Types of Light - Fill in the blanks

Light travels as particles called _____, which move in a _____ line when in a vacuum. However this straight line is actually an _____ wave, meaning that light has both _____ and _____ fields.

However, there are different types of light sources. Light from the sun and other stars is considered a source of _____ light, whereas light from a flashlight or lamp is from an _____ source.

Light that is emitted by a very hot object is called _____. This type of lighting is produced when electricity passes through a _____ wire, which then heats up.

Incandescent lighting was first discovered/invented by _____ and _____, who is usually credited with the invention.

Incandescent light bulbs however are a very inefficient source of lighting, as only about 5% of the energy used is given off as _____ energy, whereas 95% is lost as _____ energy.

Due to this inefficiency, fluorescent lights have replaced many incandescent light bulbs in homes. Fluorescent lighting works by passing _____ through a tube (bulb) containing _____ atoms, along with an _____ gas like argon. This produces _____ light. This type of light is not visible to us, but is converted to visible light by a powdery substance called _____, which coats the bulb.

While more efficient than incandescent bulbs, fluorescent lights still have a couple of problems. Firstly, the initial surge of energy may not be sufficient to _____ the mercury atoms, and secondly, once heated the mercury atoms would increase the conductivity as time passes, increasing the chance of the bulb overheating. Due to this, we add a fluorescent light _____ to help overcome these issues.

Light that is generated by the energy released in a chemical reaction is called _____. Light produced in this way in animals is called _____.

Forensic scientists often use chemiluminescence at crime scenes to identify certain bodily fluids. This is done by spraying a mixture of _____ and hydrogen peroxide onto the area. Blood will then show a blue glow when viewed under UV light in the dark, as _____ in the blood acts as a catalyst in the chemical reaction, making it visible to the naked eye.
Fireflies produce their own light, however they do not use hydrogen peroxide to oxidise their luciferin (like luminol), instead they use _____.

Many other animals use bioluminescence to their advantage. Some reasons they may use this is to attract _____, to lure in _____ for food, or for _____, to scare of potential predators.

The colour of the bioluminescence produced is dependent on the _____ of the photons emitted by the reaction. Colours with _____wavelengths travel _____, which is why most bioluminescence in the ocean is in the form of blue-green light.

Word Bank

Light	Joseph Swan	
Ultraviolet	Heat	
Photons	Bioluminescence	
Electricity	Electromagnetic	
Ballast	Artificial	
Phosphor	Thomas Edison	
Chemiluminescence	Iron	
Straight	Farther	Mates
Shorter	Incandescence	wavelength
Excite	Inert	prey
Electric	Tungsten	oxygen
Mercury	Luminol	protection
Magnetic	Natural