

***Cosmos: A Spacetime Odyssey Season 1: Hiding in the Light Video Questions***

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

1. What was Isaac Newton's Experiment? What did it show? (16:00)
2. What was William Herschel's experiment? What did it show? (19:00)
3. What are wavelengths? How do they affect the sound we hear and the colors we see? (27:00)
4. How do sound waves and light waves differ from each other? (28:00)
5. What was Joseph Fraunhofer's experiment? What did he learn different types of light could do when put through a prism? (30:00)

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5. What was Joseph Fraunhofer's experiment? What did he learn different types of light could do when put through a prism? (30:00)

6. How does a prism or a diffraction grating like is inside a spectroscope split light? (31:00)
7. What makes color in any object you see? (32:00)
8. What is the energy of blue light waves compared to red light waves? (32:30)
9. What causes spectral lines to appear? What is going on in the electrons inside an atom? (35:00)
10. What do Fraunhofer's spectral lines tell us about the objects in our universe? (40:00)
11. What can light **not** tell us about in the Universe? (41:00)
12. What can other types of light like ultraviolet, infrared, or X-rays tell us about our Universe? (43:00)

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