**Bill Nye Video Worksheet (Light and Optics)**

**Part 1:**

Watch this video on Light and Optics and answer the following questions:

<https://www.youtube.com/watch?v=H8gX6a6yTT4>

1. What are the three things light can do?

2. What happens to light when it travels through a curved piece of glass in the water box?

3. What are three pieces of technology that uses refraction?

4. What happens to light when it is reflected or refracted?

5. How many mirrors do you need to make a periscope?

6. What happens to waves when they slow down?

7. What kind of light does the TV remote use?

8. Why won't you be able to turn the TV on if black paper is used?

9. How do things look through a concave lens?

10. How do things look through a convex lens?

11. What kind of lens is in our eye?

12. What kind of mirror makes u look upside down?

13. When bill places the curved glass in front of the three beams of light, what kind of point do they meet at on the other side?

14. What can you only see one end of the pencil (the end in the water)?

15. What technology is used in knee surgery (to not cut the knee open)?

16. What kind of light gets trapped in a greenhouse?

**Part 2:**

Watch this video on Light and Colours and answer the following questions:

https://www.youtube.com/watch?v=g5BHxozBPuA

1. White light is a mixture of what?

2. What does bill use to break up the white light?

3. What are the colours of the rainbow?

4. Can you break up the colours with a second prism?

5. Why is a red car red?

6. Why is it when you mix red blue and yellow paint, you get black?

7. What are lasers?

8. What is the difference between red and blue light wavelengths?

9. Why is the sky blue?

10. Why is the ocean blue?