translucent/ Opaque

Quiet/ Loud / Pitch/ High/ Low / Rhythm/ Frequency/ Amplify / Sound wave/ Vibration/ Noise/ absorbent/ Muffle

Fair Test/ Observations/ Conclusion

Cross Curricular Links:

Maths – Time/ Data recording

English - Ideas for film script

Computing – Use Search Technologies and evaluate digital content/ Present information using digital services

Celebration of knowledge and skills gained (opportunities for assessment):

- To make a film to explain sound and light to younger children

Non-fiction texts: