Something is Fishy in the Nitrogen Cycle Student Worksheet

In your own words, describe the Nitrogen Cycle.

Draw a model of the Nitrogen Cycle. Label all of the parts.

DATA COLLECTION

Date	Ammonia Level	Nitrate Level	Nitrite Level	Subjective Observations (Observe the aquarium for any changes in water clarity, fish behavior, or plant growth.)
Starting Levels				
Week 1 Average ** Do not include the starting level in the average calculation*				
Week 2 Average				

Week 3 Average				
Difference between the ending and starting values				

GRAPH IT

Create a bar graph of the starting value, week 1 average, week 2 average, week 3 average and the final value for EACH of the variables you tested. These should be on the x axis. The values should be on the y axis. Don't forget to label your axes and to include a title and the units.

ANALYZE IT

1. **Which nitrogen compound increased first? How can you explain this?**

2. **Which nitrogen compound increased second? How can you explain this?**

3. **Which nitrogen compound increased last? How can you explain this?**

4. **Where do you think the bacteria came from in your initial tank setup?**

5. **What pattern do you notice between the ammonia levels and the nitrate levels?**

6. **What pattern do you notice between the ammonia levels and the nitrite levels?**

7. **What pattern do you notice between the nitrate levels and nitrite levels?**

8. **Explain what happened to the levels of each nitrogen compound and how it relates to the nitrogen cycle.**

9. **What role do the fish play in the nitrogen cycle?**

10. If you don't want to have to change the water in your fish tank every few weeks, what can you do?