

NATURE ACTIVITIES

DIY ECOSPHERE

Learn how to make your own DIY Ecosphere! Use an empty jar and collect some pond water. You may see macroinvertebrates grow before your eyes in a mini self-sustaining ecosystem!



Photo Credit: Wired



Photo Credit: Instructables



GATHER YOUR MATERIALS



YOU WILL NEED:

- Mason Jar or another Lidded Glass Vessel
- Soil
- Pebbles, Gravel, or Small Stones (helps with drainage)
- Sand
- Pond, Marsh, Lake, Stream, Creek or River Water (the more stagnant the better)
- Algae
- Aquatic Plants
- Critters in the water including optional snails



FILL



STEP 1:

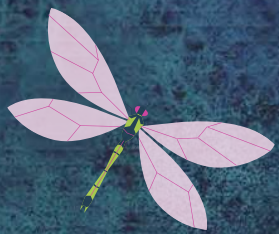
- Layer your soil, pebbles and sand to an inch within a lidded glass jar.
- Gather water from a pond or from rivers, streams, etc in more still areas areas near the bank in another lidded mason jar.
 - Make sure the water has little critters inside as well as algae water plants. If you scoop up some of the bottom, you will probably get mayflies and other macroinvertebrates in the mix. If you can find a small snail to add, great!
 - Seal and bring home.
- Pour your pond water into the jar with the soil and pebbles.



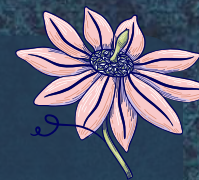
Photo Credit: Instructables



Photo Credit Bored Panda



ECOSYSTEM



STEP 2:

- If you have access to aquatic plants it would be good to add to your container.
- Once sealed, the DIY Ecosphere should be self-sustaining. It should be placed in a softly lit area. Too much sun may harm the critters inside, but sunlight is necessary for its survival.
- The algae is eaten by the macroinvertebrates. If there is not enough of them, algae will take over the jar.
- Bacteria and carbon dioxide feed algae and plants and therefore turns into oxygen and nutrients for the macroinvertebrates continually cycling



Photo Credit: Instructables



Photo Credit: Wired

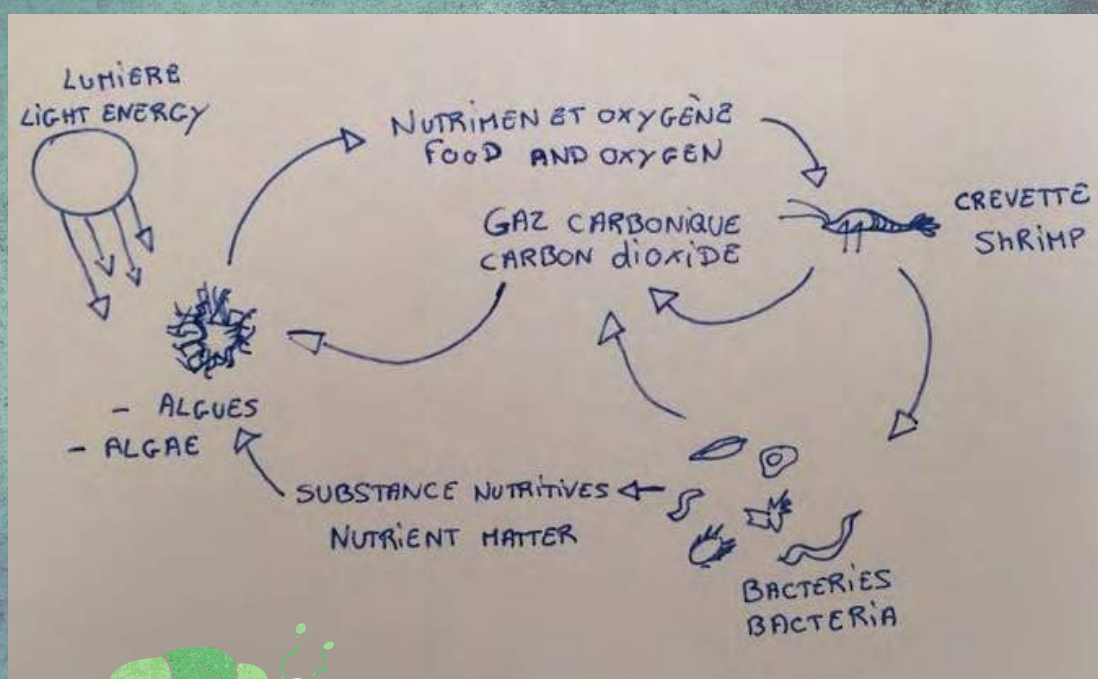


Photo Credit: Instructables

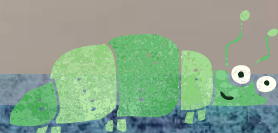




Photo Credit: Sparks Research Group



OBSERVE



STEP 3:

- Keep looking into your DIY Ecosphere and see what has grown! You may notice critters that you didn't see before as they grow.
- You may see mayfly and dragonfly nymphs, crane flies or stoneflies etc. If you notice any of these start to grow wings and fully develop, it is time to set them free into nature.
- Observe over time and see how your DIY Ecosphere is doing. Use your best judgment if it seems healthy or not. Introduce more critters if it is entirely green with algae and vice versa.



Photo Credit: Bored Panda



Photo Credit: The Catch and the Hatch



Photo Credit: Bored Panda



References:

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