GOULD LAKE OUTDOOR CENTRE
Limestone District School Board

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Micro Mansion Activity

Recommendations: For students Gr 3-8. Adult supervision recommended.

Purpose: Combine biology with manual construction and artistic design in this creation of a natural mansion for the small creatures of the world.

Materials:

- A nearby dead log/stump
- A variety of natural material that can be used for intricate building such as:
  - Stones
  - Bark
  - Sticks
  - Acorn tops
  - Different dead flowers/grasses that look neat
- Paint if desired (can decorate stones and clean wood

How it Works:

Step 1: Find a nearby dead log or stump. These are ideal for building because A) it won't harm a living plant and B) micro-organisms and small creatures thrive in decaying logs. The Magic School Bus Episode *"Meet the Rot Squad"* takes an in-depth look at how alive a dead tree really is. There is a YouTube version here.

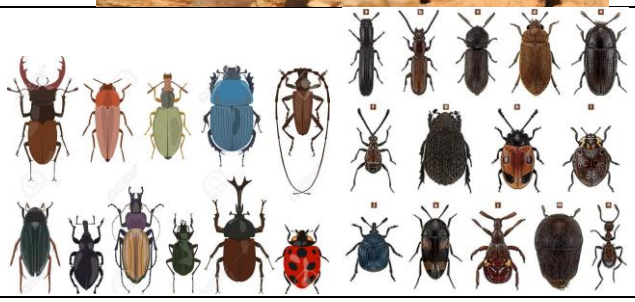
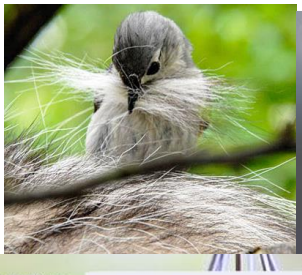
Step 2: Go outside and gather a wide assortment of natural materials. Check out the information at the bottom of the page about different creatures and the habitats where they thrive. Include those elements in the design if you want to.

Step 3: Build and design! Take as much time as you need. You can even pause for a day and come back to it. You can be creative artistically in the design by including doors, windows, and staircases even though these creatures don't need them. You can also be creative architecturally with how you put the materials together *(balancing them, using harder materials to poke into softer materials, etc.)*

Step 4: Stand back and admire! Over time organism like moss, fungus, etc., will grow on the decaying log, adding extra beauty and living space for micro-organisms. Visit the micro mansion from time to time and record what small creatures you find living there.

Small Creatures and their Creature Comforts!

Decomposers: These small organisms will be attracted just by the fact that the activity uses a dead log so no need to do anything special but let them come. Earthworms, fungi, and bacteria thrive in the damp, sheltered environment where they can break down and recycle the nutrient rich wood fibres.	 
Solitary Bees: Unlike honeybees, solitary bees are extremely docile and *up to three times more effective as pollinators*. No, you won't get any honey, but you probably won't get stung either and you will enjoy better flowers, thriving plants, and healthier vegetables in your garden! Solitary bees are hole-nesting bees meaning they like nesting in holes that are between 4–10 mm in size and about six inches long. Grass reeds are a natural material that work well. The ideal bee house would also have a solid outer structure that has a 2–3" overhang, which will protect nesting materials from bad weather, giving them a place to live that's dry and safe.	 
Newts and Salamanders: These wonderful vertebrates require a sheltered and damp habitat. If the decaying log is laying horizontally on the ground, newts and salamanders with crawl underneath where they can stay cool and damp while snacking on insects that are also living in the wood. If the decaying log/stump you have is standing vertically, considering putting a large, flat stone on the bare ground next to the log. This can provide that same cool, damp habitat and the log with still serve as a nearby food source.	 
Ants: Different species of ants prefer different habitats. Some tunnel underground, some require loose soil or sand to build ground level mounds, some create tunnels through wood, and others prefer the flat underside of a rock.	

	
Beetles: A variety of beetles can be found in every type of habitat except salt water and artic cold. They like damp, dry, hot, cold, under bark, in live trees, dead trees, etc. Keep your eye out for these visitors, there are thousands of different species that might show up just about anywhere on your mansion.	
Birds: This time of year, birds are building nests to lay eggs. Part of the Micro Mansion can be providing a variety of materials for them to build with such as hair from a hairbrush, birch bark, soft shredded cedar bark (aka cedar duff), cattail fluff, dead grass, etc.	  

Avoid Tics: Tics lay their eggs in dead leaf litter. Once the eggs hatch, they will make their way into tall grasses. Climbing up the tall grass is adaptive for being at a good height to grab on to mammals that brush past them. Once on the mammals they can imbed their heads under the skin to fill with a nutrient blood meal that will sustain them and allow for them to lay a new batch of eggs. Keeping the activity space clear of dead leaves and tall grasses will reduce the risk of getting tics.