

# LIGHT WAVES

## UNIT QUESTION:

*How does light interact with materials?*

## Chapter Questions:

1. *How does light from the sun cause skin cancer?*
2. *How can the same amount of sunlight cause different rates of skin cancer?*
3. *Why does Australia get more ultraviolet light than other parts of the world?*
4. *Can the crabs see the plankton they eat near the ocean floor?*

## Key Concepts:

1. The movement of energy can be tracked by observing the changes the energy causes to matter.
2. Light carries energy that causes materials to change.
3. When light hits a material, the material can absorb energy from the light.
4. When a material absorbs energy from light, the energy causes the material to change.
5. There are different types of light that can change a material in different ways.
6. A light source can emit more than one type of light.
7. Different types of light have different wavelengths.
8. A material absorbs energy from some types of light and not others.
9. Light travels in a straight line.
10. When a light wave hits a material, the light can be absorbed by the material, transmitted through the material, or reflected off the material.
11. A material transmits or reflects some types of light and not others.
12. When light is transmitted through or reflected off a material, the energy is not absorbed, so the material does not change.