"Be an Ecologist"

Job Task:
You are an ecologist, a scientist who studies the relationship among organisms and their habitats. The U.S. Fish and Wildlife Service has asked you to calculate the biodiversity index of a local area. Ecologists use an area's biodiversity index to describe the amount of species diversity in a specific area. Your job is to go to a local area, observe the richness (number of unique species) and abundance (number of individual species), and then calculate the biodiversity index.

Time Frame: 1-2 hours

Materials:
- Paper
- Pencil
- An outdoor area
- Binoculars (optional)
- Seek App by iNaturalist or Field Guides (optional)

Procedure:
1. Fold your piece of paper into eighths.
2. In the first box, write Location, Date, and Time.
3. Label the rest of the boxes (including some on the back): Plants, Amphibians, Fungi, Reptiles, Arachnids, Birds, Insects, Mollusks, Mammals, Abiotic Components (Non-Living), and Biodiversity.
4. Find an outdoor space to observe. Record the location, date, and time in the first box.
5. Try to observe and record all the different living and non-living things that you see.
6. Calculate the biodiversity index for the location by tallying the total species and total items in each category. Then, divide the total number of different species by the total number of living things. The closer the biodiversity index is to 1, the higher the diversity of an area.

$$\text{Biodiversity Index} = \frac{\text{Total Number of Different Species}}{\text{Total Number of Living Things}}$$