

Name: _____

Hour: _____ Date: _____

The Study of Light Chapter 24.1

Electromagnetic Radiation

- _____ is _____ of many _____ of _____ called _____ **Radiation**.
- **Electromagnetic** _____ includes
 - _____
 - X-_____
 - _____ light
 - _____ light
 - infrared _____
 - _____
 - Radio waves.
- The **electromagnetic** _____ is the _____ of electromagnetic _____ according to _____.
- All _____, regardless of _____ travels at the _____ of _____ when in a _____.

Nature of Light

- There are _____ ways _____ behaves.
 - **Like** _____
 - **Like** _____
- **Light** _____ are like the _____ of the _____.
 - This _____ is known as a _____, which is the _____ from _____ wave _____ to the next.
 - Most _____ are too _____ or _____ for us to _____.
 - _____ **light** has a _____ of _____ lengths.
 - _____ separate _____ light by _____.

Photons

- Sometimes _____ acts like _____ of _____ called _____.
- Each _____ has a _____ amount of _____ which is _____ to its _____.
- _____ **wavelengths** have _____ energetic _____.

Spectroscopy

- _____ is the study of the _____ of _____ that _____ on _____.
- The _____ of _____ that comes from _____ acts as the star's _____ prints.
- We can learn the following from a star's finger prints.
 - _____
 - Temperature
 - _____
 - Density

- 1.) When you burn elements they give off _____.
- 2.) What color is copper when it burns? _____
- 3.) A rainbow is a _____
- 4.) Each element emits and _____ light of the same color.
- 5.) What percentage of hydrogen does our sun have? _____

The Doppler Effect

- Like _____, sound also _____ in _____.
- When a _____ car _____, it _____ a high _____.
- When the _____ car is _____ away, it has a _____ pitch.
- The _____ is not _____ different. You only _____ it to be _____ because the _____ of _____ is _____.
- The _____ **Effect** is the _____ change in _____ of a wave that is _____ from a _____ that is _____.
- The _____ **Effect** can be _____ to _____ if a _____ is _____ away from or _____ Earth.

- 1.) If a star is moving towards us, the light is what color? _____
- 2.) If a star is moving away from us, the light is what color? _____