



Biocube Questions/Challenges for Teachers and Students

These questions can help tailor the biocube exercise to your unique situation. Some classrooms will be limited by time. Others will need to moderate their impact on the local environment. Some groups require more structure and others may want to leave things flexible. Keep in mind these are only possibilities. There are many more questions out there, so get as creative as you want.

1. Where can you place your cube to capture the most species (kinds of animals and plants)? If you were a Space alien and wanted to learn about diversity on earth, where would you find a lot of stuff?
2. How does biodiversity change through time or in different seasons? Does activity change within one day? Consider repeating a cube in the same place year after year, or at different times.
3. How does human disturbance affect biodiversity? Consider placing a cube close and further away from a walking path/parking lot/etc.?
4. Anchor the cube on a particular kind of plant or animal, species X. What is the same and what is different about the different neighborhoods where you find species X living?
5. Compare cubes from managed sites (gardens, agriculture fields) vs. wild places (no pesticides, herbicides, weeding, etc.)
6. Place the cubes in two areas with contrasting movement or frequency of transit. How is biodiversity affected? For example: still water vs. moving, open spaces vs. cluttered.
7. Think about collecting biodiversity data for only a subset of the inhabitants within the cube, such as all the spiders, only flowering plants, all crabs or all insects.
8. Think of making ecological connections – observing interactions, pollinators, predation, herbivory, etc.

9. How does water/energy flow through your mini-ecosystem? Follow processing and think about inhabitants as players in the system. Which organisms are members of which trophic groups: primary producers, consumers, recyclers.

10. Can you estimate biomass of various subcomponents? Do these proportions change in different habitats or seasons?