Our Intent is: To develop inquisitive children who are excited about investigating with curiosity, "How can scientific enquiry explain the world?" Exploring answers by gathering and analysing evidence.

Forton Primary School
Science

Clougha Class Autumn 2 Year A	**N.C. LINKS:** **Light** Pupils should be taught to: • 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 an opaque object. • Find patterns in the way that the size of shadows change.
Key Concept: Light Key Question: Why is light important to Earth?	
Unit Overview: Light travels in straight lines. Reflection and shadows.	Vocabulary: Light, light source, dark, reflection, reflect, reflective, ray, pupil, retina, shadow, opaque, translucent, transparent.
. New Knowledge Progression:	Building on Prior learning KS1:

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• 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 can change.	• Distinguish between an object and the material from which it is made. • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. • Describe the simple physical properties of a variety of everyday materials. • Compare and group together a variety of everyday materials on the basis of their simple physical properties. • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching • Some materials can be found naturally; others have to be made

Key Skills (Disciplinary)

- Suggest their own ideas on a concept and compare these with what they observe / find out.
- Use observations to suggest what to do next.
- Discuss ideas and develop descriptions from their observations using relevant scientific language and vocabulary.
- Ask / raise their own relevant questions with increasing confidence and independence that can be explored, observed, tested or investigated further.
- Ask questions such as 'What will happen if…?" or 'What if we changed…? .
- Choose / select a relevant question that can be answered [by research or experiment / test].

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- Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.
- Suggest their own ideas on a concept and compare these with models or images.
- Build on / add to someone else's idea to improve a plan.
- Understand that it is okay to disagree with their peers and offer reasons for their opinion.

Sequence of Lessons:

1. LO – To recognise that we need light in order to see things.
2. LO – To recognise that light from the sun can be dangerous and there are ways to protect our eyes.
3. LO – To investigate which surfaces reflect light.
4. LO – To investigate which materials block light to form shadows.
5. LO – To find patterns when investigating how shadows change size.
6. LO – To create a final shadow puppet performance.

Enhancements:
The Science and Industry Museum.

End of Unit Outcome:
Final shadow puppet performance – children will create their own shadow puppet performance in groups using their knowledge of light and shadows.