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

The Electromagnetic Spectrum- Limits of light video questions

Please complete the following questions on a separate piece of paper. Remember that these are critical thinking questions, and require full sentences and paragraphs to answer completely. Note: the video can be found on the class blog.

1. What part of the wave gives light its colour?
2. a.. Who discovered that white light was made up of different colours?

b. Describe the experiment he used to prove this.

1. What are pigments? How do they work?
2. Why are leaves green?
3. Why is the sky blue?
4. What were some uses of the colour indigo?
5. Name an animal that can see UV. How do they use this adaptation?
6. What was the first X-ray of?
7. What can cause bursts of gamma rays? (at 29:09 of video)
8. In nature what do the colours orange and red signify?

\*Once you have finished your work, be sure to fill in the rubric below to show what you feel you have earned with the quality of your answers.



1. How were infrared rays discovered?

(infrared rays have longer wavelengths than red light) William Herschel (1800) was measuring the temperature of different colours of light and he noticed that a thermometer in a dark area (below red) was warmer than the other colours.

1. What is one application of infrared light?

Infrared photography. These types of cameras can pick up reflected (or emitted) infrared light.

1. Which parts of the body radiate the most heat?

Far infrared waves indicate the temperature of an object. Your head radiates the most heat.

1. What is one application of microwaves?

(microwaves have longer wavelengths than IR) Heating food.

1. What are quasars and how were they discovered?

(radio waves have longer wavelengths than microwaves) A special type of galaxy that is 12 billion light years away that emit radio waves from a super-massive black hole at the centre of the quasar.

<https://www.youtube.com/watch?v=jnGTCaiZqOE>