Ecosystem in a Box

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In this lab you will see various ecological cycles and how they interact and are essential for the survival of organisms. With your group you will plan a way to incorporate these cycles into your ecosystem. Make sure to include the carbon, nitrogen, and water cycles.

Procedures:

Day 1

1- On the first day we will start to grow beans and radishes for oxygen and nitrogen fixation. Fill the bottom of your container with soil.

2- Plant several radish seeds (10ish) and a few bean seeds (4ish) in your container. Do this by pushing them about a half inch down into the soil and then lightly packing the soil on top of the seeds.

3- Make sure that your soil is damp, not swimming.

4- Add a reservoir by filling a cup half way with water and placing it in your ecosystem container

5- Close the container and tape the holes on top of the container to seal it.

Day 3 (or after the plants start to grow)

1- Open your container and add a few pill bugs to your ecosystem.

2- You may add additional organisms you find if you would like.

Observations:

|  |  |  |
| --- | --- | --- |
| Day | Observations | Sketch |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |

Analysis Questions:

1- How was oxygen provided in your ecosystem?

2- How was nitrogen provided in your ecosystem?

3- How was carbon provided in your ecosystem?

4- How was water provided in your ecosystem?

5- What is something that worked well in your ecosystem?

6- What would you like to change about your ecosystem?