How Biodiverse is Your Backyard?

Science Film Festival
Knowledge Through Entertainment

Science Film Festival Film

▶ **Lyn and Babas**

Introduction

Have you ever wondered how many different types of animals live around your home, like in your backyard or a local park? Animals come in all shapes and sizes, each a small part of the amazing diversity of life. These differences can help people use systems to classify animals into different groups. One way people classify animals is by their phylum. Do you know which phylum you belong to? In this science activity, you will investigate the diversity (or biodiversity) of the animal life around your home and try to figure out which phylum most of the animals belong to.

The types of animals you saw depends on where your observation location is, but for most backyards, parks, gardens, fields, etc., the phylum that most of the different animals belong to is arthropoda. Some of the most common arthropods you would see include various flies, beetles (including ladybugs), spiders, roly polies, grasshoppers, centipedes, millipedes, earwigs, ants, butterflies, wasps, crickets, and many others. You may also have seen mollusks, such as snails and slugs (which belong to the mollusca phylum), as well as earthworms (if you dug around in soil – these belong to the annelida phylum). If you counted yourself in your survey, then you also saw at least one member of the phylum chordata! Other common chordates you may have seen include squirrels and birds.

Key Objectives

• To understand what phylum are.
• To understand what microhabitats are.
• To undertand what biodiversity means.

Materials

• Sheet of paper
• Pencil or pen
• Optional: Digital camera to take pictures
• Optional: Magnifying glass
• An observation location, such as a backyard, park, community garden, open field, lake, stream, etc. It should be a place you like to explore and where you think you might find a diversity of organisms.

Beginner	
Resource Type	
Project	
Topics	
Biodiversity	
Subjects	
Biology	
Keywords	
Phylum	Arthropods	Classification
Microhabitat	Species	
Time For Activity	
45 – 60 minutes	

Safety Instructions
Keep an eye out what kind of animals the kids are handling.

Guiding Questions

1
What animals do you see? What kind of microhabitat are they living in? (Is it dry, damp, has plants, rocks, etc.?)

2
Do some animals seem to prefer certain types of microhabitats (such as damp ones or dry ones) more than other animals?

3
Which phylum did you find the most animals (i.e., greatest number of different species) for?

4
Which phylum was the most difficult to find?

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5

Were there some phylum that you could not find at all?

2

How diverse do you think animals are in your region?

3

Did you consistently find certain animals in a specific type of microhabitat?

Tasks/Steps

1 At a good time you picked to do your investigation, bring your sheet of paper and pen or pencil (and digital camera and magnifying glass, if desired) to the observation location you decided on.

2 Pick a small part of the location to investigate first. For example, it could be a pile of dead leaves, some shady rocks, a patch of lawn, old logs, dry weeds, a tree, etc. (These are all different "micro-habitats.")

3 Carefully look for animals in that micro-habitat. You may want to turn over rocks or logs to look for animals. On your sheet of paper, write down what type of animals you see. (For example, maybe you see a bird, earwigs, or spiders.) Do not worry if you cannot identify something right away – you can write down a description, make a drawing, or take a picture, and try to identify it later.

4 Move on to another microhabitat and similarly investigate it. What animals do you see in this area? Do any of the animals look like different species of types you saw already? What is the microhabitat like, and how is it similar or different from the previous one?

5 Try to explore at least five different microhabitats at the observation location, if possible.

6 Once you are done investigating the observation location, try to categorize the animals you found by their phylum. Depending on where your observation site is, the phyla you are most likely to encounter are chordata, arthropoda, mollusca, and annelida. Chordates include all vertebrates (like us, dogs, cats, frogs, fish, cows, birds, etc.), while arthropods include insects, centipedes, millipedes, shrimp, pill bugs, etc., mollusks include snails and slugs, and annelids include earthworms.