# **Key Knowledge**

### **Eyes**

Our eyes can see objects because we can sense light

## **Light and dark**

Dark is no light so we can't see and light is when there is light so we can see

#### The Sun

Light from the sun can damage our eyes and skin so we can wear hats and sunglasses to protect them

#### **Shadows**

These are formed on a surface when something blocks or gets in the way of the light

### **Small shadows**

These happen when the object blocking the light is further away from the source

#### **Big shadows**

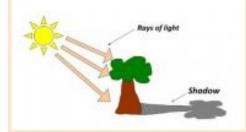
These happen when the object blocking the light is closer to the light source

# **Important Scientists**

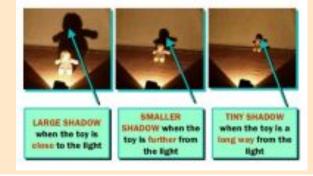
IDD AI-Haytham  He was an Arabic scientist who proved that light travels in straight lines	965 - 1040
Zhang Heng He was a Chinese scientist who recognised that the Moon is not a source of light and that it reflects the	78 - 139

# **Key Diagrams**

#### How are shadows formed?



### Light travels in straight lines



## **Investigate**

Explore how shadows vary as the distance between a light source and an object or surface is changed.	Explore shadows which are connected to and disconnected from the object e.g. shadows of clouds and children in the playground.
Choose suitable materials to make shadow puppets.	Create artwork using shadows
Explore how different objects are more or less visible in different levels of lighting	Explore how objects with different surfaces, e.g. shiny vs matt, are more or less visible.

### **Key Vocabulary** When there is no light so it is dark absence of light dark When there is no light available light A brightness which helps you to see things light source Things which give us light such as the sun, light bulbs and candles A glass surface which reflects an mirror image Something that isn't shiny matt Something that doesn't let light opaque through it reflect When light is sent back from a surface because it doesn't pass through it shadow A dark shape on a surface made by something blocking the light shiny A surface which reflects light because it is clean or polished sunlight The light that comes from the sun surface The top of an object or thing translucent Something which lets some light through Something which lets lots of light transparent through