



## *Bugmobile: A Quest through Mini-Kingdoms*

### Activity Snapshot:

Adventure is out there! You don't have to travel far from your front door to experience an exciting natural world – but you may have to adjust your point of view! In this activity you will 'shrink' yourself down to the size of a bug using the power of your imagination and set out on a quest to discover the hidden wilds and 'mini kingdoms' in your own home or backyard! Brave your way through vast grassy 'forests' and splintered deck 'deserts', encountering armored, arthropodal warriors, camouflaged secret agents, and gigantic winged beasts!

Throughout your travels, you can complete a scavenger hunt and craft a collection of relics, recordings, and memories from your tiny escapades!

### Goal:

**Be the Bug!** Imagine living a bug-sized life.

Consider the adaptations our bug friends have in order to survive.

Complete a scavenger hunt and create a collection of the treasures you discover!

### Time Recommended:

Approximately 30 minutes.

(though if you are enjoying your experience, longer exploration is always encouraged!)

### Materials:

- Scavenger Hunt/ "QUEST Sheet" (print out or recreate on your own paper)
- Writing tools (pencil or pen)
- A hard surface to write on, like a notebook or clipboard
- A magnifying glass or Hand Lens is always useful to bring yourself in for a closer look!

- A keen eye and a strong imagination!

Instructions:

1. Gather your materials, adventurer!
2. Suit up! (make sure you are properly dressed and prepared for a safe outdoor experience)
3. Travel to an interesting natural location – this could be your backyard, a deck, a park, any safe outdoor space)
4. **“Activate the Shrink Ray!”**  
Bring yourself down to a ‘bug’s eye-view’ by kneeling or laying down on the ground. Do you have a bug in mind? What sort of bug would you be? Or maybe you’d prefer to imagine yourself as a tiny human.. But riding a bug like a horse! Would you ride on the back of a beetle? A grasshopper? A dragonfly?
5. Before looking for any QUEST items, take 5 minutes to just exist in this new world.
  - Say hello to the little insect citizens crawling or buzzing by.
  - Use your hand lens to explore all the tiny objects up close and personal.
  - Admire the lovely views from the ridges of tiny sticks, stones, plants...
  - Imagine how different it would be, how exciting of a wilderness, if you were the size of a bug out here!
6. Now, take out your QUEST List, and choose any one of the boxes to start! In each box is a phrase that could describe many different creatures or objects in nature.
  - Try to find the most creative and interesting version of each!
7. Explore the miniature world, questing for each of these items.
  - If you get stuck on any boxes, and need a little more information or some helpful examples, there is a ‘Quest Reference Sheet’ provided for you.
  - Whenever you move around in your search, imagine yourself traveling ant-sized across that space. How long would it take you? How would you accomplish it?
8. When you find one of your items, be sure to write or draw it into the matching box!

9. You can choose to Quest until you make a line of 5, like a BINGO board, or until you fill the entire page, the challenge is up to you!
10. Decorate and share your completed Quest Sheet and share it with your community!

Closing Questions:

1. How would your experience of your backyard be different if you were the size of a bug?
2. What is something new you discovered in your backyard that you had not realized before?
3. After taking a walk in the very tiny shoes of some of these creatures, do you think you might understand them a little better?

## THE NATURE QUEST BOARD

	<b>Q</b>	<b>U</b>	<b>E</b>	<b>S</b>	<b>T</b>
	Question	Understand	Explore	Sense	Teach
<b>1</b>	Something Soft	Something with 1 or more legs	Something Black	Something Round	Something New
<b>2</b>	Something Secret!	Something with 3 or more legs	Something Red	Something Smooth or Shiny	Something Old
<b>3</b>	Something Safe	Something with 5 or more legs	<b>NATURE!</b> Something Green	Something Noisy	Something Imprinted
<b>4</b>	Something Beautiful	Something with 7 or more legs	Something White	Something Hairy	Something Unnatural
<b>5</b>	Something Useful	Something with NO legs!	Something Blue	Something Smelly	Something Left Behind

## QUEST BOARD REFERENCE:

**Q1: Something Soft** – Imagine you are bug-sized and looking for a place to rest. What material might you use to make your bed? What can you find that feels soft?

*Some examples: flower petals/fluff, downy feathers, moss...*

**Q2: Something Secret!** – The natural world is full of ‘secret agents!’ creatures using camouflage to blend in and be hidden. Chewonki’s Walking Sticks are a great example of this, an animal pretending to be a stick! Can you find something hidden in your mini-kingdom?

*Examples: moths, caterpillars, stick bugs, other bugs blending in...*

**Q3: Something Safe** – If you were bug-sized and living out here, you’d want someplace safe to rest! Animals big and small make homes for themselves. Seek out the safety of a nature home!

*Examples: spider webs, anthills, plant galls, burrows..*

**Q4: Something Beautiful** – Nature can be a beautiful thing – even the small and humble things can be so pretty when we look close! Choose one thing you find really beautiful in your mini-kingdom.

*Examples: beauty is in the eye of the beholder – it could be anything!*

**Q5: Something Useful** – Nature provides an abundance of resources that could be useful for survival. Some bugs are very resourceful and gather supplies for themselves and their colony! Choose something in your mini-kingdom that you would find useful.

*Examples: firewood, fibers for rope making, edible plants, etc.*

**U1: Something with 1 or more legs** – This includes most animals! Look around and find one that matches. Imagine how different it would be to encounter this animal if you were the size of a bug! Would it be exciting? Scary?

*Example: a Blue Jay, a Praying Mantis, a Mouse*

**U2: Something with 3 or more legs** – creatures with 3 or more legs. Choose a new creature, different from any you’ve already written down!

*Example: a squirrel, a porcupine, a beetle*

**U3: Something with 5 or more legs**

*Example: a Butterfly, a tick, a centipede*

**U4: Something with 7 or more legs**

*Example: a daddy-long-legs, a roly-poly, a millipede*

**U5: Something with NO legs!**

*Example: a snail, an earthworm, a mushroom*

**E1: Something Black** – There are many different colors and hues in nature, when we start looking closer!

*Example: black stone, black ants, blackberry*

**E2: Something Red** – Anything in nature that has a red or reddish hue to it – What interesting things could you find?

*Example: wild strawberry, red leaves, red ants*

**E3: NATURE! Something Green** – This is the freebie space in BINGO! And this one is as easy as it gets – find something green in nature!

*Examples: grass, moss, plants*

**E4: Something White** – Find something without any color at all in the natural world.

*Examples: clouds, white flowers, birch bark*

**E5: Something Blue** – Maybe the trickiest one. Can you find blue in nature?

*Examples: blue-jays, blue flowers... bonus points if you don't choose the sky :P*

**S1: Something Round** – Look for perfectly round shapes in your kingdom. How did they get this way?

*Example: pebbles, seeds, shells, bubbles*

**S2: Something Smooth/Shiny** – Explore your mini-kingdom for objects that have a smooth surface, something that is 'shiny' and makes light gleam off it.

*Examples: certain leaves, certain insect shells, certain seeds*

**S3: Something Noisy** – Use all your senses when exploring your mini-kingdom. Seek out something that makes a sound.

*Examples: bumblebee, running water, songbird*

**S4: Something Hairy** – Look and feel to find something in your kingdom that seems hairy!

*Examples: certain plant stems/leaves, certain bugs, most mammals*

**S5 : Something Smelly** – Use your sense of smell to pick up the scent of something in your mini-kingdom. Follow your nose, and identify the stinky thing!

*Examples: fragrant flowers, smelly compost/soil, spicy-smelling leaves*

**T1: Something New** – This means something new to the world – a baby plant or animal – or even younger, a plant seed or animal egg! In the world of bugs, this could be an egg, a larva, or a nymph!

*Examples: ant larva, acorn, tiny sapling, grasshopper nymph, salamander eggs*

**T2: Something Old** – Something that has been around for a LONG time. How could you tell this thing was old? Where would you look for something like this?

*Examples: old tree, old insect exoskeleton, certain rocks*

**T3: Something Imprinted** – Something you can make an impression or rubbing of using paper and pencil/crayons. Could be a flat leaf, or a bark texture, or maybe a footprint?

*Examples: an oak leaf, a hackberry bark, a fern*

**T4: Something Unnatural** – Something that doesn't belong in the natural world – maybe a piece of litter we can remove to make the natural world a little bit cleaner! Or maybe, something humans installed, like a signpost or pathway.

*Examples: candy wrapper, drinking straw, lawn chair*

**T5: Something Left Behind** – The residents of the mini-kingdom might leave behind a trace of where they were. Animal tracks, scat, slime trails, exoskeletons, nests or webbing...all of these could count! Try to find something you have not already used in another box!

*Examples: bird droppings, worm castings, cicada shell*