MEDIUM TERM PLANNING | UNIT OBJECTIVES
Nunthorpe Primary Academy

Summer 1 Light and Shadow

Year Group: 3

Science Intent
Through science, children are taught to be curious about the world around them. Our curriculum is stimulating, engaging and challenging and ensures full coverage of the National Curriculum. It fosters a sense of wonder about natural phenomena. Children develop and use a range of scientific skills including questioning, fair-testing and drawing conclusions. Scientific vocabulary is taught and built upon as topics are revisited progressively in different year groups and across key stages.

English – National Curriculum/Skills	Overview
• extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although • increasing their familiarity with a wide range of myths and legends, and retelling some of these orally • write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far • read their own writing aloud, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear • use of the forms 'a' or 'an' and word families	Using a mythical story as inspiration, pupils create their own adaptations of myths in the form of a play script to perform with shadow puppets they create. Follow and explore instructional texts about how to make shadow puppets and how to use mechanical mechanisms for a mythical beast that moves with either a lever or pneumatic system. Create their own non-chronological report about a mythical beast.

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Science – National Curriculum/skills	Overview
•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 Work scientifically by: •finding patterns in the way that the size of shadows change •asking relevant questions and using different types of scientific enquiries to answer them •setting up simple practical enquiries, comparative and fair tests •making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers •gathering, recording, classifying and presenting data to help in answering questions •recording findings using simple scientific language, drawings, labelled diagrams and tables •using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions •using straightforward scientific evidence to answer questions or to support their findings.	Pupils will discover that, in the dark, nothing can be seen. They will explore the formation of shadows, using different light sources, objects and screens, outdoors and indoors. They will discover how shadows are formed and will use their observations to explain the process, investigate how different variables can change the size and nature of a shadow and make measurements to test their own ideas. They will also begin to learn how sundials tell the time and how the size and direction of shadows change throughout the day (we build on this area further in Y5).

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Design Tech – National Curriculum/Skills	Overview
• apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems (levers, linkages) • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • select from and use a wider range of tools and equipment to perform practical tasks such as cutting, joining and shaping accurately • I can make a product which uses mechanical components. • I can use the most appropriate materials. • I can work accurately to make cuts and holes and join materials.	Explore, design and create shadow puppet characters as part of a team. Consider the way they move and join. Make a moving monster with a lever or pneumatic system.

Art and Design – National Curriculum/Skills	Overview
• to improve their mastery of art and design techniques, including drawing, painting and sculpture with charcoal, pencil, collage • to learn about the artist Alberto Giacometti's sculptures	The pupils will create 'Notan', cut paper designs (a term used by Japanese to refer to light and dark space and positive and negative space). Learn how to draw simple 3D objects using perspective and explore how light creates shadows on the object drawn (cuboids, cylinders and so on). Experiment with pencil hardness and other media such as charcoal and chalk. Draw around shadows in the playground, considering the position of the light source.

	Using mixed media, the pupils will make Alberto Giacometti inspired sculptures. The shadows created will form part of their artwork.

Debate & Discussion Opportunities	Trips and Experiences	Possible Linked Texts
How can we help to look after our planet? How can we become more energy efficient? What is a moral dilemma?	Showcase shadow puppet stories Kettleness Trip	Greek Mythical Stories such as Perseus and Medusa.