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| **What will we be learning?**  Lights On with solid fill  **Light** | **Why this? Why now?**  Previous Learning  Key stage 2 Science  Year 7 Course - Speed, Gravity, Current, Voltage and Resistance, Energy transfers and Energy costs  Future Learning  Year 8 Course – Sound, contact forces, Pressure, Magnetism, Wave effects, electromagnetism  Enquiry Processes  Identify variables, Collect data, Present data, Analyse Patterns, Draw conclusions, Justify opinions and conclusions | **Key Words:**  Lens  Vision  Diagram  Image  Convex  Construct  Reflect  Mirror  Refract/Refraction  Uniformly  Scatter  Material  Medium  Specular  Diffuse  Frequency/frequencies |
| **What will we learn?**  To describe how lenses may be used to correct vision and how a ray diagram can show how an image will change in different situations with a convex lens.  To show how light bends when passing into different materials, such as glass blocks and lenses  What happens when light meets a different medium and to be able to draw the refraction of light  To describe the basic properties for light of speed and travel and accurately show how light is reflected  What the difference is between specular and diffuse reflection  How to construct ray diagrams to show how light reflects off mirrors to form images  How to predict whether light will reflect uniformly, refract or scatter when it hits the surface of a given material  How to explain observations for objects viewed in different lights  That different colours of light have different frequencies  **Misconceptions in this topic**  Light is reflected away from shiny surfaces, but light is not reflected from other surfaces.  Light always passes straight through transparent material (without changing direction).  When an object is viewed through a transparent material, the object is seen exactly where it is located. | |
| **What opportunities are there for wider study?**  Careers – Astronomy, telecommunications, astrophysics, ophthalmics, orthoptics  STE(A)M – For details of courses and opportunities look at:  <https://highcliffe.sharepoint.com/sites/LearnSTEM> | |
| **How will I be assessed?**  **End of topic assessment** | |