These questions could be done in small groups or as a class discussion.

Discussion Questions:

**Introduction (4:25)**

1. Why was Eli Lilly started by Colonel Eli Lilly?

2. How much money does Lilly spend per day on research/development?

3. How many molecules make it to market as a drug?

4. How long does it take from initial discovery to approved drug?
   
   • Why do you think it takes so incredibly long?

5. Fill in the blank lines on the “rocket ship” model that was used in the video to explain the drug formulation process.

1. On this model, why are animal models used for testing?
Discovery Chemistry and In Vitro Biology (3:55)

1. Only _________ in _________ (#’s) become a drug.
   - Hypothesize as to why you think that is?

2. Something that dissolves another substance to form a solution is called a _____________________.

3. Explain how biology and chemistry work together.

4. ______________________ means “in plastic”.

5. What is another name for a test in a biology lab? _____________

6. How many genes are in the human body? ________________

In Vivo and Toxicology (4:20)

1. In vivo means ___________ the organism.

2. _______________ means the study of the effects of chemicals on an organism.

3. __________ mice are sterile or germ free.

4. Does Eli Lilly employee vet techs? __________

5. Why would veterinarians want to monitor animals while they are awake and running about using the telemetry device?
Clinical Development (4:32)

1. Why do you think human subjects are monitored so closely during a drug trial?

2. Why would a clinical team need such diverse people as a doctor, biostatistician, pharmacokineticist, project manager, pharmacologist and toxicologist?

Development and Manufacturing (4:21)

1. Why would a chemist be needed in the manufacturing of drugs?

Summary

1. After watching this video explain, in detail, why prescription medication is so expensive?

2. Why would this segment end by saying, “For someone with a science background, the sky is the limit!”?