

Name _____

Radiation: The Invisible Heat Transfer

Short Answer Key

1. A mirror reflects radiation, such as visible light. It works by bouncing off incoming light waves without absorbing them, resulting in the reflection of an image.
2. Microwave ovens use radiation in the form of microwaves. These waves are absorbed by water molecules in food, causing them to vibrate and generate heat, which heats the food.
3. We can feel the warmth of the Sun in space because the Sun emits radiation, including visible light and infrared radiation. When these rays reach our bodies, they are absorbed, making us feel warmer.
4. Absorption of radiation occurs when an object captures the energy from incoming waves, causing it to become warmer. An example is the Earth absorbing sunlight during the day. Transmission of radiation happens when certain materials allow radiation to pass through them without absorbing it. For instance, glass windows transmit visible light and infrared radiation, allowing sunlight to enter a room without absorbing all of its heat.
5. The campfire emits infrared radiation in all directions, including toward you. When this radiation reaches your skin, it is absorbed, warming you. This is how you feel the heat from the campfire, even without direct contact.

