

**Goal** • Use this page to review terms introduced in section 7.1 of Chapter 7.

### What to Do

- Fill in the spaces in the sentences below with the words that fit best. Choose from the list of words at the end of each section.

#### A. What is Light?

1. Light that spreads out from the Sun transfers energy to the Earth by \_\_\_\_\_.
2. Light is produced from other types of energy. Chemical energy is transformed into light energy when you strike a \_\_\_\_\_. Electrical energy is transformed into light in a \_\_\_\_\_. In the Sun, \_\_\_\_\_ is transformed into light.
3. Sunlight is a \_\_\_\_\_ light source. A light bulb is an \_\_\_\_\_ light source.

artificial	light bulb	light energy	match
match	radiation	nuclear energy	natural

#### B. Properties of Light

1. A dark surface gets \_\_\_\_\_ when light energy hits it. The light is transformed into \_\_\_\_\_.
2. Solar cells can change light energy into \_\_\_\_\_. A light's \_\_\_\_\_ determines how much energy the light carries.
3. Two natural light sources are \_\_\_\_\_ and \_\_\_\_\_. Two artificial light sources are \_\_\_\_\_ and \_\_\_\_\_.

electrical energy	intensity	lightning	the Sun
streetlights	television	thermal energy	warm

#### C. Incandescence

1. An ordinary light bulb is an \_\_\_\_\_ light source. An incandescent light source becomes so \_\_\_\_\_ that it glows. \_\_\_\_\_ energy is changed into \_\_\_\_\_ energy.
2. If an object gets hot enough, it emits visible \_\_\_\_\_ energy. The part of an incandescent bulb that heats up and glows is called the \_\_\_\_\_.

electrical	filament	hot
incandescent	light	thermal

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**A. Fluorescence**

1. The long tubes in overhead lights and the tubes that spell the names of stores and restaurants are examples of \_\_\_\_\_ light sources. These do not work the same way as \_\_\_\_\_ bulbs, which have filaments that heat up and glow.
2. In fluorescent bulbs \_\_\_\_\_ energy is absorbed by the particles of mercury \_\_\_\_\_ inside the tube. These particles give off \_\_\_\_\_ light (a type of light you can't see) which hits the white \_\_\_\_\_ powder on the inside of the bulb. The phosphor particles give off \_\_\_\_\_ light.
3. A disadvantage of these bulbs is that they are \_\_\_\_\_ and their contents are \_\_\_\_\_. An advantage of these bulbs is that, since they don't get \_\_\_\_\_, they are energy \_\_\_\_\_.

efficient

electrical

expensive

fluorescent

hot

incandescent

phosphor

poisonous

ultraviolet

vapour

visible

**B. Phosphorescence**

1. Phosphorescence is similar to fluorescence, except that the particles that absorb the \_\_\_\_\_ do not release it immediately. There is a \_\_\_\_\_. An example is a toy ball that \_\_\_\_\_ after you hold it near a bright \_\_\_\_\_ for a while.

delay

energy

glows

light

**C. Chemiluminescence and bioluminescence**

1. Electrical and solar energy are used to make incandescent or fluorescent light. Energy released in \_\_\_\_\_ reactions provides the energy for chemiluminescence and bioluminescence. The term chemiluminescence refers to \_\_\_\_\_ light produced this way, and bioluminescence refers to the \_\_\_\_\_ produced by \_\_\_\_\_ organisms.

artificial

chemical

light

living