

Homework Assignment Unit One - with answers
Chapter One AP Introduction

Why do some students find science hard? (11 min)

1. What makes science difficult for some people?
2. What makes something hot or cold?
3. What happens when something hot comes into something that is cold? f
4. What happens to the energy from a bouncing ball? Where does it go?
5. What happens to cause a fire?
6. Where do trees come from?

Twenty Amazing Facts About the Human Body (10 min)

1. How long may the heart beat if removed from the body?
2. If you removed the lungs and laid the respiratory tubes flat what would be the surface area?
3. Do infants or adults have more bones? Why?
4. How many heart beats are there in a lifetime?
5. How may you explain how many synapses are in the human brain?
6. What is the meaning of the cauda equina?
7. Is there muscle tissue in your fingers? Explain.
8. What do bite size information prepare the mind for?

Positive and Negative Feedback (15 min)

1. What does a negative feedback loop cause?
2. What does a positive feedback loop cause?
3. What is a simple definition of homeostasis?
4. What is our body temperature? What type of loop maintains homeostasis?
5. Where is most of the diabetes in the world located? Why?

What is a reflex? (2 min)

1. What are the characteristics of a reflex reaction?
2. What six structures are need for a reflex arc?
3. Do reflex arcs need to travel through the brain for signal to reach effector?
4. Will the brain eventually find out about the event triggering the reflex arc? Why?
5. What is a conditioned reflex?

Natural Selection and Evolution (7 min)

1. What type of cells are antibiotics designed to kill?
2. What type of cells form the human body?
3. What two characteristics are shared by same species?
4. What type of trait may play a role in determining natural selection?
5. What does fitness mean in biolgoy?
6. What is the simple definition of evolution?

7. What is the mechanism for evolution?
8. What will occur in natural selection has a positive effect?
9. What is the last lesson in this video?

Fact vs Theory vs Hypothesis vs Law (7 min)

1. What is the best tool we have for understanding how the universe works?
2. What are facts?
3. What is a hypothesis?
4. What do you do with all the proven true hypothesis?
5. What is a theory?
6. What is the best thing about theories?
7. Is gravity a theory of law? What is a law in science?
8. Does a law tell us why something happens?
9. Are theories always complete and able to explain everything?
10. What is the last message in this video?

How to use Feynman's Technique to learn anything? (5:45 min)

1. What was Richard Feynman's nickname?
2. How do you use the Feynman's Technique?
3. What is step one?
4. What is step two?
5. What is step two's goal?
6. What is step three? Follow up?
7. What is step four?