

Conclusions: Discuss these topics with your students on the last day of class.

1. Philosophers and scientists have debated the nature of light for centuries.
 - a. They had good reasons for their models based on the data available to them at the time.
 - b. Occasionally they encountered new evidence that could not be explained by the current model, so their theories had to evolve over time.
 - c. They had to use qualitative (analogies, metaphors, imagination and speculation) descriptions as well as quantitative (observations, equations, and calculations) measurements as they developed their models. Developing scientific theories requires more than just pure measurement and calculation.

2. Einstein's explanation of the photoelectric effect is our current best model for light having a mysterious wave-particle dual nature.
 - a. Even though it seems impossible for light to be both a wave and a particle at the same time, scientists accept this theory as the best explanation we currently have.
 - b. Clearly, there is mystery in science!

3. Make some important connections to theology.
 - a. Watch the Word on Fire video: "[Light from Light](#)". It is a 15-minute video that can now be found on YouTube. I was not able to upload it to the resource section. It is a really good way to conclude the lesson!
 - b. In both science and faith, we have an innate desire to search for truth. When we encounter things that make us experience awe and wonder, we want to learn more about them.
 - c. We can gain a better understanding of some of the mysteries that we encounter in our faith when we see that there are also mysteries in science. We are often criticized for claiming that Jesus is both fully human and fully divine. How can that statement possibly be true? However, the theory of wave-particle duality provides a good example of a similar statement in science. I think you could also discuss the Trinity in this context also.