GOULD LAKE OUTDOOR CENTRE
Limestone District School Board

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Backyard Biodiversity Activity

Recommendations: For grades 6-9. Outdoor activity. Adult supervision recommended.

Purpose: Investigate and collect data to create a sample determining biodiversity for your area.

Materials:

- Paper & writing utensil
- Measuring tape (*or alternative)*
- String or rope
- 4 sticks that you can peg into the ground
- Magnifying Glass (*optional, not required*)

How it Works:

Context: Our world is host to thousands of different species. With a small sample of your own backyard and a little bit of math, you can gain an understanding of your local biodiversity and species population density.

Step 1: Make a quadrat (*tool used to take a measured sample of an area*) by marking off a 1 meter by 1 meter square area outside with sticks and rope. Depending on the colour of rope you use, it may be difficult to see so be sure others in the area know where it is so that they don't trip.

Step 2: Study the quadrat and make note of everything you see within the frame. Be sure to look closely at both plant and animal species, there will be differences in grass types and small insects that can be hard to notice at first.

Step 3: Use your findings in the quadrat to make scientific estimates of a larger area. This requires measuring the total area of your backyard or whatever green space you are using.

Ex: if there are 12 dandelions in the 1 square meter quadrat and if your total area is 10 square meters, then you can assess that there are 120 dandelions in your yard.

The totals that you come to are a representative sample of your local biodiversity!

Additional Learning

- Revisit the quadrat periodically to see how populations fluctuate as the season changes. Different flowers, insects, etc. will present with greater or lesser density as temperatures warm towards summer.
- Look into the taxonomy of the different species that you find to see how many you can properly identify.

Table 1: Levels of Classification

Levels of classification	Dandelion
kingdom	Plantae
phylum	Tracheophyta
class	Angiospermae
order	Asterates
family	Compositae
genus	*Taraxacum*
species	*officinale*