Lodge Farm Primary School- Knowledge Organiser

Science Topic: Light (How We See)

Year: 6 **Term:** Summer 1

Key Knowledge/Content:

- Animals see light sources when light travels from the source into their eyes.
- Animals see objects when light is reflected off that object and enters their eyes.
- Light reflects off all objects (unless they are black). Non shiny surfaces scatter the light so we don't see the beam.
- Light travels in straight lines.

Scientist Focus:

Ibn Al-Haytham (Mathematician)
Known for his work in optics and the laws of refraction.

Links to:

Prior learning:

To understand that transparent materials let through light and that light comes from a source.

Future learning:

To understand how shadows are formed, relating to the absence of light.

Key vocabulary with definition:

Prior vocabulary:

- Travel- Movement
- Straight line
- The Sun
- Light source- An object which produces light, such as the Sun or a bulb

New vocabulary:

- Ray- The movement of light from a source.
- Visible- Able to be seen.
- Bounce- Moving off a surface.
- Iris- The coloured part of an eye.
- Cornea- A dome in front of the coloured part of an eye.
- Pupil- Controls how much light goes into your eye.
- Lens- A transparent and curved cover over the eye.
- Scatter- When things are sent off in different directions.
- Reflect- When light changes direction.
- Refraction- When light changes direction, moving from one material to another.

By the end of this unit

All children can: **identify** the process of light moving from a source to the eye and **explain** which materials are the most reflective.
Most children can: **label** the main parts of the eyes, identifying their purposes, and **investigate** what causes light to scatter.
Some children can: **explain** how refraction works and **compare** how our eyes change when adapting to different conditions.

Background understanding for teachers and parents:

This unit will focus on light and how it helps us to see. Children will investigate different ideas such as refraction and reflection and discuss what happens when light is shone through water.

Curriculum Driver (one):

Healthy Lifestyle

Evidence outcome:

Understand how to protect our eyes when exposed to extreme conditions such as bright sunlight.