Science Knowledge Organisers

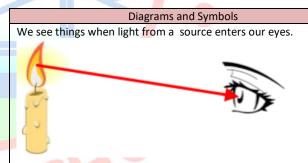
Science Focus Light Year 3 Spring

	Vov Knowlodgo
What is a light source?	Key Knowledge A light source is something that makes its own
what is a light source:	
Common sources of	light
Common sources of	The sun The stars
light	
	Flames
	Electric lights (including car headlights, street
	lights)
	Some animals (fireflies and glow worms make
	their own light)
Things you may think	The Moon is not a source of light even though
are light sources but	we can see it in the dark.
are not	This is because the Sun's light reflects on the
	surface of the Moon making it appear as
	though the Moon emits light.
	Shiny things are not light sources – they,
	basically reflect light from a source - they
Why do we and list-12	appear to be sources of light as they are bright.
Why do we need light?	We need light so that we are able to see in the
	dark. This is because the dark is the absence of light
	This is because the dark is the absence of light.
	The Sun and stars always give us light but we can only see the stars when it is dark. At night
	time we cannot see the Sun's light as the Earth turns and our part of the Earth is not lit up by
	the Sun at night. When we are driving, we
	need car headlights or street lights to help us.
	If we are walking or out in the dark, we would
	need torches to help us see. You should not
Things you need to	look directly into the torch as this is dangerous.
Things you need to	Light travels in straight lines
know about light	Light travels very, very fast - 186,282 miles per
	second. (that's like travelling around the world over 7 times in a second)
	If something gets in the way of light, a shadow is formed.
	The Sun
WARNING	
WARNING	IT IS NOT SAFE TO EVER LOOK DIRECTLY AT THE
	IT IS NOT SAFE TO EVER LOOK DIRECTLY AT THE SUN, EVEN WHEN WEARING SUN GLASSES
How is a shadow	IT IS NOT SAFE TO EVER LOOK DIRECTLY AT THE SUN, EVEN WHEN WEARING SUN GLASSES When light from a source is blocked by an
How is a shadow formed	IT IS NOT SAFE TO EVER LOOK DIRECTLY AT THE SUN, EVEN WHEN WEARING SUN GLASSES When light from a source is blocked by an opaque object, you get a shadow
How is a shadow formed How does the size of	IT IS NOT SAFE TO EVER LOOK DIRECTLY AT THE SUN, EVEN WHEN WEARING SUN GLASSES When light from a source is blocked by an opaque object, you get a shadow If an object is moved closer to the light
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Key Vocabulary	
angle	the direction from which you look
	at something
emits	to emit a sound or light means to
	produce it
opaque	An object you are not able to see
	through.
reflects	sent back from the surface and not
	pass through it
Shadows	a dark shape on a surface that is
	made when something stands
	between a light and the surface
translucent	if a material is translucent, some
	light can pass through it
transparent	If an object or substance is
	transparent, you can see through it
Warning	
	Something that is said or written to
	tell people of danger.
electricity	a form of energy that can be carried
	by wires and is used for heating and
	lighting, and to provide power for
	machines

Possible Experiences

Experiment to find out how the length of shadows can change with the seasons. (Caused by the earth's tilt). Can we make a light ray pass from using mirrors? Shadow puppets theatres with size of shadow changes for bigger characters.



Above: Light travels directly from the light source (candle flame) to the eye.



Here the light goes form the light source, bounces off the object and into your eyes, so that you see the object.

Greater Depth Thinking

What connections have you made?

Do you need to make changes to the way you are approaching this task?

Is there anything you need to check your understanding of?

