**ENVS 100 Week 1 Assignment**

**Putting the Scientific Method into practice**

Perhaps the hardest task for any scientist is to ask a good question. As Sean Chamberlin writes out in "The Remarkable Ocean World":

"A properly posed scientific question gets to the root of the matter; the mere creation of it suggests possibilities we might never have considered; the asking of it illuminates gaps in our knowledge and exposes those parts of a problem that are most critical."

In this week's assignment, we will put this concept into practice, and explore first-hand the art of scientific thinking.

For this activity, I want you to GO OUTSIDE. You don't have to go far. Find a city park. Find a patch of grass. Find your backyard. Find your local playground. But find somewhere where maybe there is some vegetation and some nonhuman animals.

# *Activity*

# Step 1. Look around you. Make careful observations. What do you see? What kinds of phenomena define the landscape that you see before you? What kinds of organisms travel along it? How does water move through it (think precipitation, how does water get into the ground? Where is the closest water body where a drop of water might end up?) What kinds of things can't you see that you might be curious about? Don't limit yourself or your thinking. Stretch your mind. Include the land, the sky, the soil, etc. Observe the big picture as well as the tiny picture.

# Below, briefly describe the environment around you. Remember the environment includes the atmosphere, biosphere, lithosphere (the ground) and the hydrosphere (lakes, oceans, rain):

# Step 2. Now write your observations in the form of scientific questions. Scientific questions are those that can be addressed using observation and hypothesis testing. Write at least ten scientific questions. Think big, think small, and everywhere in between.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

**Step 3.** Pick **the question that you think would be the easiest to address using the scientific method** and try to form two different **possible answers**. Frame them in the form of **scientific hypotheses**: your best guess given your current knowledge of the natural world.

Question picked:

Hypothesis 1:

Hypothesis 2:

**Step 4.** Now, as best you can, write a paragraph describing an experiment or study you could run to address your question. In your study, tell me what the **independent** and **dependent** **variables** are. What sort of things should be **controlled** for?

**How to turn assignments in:** There are two ways to submit assignments:

1: You can copy and paste this assignment with your answers into the textbox on the assignment page.

2. You can download the Word file, type your answers in, and upload the file back into Canvas. Do NOT upload .pages files (from Apple products) because they are not Canvas compatible.

When you submit assignments, you will get a **VeriCite** score. This is a plagiarism detection program that matches your submissions against those of current and previous students'. You might get a high VeriCite score if left in the assignment directions. This is absolutely fine: I always check to make sure that high scores are actually due to plagiarism and not from copying the text of the questions.