Name:_____

Intervention 4.1 CDE

I can describe how energy spreads from its source, compare the transfer of heat, and demonstrate how white light is separated into colors.

Use pages 131-139 in your Integrated Science textbook (the paperback book with the Octopus) to answer the following questions.

1. Visible light is transferred by _____.
2. Visible light consists of a range of wavelengths. The _____ determines the color the light appears.
3. Light with the LONGEST wavelength is _____.
4. Light with the SHORTEST wavelength is _____.
5. A _____ can be used to separate white (visible) light into colors.
6. A prism is a _____- shape.
7. When light passes through a prism, the change in _____ causes the light to _____.
8. Different wavelengths bend at different angles and separate the light into different wavelengths. What we see is a _____ of colors.
9. Waves move energy _____ from an energy producing source.
10. The vibrations spread through the air in _____ _____ away from the guitar string as waves.
11. Seismic waves are the energy from earthquakes. Seismic waves move _____ in all directions away from their source.
12. Sound waves are _____ waves.
13. Sound waves travel most quickly through _____ then _____ then _____.
14. _____ waves cannot travel through the vacuum of space.
15. Light waves do not require a _____; they can travel through _____.
16. _____ is the transfer of thermal energy between particles of matter that are **touching**.
17. _____ are excellent conductors.
18. _____ is the transfer of thermal energy by particles moving through a fluid (liquid or gas).
19. Draw a picture of convection

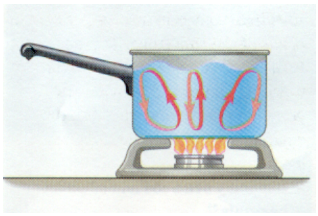
20. Convection currents move thermal energy through many fluids, including:

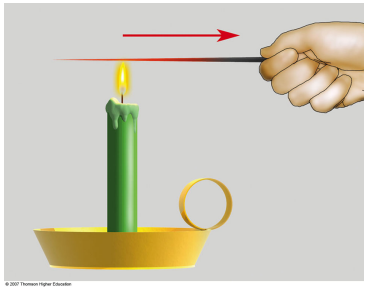
a. B. c.

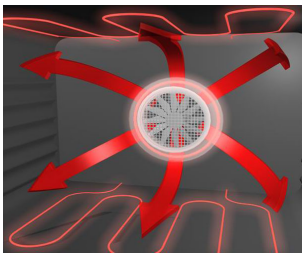
21. _____ is the only way of transferring energy that doesn't require a medium.
22. _____ is the transfer of electromagnetic waves that can travel through empty space.

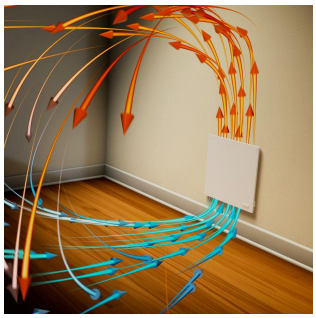
You do not need your book for the back side.

Label the following as convection, conduction or radiation.









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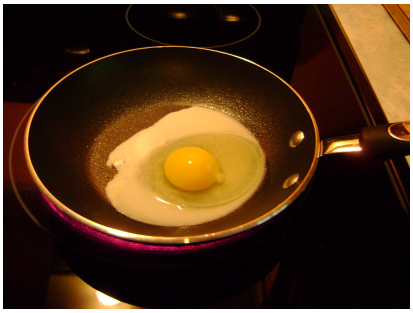

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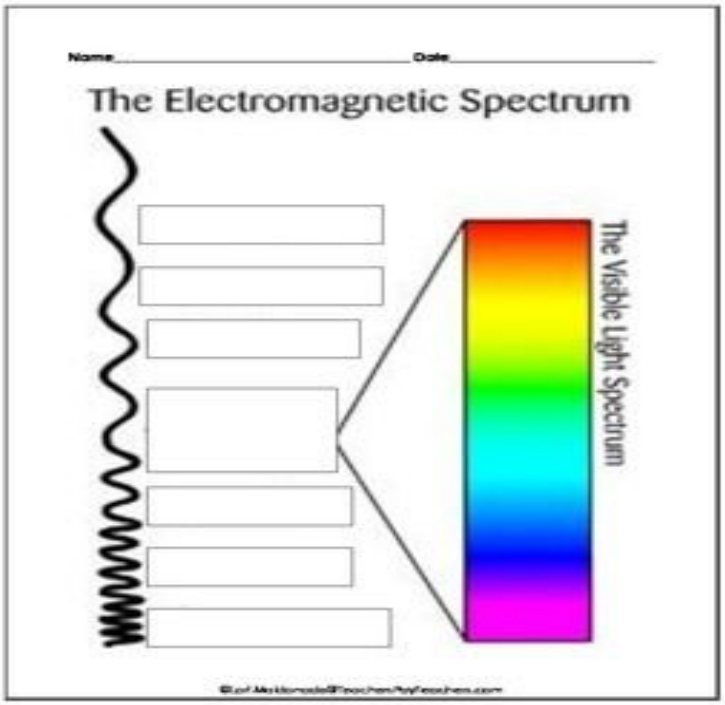

Using the diagram on the left, label the different types of energy in order and circle the one with the least amount of energy.

Word Bank

Gamma Rays, Visible light, Infar-red, Radio waves, X-rays, Ultra-violet, Microwaves