# Lesson Plan

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| **Title:** Technical writing – Light and Mirrors 1 | **Date:** |
| **Learning objective/s:**   * To investigate how light interacts with objects | **Curriculum links:** |
| **Learning outcomes**  **I want evidence student can:**   * Use scientific vocabulary * Explain how light travels | |
| **Notes on students who have exceeded the performance expected:** | **Action to be taken:** |
| **Notes on students who did not achieve the performance expected:** | **Action to be taken:** |
| **Essential vocabulary:**  Light, transparent, translucent, opaque, reflects, reflective, emits | **Possible misconceptions:** |
| **Cross curricular links:**  Science, literacy | |
| **Teacher resources including ICT:**   * Introductory Presentation PowerPoint. | **Student’s resources including ICT:**   * Technical vocab and definitions (cut up) * Torch with narrow slit card (to ensure a narrow beam of light) * An array of objects (variety of transparent, translucent and opaque) |

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| **Organisation and class management:** | **Teaching points:** | **Notes:** |
| **Introduction:**  Whole class discussion | * Using the PowerPoint presentation introduce the task and read the letter to the pupils, establishing a reason for writing. * Ask the pupils to spend 5 minutes completing the “What we already know” grids. |  |
| **Main phase:**  In pairs | * Provide each pair with a set of cut up “technical vocab” words. Ask them to match them up with the correct definition and think about examples of each. * Ensure every group understands what each of the technical terms mean. * Ask each pair to feedback one or two examples of each. * Provide each pair with a torch and a piece of card with a thin slit cut into it. This is to ensure only a very narrow beam of light is emitted by the torch. * Provide each table with an array of objects, some transparent, some translucent, and some opaque. * Ask the pairs to investigate how light travels and interacts with objects. Try not to prompt the children and let them draw out everything they observe. | Further information and lesson plans are available on the NSO Website, including a workshop looking at what causes day and night:  [https://www.schoolsobservatory.org/](https://www.schoolsobservatory.org/discover/activities/daynight)  [discover/activities/daynight](https://www.schoolsobservatory.org/discover/activities/daynight) |
| **Plenary/Conclusion:**  Whole class discussion | * Discuss as a class what we observed. * Key points: light travels in straight lines. We cannot see light, we only see objects if light reflects from them. * Possible misconception: Pupils may feel they can see light as they see the beam across the table from the torch, but point out that they’re actually only seeing the surface of the table, not the light. |  |