Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period:\_\_\_\_\_\_\_\_\_\_\_\_

Remediation 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 can not 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:
21. B. c.
22. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the only way of transferring energy that doesn’t require a medium.
23. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the transfer of electromagnetic waves that can travel through empty space.