**UKS2 Light Knowledge Mat**

| Subject Specific Vocabulary |  | Sticky Knowledge about Light |
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| **light wave** | One of the characteristics of light is that it behaves like a wave. Light can be defined by its wavelength and frequency. The frequency is how fast the waves vibrate up and down. |
| * Light will travel in a completely straight line until it hits an object that will reflect it.
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| **light source** | Light, or illumination, is a form of energy that travels in waves, like sound. You can find different sources of light, such as a candle or the sun. | * Space does not have any light. We can see things in space due to light bouncing off of the objects in space.
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| **Important facts to know by the end of the light topic:** |
| **concave** | Is a lens that curves inwards and reflects light differently as a result. | * Light doesn’t travel as fast when it has to pass through mediums that are different, such as air, water or glass.
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| * Know that light travels in straight lines.
* Understand that because light travels in straight lines objects are seen because they give out or reflect light into the eye.
* Know that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.
* Know that light travels in straight lines and therefore shadows have the same shape as the objects that cast them.
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| **convex** | Is a lens that curves outwards and reflects light differently as a result. |
| **filters** | A filter is a transparent material that absorbs some colours and allows others to pass through. | * The light that we see from the sun actually left the sun ten minutes before we see it.
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| **lens** | A lens is a curved piece of glass or plastic designed to refract light in a specific way. | * Light can be controlled and produced in so many ways. A camera can control the amount of light that comes into the camera lens. We also use light in televisions, medical systems, copy machines, telescopes and satellites.
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| **retina** | The retina is at the back of your eye and it has light-sensitive cells called rods and cones. |
| **cornea** | The cornea is thin, clear and covers your eye. It's important because it helps you see by focusing light as it enters the eye. |
| * Light is used by plants to convert the light into energy as their ‘food’. The process is called ‘photosynthesis’ and converts carbon dioxide through the energy of the light.
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| **iris** | By opening and closing the pupil, the iris can control the amount of light that enters the eye. |
| **pupil** | The pupil can be compared with the shutter of a camera. It is surrounded by the iris which is the coloured part of the eye. |