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These terms should be memorized and the key concepts should be understood in order to grasp the essential information for the science unit. You will be quizzed weekly over this content, and it will appear on exams.

## Lesson 1.1

### Terms

1. **Truth**
2. **Scientific fact**

### Questions

1. How is scientific knowledge different from truth?
2. What are three ways we can know truth?
3. Why is Revelation the most certain form of truth?
4. What is an evident truth?
5. What are the two categories of conclusions about truth that are reached using reason? To what category does scientific knowledge belong?
6. Why are scientific facts provisional and yet not mere opinions?

7. What causes our scientific knowledge to be limited to probable truths?
8. What is the difference between Special Revelation and General Revelation? Can they conflict?
9. Why does God directly reveal things that can be known through General Revelation?

**Exercise:** Explain the *Catechism* quotation in the video.

"Though faith is above reason, there can never be any real discrepancy between faith and reason. Since the same God who reveals mysteries and infuses faith has bestowed the light of reason on the human mind, God cannot deny himself, nor can truth ever contradict truth." "Consequently, methodical research in all branches of knowledge, provided it is carried out in a truly scientific manner and does not override moral laws, can never conflict with the faith, because the things of the world and the things of faith derive from the same God. The humble and persevering investigator of the secrets of nature is being led, as it were, by the hand of God in spite of himself, for it is God, the conservator of all things, who made them what they are." (*Catechism of the Catholic Church*, §159)

1. In this passage, what is General Revelation and what is Special Revelation?
2. Why is faith above reason?
3. Why will careful scientific research never contradict faith?
4. How is a scientist called to glorify God?



## Lesson 1.2

### Terms

1. Science
2. Theory
3. Hypothesis

### Questions

1. Why is it incorrect to dismiss a scientific idea because, "it is only a theory."
2. Summarize each of the seven key points about theories. Number each point.
3. Explain how a hypothesis is a positively stated, testable, informed prediction. (Make sure to discuss each of the underlined sections.)
4. If the outcome of an experiment does not prove the hypothesis, what should a scientist consider before concluding that the underlying theory has a weakness?



5. How does a good scientist exercise the virtue of humility?

## Lab Preparation Lesson

### Questions

1. What is a controlled experiment?
2. What three explanatory variables will we use in the pendulum lab?
3. Why do we do multiple trials in an experiment?

**Works Cited:** *Catechism of the Catholic Church*. Liguori, MO: Liguori Publications, 1994.