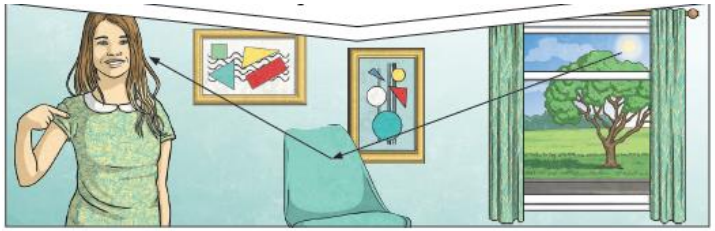
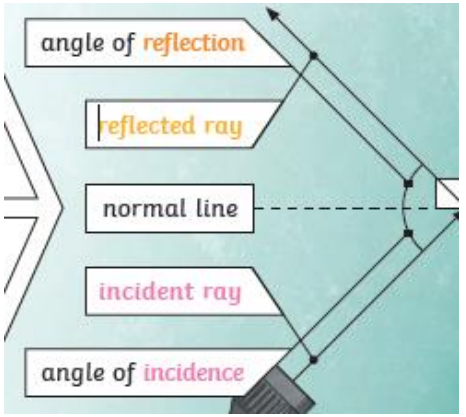
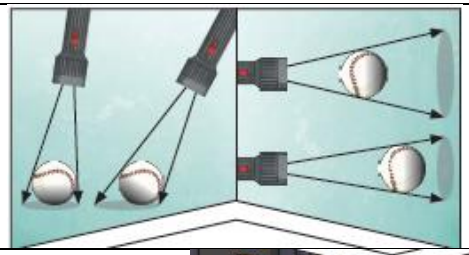
Crofton Junior School – Curriculum Knowledge Organiser

Unit of Work	Science – Physics – Year 6
Key Strand	Understanding light and seeing
Overview of the Unit of Work	This concept involves understanding how light and reflection affect sight
Prior Learning & Vocabulary	Year 2 (materials): transparent, opaque, translucent Year 3 (light): light, light source, names of light sources, dark/darkness, reflect, reflective, mirror, shadow, block, direct/direction
Sticky Knowledge	Light waves travel from sources of light in straight lines. These lights are often called rays or beams of life. The light ray is cast from a light source, reflects from an object then travels into our eyes.   Light travels as a wave. But unlike waves of water or sound waves, it does not need a medium to travel through. This means light can travel through a vacuum – a completely airless space.  The law of reflection states that the angle of incidence is equal to the angle of reflection. Whenever light is reflected from a surface, it obeys the law. The angle of reflection is the angle between the normal line and the reflected ray light. The angle of incidence is the angle between the normal line and the incident ray of light.

<table>
<tr><td rowspan="2"></td><td colspan="2"> 
A shadow is always the same shape as the object that casts it. Shadows can be elongated or shortened depending on the angle of the light source.</td></tr>
<tr><td> 
Isaac Newton shone a light through a transparent prism, separating out light into the colours of the rainbow (red, orange, yellow, green, blue, indigo and violet) – the colours of the spectrum. All the colours together merge and make visible light.</td><td> 
Refraction: The spoon in this water looks as if it is bent. This is because light bends when it moves from air to water. When light bends in this way, it is called refraction.</td></tr>
<tr><td>New Vocabulary</td><td colspan="2">absorb, refraction, incidence (ray/line), prism, visible spectrum</td></tr>
<tr><td>Post Learning</td><td colspan="2">KS3: Waves</td></tr>
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