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| **Question for Learning;**  **What is a light source?**   * Examples of light sources and luminous objects: light bulbs, the sun, and glow sticks. * Non-luminous objects: shiny diamonds, mirrors and road signs. * The moon is not a light source. * Darkness is the absence of light and we need some light to be able to see. * It is important to protect our eyes from harm, including not looking directly at the sun and other bright light sources. | **Research** |
| **Question for Learning;**  **What is reflection?**   * Light bounces off a surface when it reflects. * Rejective surfaces or materials: mirrors, glass or metallic objects. * The smoothness or how still the surface is will affect the quality of the **reflection**. | **Identifying, grouping and classifying** |
| **Question for Learning;**  **Where do shadows come from?**   * Shadows form when light is blocked by a material (usually opaque). * Opaque materials form darker shadows or translucent and transparent materials form lighter, fuzzier shadows. * The colour, position and material of an object can affect the way a shadow appears. | **Pattern seeking** |
| **Question for Learning;**  **Do shadows change during the day?**   * The position of the light source (the sun) causes shadows to change throughout the day. * Shadows are longer when the sun is low in the sky, such as sunrise or sunset. * Shadows are much shorter when the sun is high in the sky. | **Observation over time** |
| **Question for Learning;**  **Can the distance of the light source affect the size of its shadow?**   * The distance or the angle of the light can change the size of a shadow. * The closer a light source is, the larger the size of the shadow. | **Comparative / Fair Testing** |
| **Question for Learning;**  **How do different people work with light and shadows?**   * Opaque materials are most appropriate to make a shadow puppet as they block out light. * To get a shadow, the puppet needs to go between the screen and the light source. | **Researching / Problem Solving** |

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| **Key Words** | |
| Light source | Where light comes from |
| Opaque | A property of a material where no light can pass through |
| Transparent | A property of a material where most light can pass through |
| Translucent | A property of a material where some light can pass through |
| Reflective (shiny) | A surface that light bounces off more. |
| shadow | A dark area caused by something blocking the light. |