



# St James' Church of England Primary School

## Science Overview Sheet



### Year 3 – Light



**Rationale:** Pupils should explore what happens when light reflects off a mirror or other reflective surfaces, including playing mirror games to help them answer questions about how light behaves. They should think about why it is important to protect their eyes from bright lights. They should look for, and measure shadows and find out how they are formed and what might cause shadows to change.

**Note:** Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.

**Pre-unit task:** Knowledge Organiser Quizzes

**Working Scientifically:**

- Looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes.

**Statutory Requirements:**

- Recognise that they need light in order to see things and that dark is the absence of light.
- 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.

#### **Overview:**

Lesson 1: Light and Dark - I can recognise that I need light to see things, and that dark is the absence of light.  
Lesson 2: Reflective Surfaces - I can investigate which surfaces reflect light.  
Lesson 3: Mirrors - I can use a mirror to reflect light and explain how mirrors work.  
Lesson 4: Sun Safety - I know that light from the sun can be dangerous and that there are ways we can protect our eyes.  
Lesson 5: Making Shadows - I can investigate which materials block light to form shadows.  
Lesson 6: Changing Shadows - I can find patterns when investigating how shadows change size.

#### **Cross Curricular Links**

##### **Resources**

- 5 'feely bags' – drawstring bags for children to feel inside without looking.
- 5 objects to place inside them - some ideas include an orange, a shell, a pine cone, bubble wrap, pumice stone, a dice, an avocado or cotton wool.
- Torch per pair
- A5 piece of white card per pair
- 6 materials to test such as CDs, tin foil, paper, different fabrics, bubble wrap, cardboard.
- A mirror per child
- A wavy chalk line (approximately 3-5m long) drawn on the floor, either outside or in the School Hall.
- A torch per pair
- A ruler or metre stick per pair
- Objects to make shadows

#### **Assessment**

**Most Children will:** • Understand that dark is the absence of light. • Set up an investigation and make predictions. • Understand how surfaces reflect light. • Recognise that a mirror appears to reverse an image

**Less Able Children will:** • Identify light sources. • Understand that we need light to see. • Know that light travels in a straight line. • Identify reflective surfaces. • Know that the Sun can damage their eyes. • Identify some parts of the eye.

**More Able Children will:** • Explain the properties of materials that reflect light well.

• Understand why shadows change size. • Set up reliable and accurate investigations. • Make and explain predictions.