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| Suitable for Key Stage 1 | | |
| **Exploring Light** | | |
| **Learning Objectives:** | **Curriculum Links:** | **Resources:** |
| * To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses (transparent, translucent and opaque). * To use observations and ideas to suggest answers to questions. | **Science**: - Everyday materials and light dark  **English**: Re-telling stories  **D.T**: - To use a range of materials creatively to design and make products.  **R.E: -**  To explore a church building. | * **Sheet 1**: Can you find 10 light sources or light reflectors? * **Sheet 2**: Window template * **Sheet 3**: Transparent, Translucent and Opaque * Different coloured tissue paper * **Sheet 4**: Light quiz statements * Pencils and pens |
| **Teacher’s Notes** | | |
| **Before your visit** | | |
| * Children will need to understand what light is and where it comes from. * The children will need to question what is dark and understand that darkness is an absence of light. * The children will need to have explored different light sources, and questioned ‘what is the difference between natural and man-made light?’ * To have spent time experimenting with light sources, find objects around school that are light sources and question whether they are natural or man-made light sources? * The children will also need t know about the dangers of looking at the sun. Why should we not look directly at the sun? Explain that the sun is the most powerful light source and if you look directly at it you can damage your eyes - that is why we wear sun glasses to protect our eyes. | | |
| **During your visit** | | |
| **Introduction *(10 mins)*:**  Introduction to the church building.  Discuss - Where are we? What is the building used for? Who is likely to use the building? How does the building make you feel? What can you see in the building? | | |
| **Main activity *(40 mins)*:**  Explain that today we are going to be exploring the topic of light and materials in this church. How would you describe this church? Where does the light come from? Is it natural light? Or is it dark? Why?  Ask groups to move around the church looking for different light sources and materials / objects that reflect light (R1). Discuss the findings. Explain that all the objects in the church reflect light to be seen. However, some materials are better reflectors than others. Show examples of this in the church. Discuss what it would be like if the walls where painted a different colour.  Look at a stained-glass window – this window is filtering light into the church but in different ways. Discuss and compare to a transparent glass window. Explain the vocabulary ‘transparent’, ‘translucent’ and ‘opaque’. (R3) Find examples in the church.  Explain that stained glass windows are used to filter light but also to tell stories using coloured glass making them translucent. Different colours filter through different amounts of light, creating the picture. Experiment with different coloured tissues to see what colours let through the most light and discuss.  Tasks: Design your own stained-glass window based on a story. Think about what colours you are going to use to depict your picture. (R2) | | |
| **Plenary *(10 mins)*:**  Complete the light quiz (R4) Children find statements that have been hidden around the church about light and materials. In groups can they decide whether these are true or false? Discuss and review today’s learning. | | |
| **After your visit** | | |
| * Back in school use your plan to make your own stain glass window of your story. * Use black card to create the background and your objects - remember these will form the shadows and then use coloured tissue paper to add the details which will filter the light and colours. * Review why the tissue paper will let the light through and not the black card? * Share your finished windows / stories with other children in your class and see if they can guess your story from the reflections? | | |
| **Examples of light in a church** | | |
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