



# LKS2 Science Knowledge and Skills Organiser

## Lights, Camera, Active

### Key Knowledge and Skills

#### Light Sources

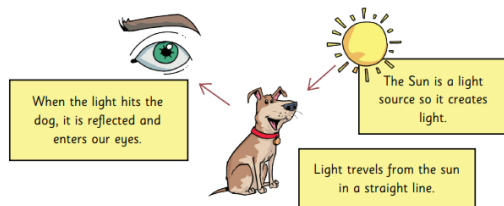
A light source makes light. The Sun and other stars, fires, torches and lamps all make their own light so are examples of sources of light.

#### Dark and Shadows

Darkness is what happens when there is an absence of light. When there is no light, it is dark. A shadow is made when an object blocks light. A shadow is a dark area or shape caused by a solid object blocking the rays of light from a light source.

#### Reflective Light

We can see things because light is reflected. Some materials reflect light better than others. Light travels in straight lines. When light from an object is reflected by a surface, it changes direction. Smooth, shiny surfaces such as mirrors and polished metals reflect light well. Dull and dark surfaces such as dark fabrics do not reflect light well.

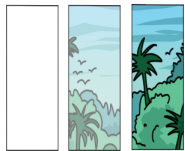


#### The Sun

The Sun is the biggest light source we use. It is a huge ball of hot, burning gas. It can damage our eyes if we look directly at it. We should protect our eyes from the Sun by wearing sunglasses and wearing a hat.

#### Types of Objects

Objects are either opaque, translucent or transparent. Opaque objects let no light pass through. Translucent objects let some light pass through. Transparent objects let light pass through.



#### Sound

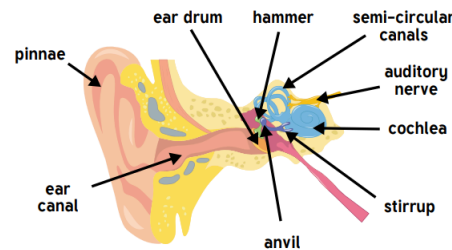
Sounds are made when objects vibrate. The vibration makes the air around vibrate, and the air vibrations enter your ear. You hear the vibrations as sounds. You cannot always see the vibrations, but if something is making a sound, a part of it is vibrating. The vibrations travel in all directions and they don't travel in straight lines.

Sounds can be high or low. We call this the pitch. The pitch of a sound is how high or low the sound is. A high sound has a high pitch and a low sound has a low pitch. The pitch of a sound is due to how many times the object vibrates each second. The higher the number of vibrations the higher the pitch. We can change the pitch of the sound we make on different instruments.



Sounds can also be loud or quiet. We call this the volume or loudness of the sound. Loudness is the amount of energy in the sound. The energy creates different sized vibrations. If you hit a drum hard, you give it lots of energy and the vibrations will be bigger than if it was hit gently. Bigger vibrations cause louder sounds. Loudness is measured in decibels (dB)

#### The Ear



### Key Vocabulary

Word	Definition
Light	a source of energy that allows you to see
Dark	the absence of light
Shadow	a dark area or shape produced by an object coming between rays of light and a surface
Opaque	cannot see through
Transparent	can see through
Translucent	can be seen through, but not clearly
Volume	how loud or quiet a sound is
Vibration	very quick movements
Sound	vibrations that travel through the air and other mediums and can be heard
Pitch	how high or low a sound is
Pinnae	the outside flaps of the ear which help 'catch' the vibrations
Decibels	The measurement of sound

#### Skills

- To be able to ask relevant questions and use different types of scientific enquiries to answer them.
- To be able to set up simple practical enquiries, comparative and fair tests.
- To be able to identify differences, similarities or changes related to simple scientific ideas and processes.
- To be able to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.