# Trinity Primary School - Light

| Topic: How can you see me? | Year: 6 | Strand: Light |
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## Significant Scientists

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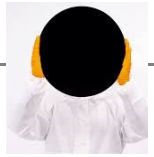
| **Abu Ali al-Hasan (Alhazen)** *(965-1040)*  | Alhazan was an Iranian mathematician, astronomer and physicist. He was the pioneer of modern optics. He carried out experiments with pinhole cameras and candles and explained how the image is formed by rays of light travelling in straight lines. |
| **Ben Jensen**  | Ben Jensen is an inventor at Surrey NanoSystems Ltd and developed Vantablack, a super-black coating that holds the world record as the darkest human-made substance. |

## Retrieval Questions

1. What is the difference between transparent, translucent and opaque?
2. How is a shadow formed?
3. Name a famous British scientist who was interested in light?
4. What is 'light'?
5. Name three sources of light.
6. How does light enter your eye?
7. How can you 'see' an object?
8. What is the 'Law of Reflection'?
9. What is a 'reflection'?
10. Why do objects the eye sees appear to be upside down?

| | Key Vocabulary |
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| Light | A form of energy that allows us to see and makes things visible |
| Light Source | Anything that makes light, either artificial or natural. |
| Reflection | Occurs when a ray of light bounces off a surface, changing direction |
| Transparent | Where a material allows light to pass through, meaning objects behind can be easily seen. |
| Translucent | Where a material allows some light—but not detailed shapes—to pass through. |
| Opaque | Where a material stops light from passing. Not transparent |
| Bright(ness) | The quantity of light. |
| Shadow | A dark area where light is stopped from reaching. |
| Visible | Able to be seen |
| Incident Ray | A ray of light that strikes a surface |
| Reflected Ray | A ray of light reflected by a surface |

## Key knowledge

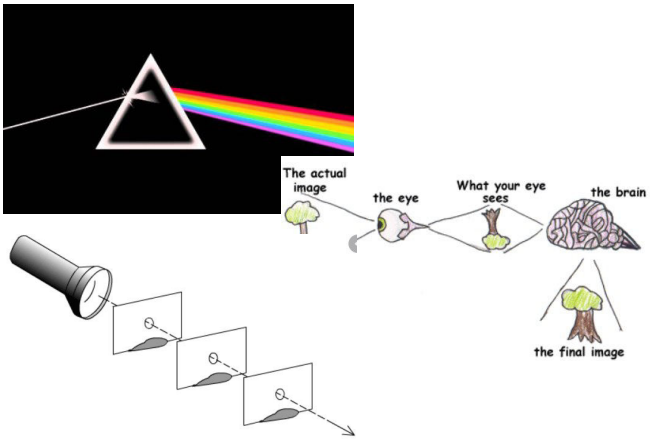
I will understand that we all need light to be able to see objects. Light is an energy that travels as a wave form in straight lines. We often call these wave forms light beams or rays.

Light from a source travels away from the source and hits an object, which reflects the light ray away into our eye. The eye converts the light energy into signals our brain can understand and brain changes these signals into what we see.

Light is made up of different colours.

Shadows are dark areas where light is stopped from reaching.

The closer an object is to a light source, the bigger its shadow is, The further away the object is, the smaller it will appear.




## Useful Websites

- https://www.bbc.co.uk/bitesize/topics/zbssgk7/resources/1
- https://www.bbc.co.uk/bitesize/topics/zbssgk7
- https://teachers.thenational.academy/units/light-dark-250b