

# Backyard Biome Mat Bundle Guide to Presentation



air

water

plant

worm



# **Backyard Biome Mat Bundle**

*(suitable for children 3 to 9 years of age)*

## **Contents of Backyard Biome Mat Bundle:**

- Guide to Presentation
- Backyard Biome Mat with storage bag
- Grammar Labels with wooden box
- Backyard Biome Energy Transfer Arrows
- Parts of the Biome Jars with wooden caddy
- Parts of the Biome Jars veneer labels

## **Additional Related Products:**

*(sold separately)*

- Introduction to the Biomes with Curriculum - Primary
- Parts of the Biome Readers

## **Guide to Presentation**

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## Backyard Biome: Energy Transfer Arrows

**You will need:** Backyard Biome Mat, Backyard Biome Energy Transfer Arrows, Parts of the Biome Jars veneer labels

**Purpose:** To learn about the parts of a biome and how energy is transferred between them.

1. Have the children identify the parts of the biome illustrated on the mat. Can they find the air, water, soil, plants, and animals? Place the appropriate veneer Parts of the Biome Jars label as the part is named.
2. Where is the source of energy? Place the veneer label on the Sun when it is identified as the source of energy. Then, bring out the large, red wooden arrow. Place it on the mat pointing away from the Sun. Explain that the arrows show how energy is transferred from one thing another. The arrow from the Sun is large because the Sun is the source of all energy for our biomes here on Earth.
3. Can they find other places where energy is transferred within the biome? Use the smaller red arrows to show the transfer of energy from one thing to another:
  - The large arrow from the Sun transfers energy to the plants.
  - The grasshopper takes energy from the plants.
  - The lizard will take energy from the grasshopper if he eats it.
  - The bird takes energy from the worm.
  - The butterfly takes energy from the flower (its nectar).
  - The dead bug gives energy back to the soil.
  - The dead leaves give energy back to the soil.
  - The plants take energy from the soil through their roots.
4. Can they see where energy moves in circles (cycles)? Discuss why this is important.
5. If you are working with the Introduction to the Biomes with Curriculum - Primary, have the child color the parts of the biomes from the Masters.

## Parts of the Biome Jars

**You will need:** Parts of the Biome Jars, Parts of the Biome Jars veneer labels, Parts of the Biome Jars caddy

**Purpose:** To find and identify the different parts of the biomes.

1. Ask the children at the circle if they would like to go visit the biome. Build a bit of eager anticipation and, then, go outside beyond the playground with the Parts of the Biome Jars in their caddy to collect parts of the biome.
2. Talk about the plants you see. Gather some in your jar.
3. Look for animals. Do you see any animals? Any evidence of animals? Try to find an insect to collect and have "visit " for a while.
4. Encourage them to notice the air. Is it moving? What is the temperature? Trap some air in a jar.

5. Note the warmth of the Sun on everyone's skin. Place the Energy jar (the one with the solar panel) in a sunny spot to be collected later. Go in the shade and note the difference in temperature.
6. Dig down into the soil. Notice how moist it is. Is it cooler or warmer than the air? Are there any animals in it? Any plant material?
7. Find a source of water (or make sure to go out in the morning to capture some dew). Collect some in your jar if you can.
8. Now that you have found all the parts of a biome bring all the jars (except the Energy jar) back into the classroom and label the jars. Explain that you will go get the Energy jar later for them to see the next day - energy takes a while to accumulate. The next day, show them that the solar panel stored up energy it collected from the Sun to make the lightbulb run!

### **Backyard Biome Mat: Grammar Labels**

**You will need:** Backyard Biome Mat, Backyard Biome Mat Grammar Labels, dots for periods, grammar symbols (optional: Backyard Biome Energy Transfer Arrows)

**Purpose:** To learn about the parts of a biome and provide an opportunity to use the parts of speech creatively by composing phrases and sentences about the biome.

This material is designed as an extension of the Montessori farm or miniature environment where children have the opportunity to label objects with nouns and, then, other parts of speech to describe the objects and their actions. Younger children will be able to use the noun cards to label the parts of the biomes and practice sight reading. Older children will be able to move through the steps below for each of the parts of speech. Experienced readers can make more elaborate sentences and symbolize them. This material can be used in conjunction with the Introduction to the Biome Curriculum after a presentation on the parts of a biome.

*Please note: The following steps are to be introduced in separate lessons and may be practiced independently between lessons. You may wish to limit the number of words introduced at one time and fill the box with the parts of speech as they are introduced.*

1. Place the label that says Biome at the top of the mat. Can you find the air, water, soil, plants, and animals? Where is the source of energy? Label the parts of the biome with the appropriate noun labels. Set the work out on the shelf for children to label other nouns. (You can also place the Backyard Biome Energy Transfer Arrows out to have them track energy transfers while they label the parts of the biome.) You can limit the amount of cards set out at once, adding new cards on a daily or weekly basis. Emerging readers can use the cards as sight words.
2. Once you have introduced articles as a part of speech, bring out the articles to introduce the nouns. Note that plural words need the as an article. Grammar symbols may be used to symbolize the different words.
3. Once adjectives are introduced as a part of speech, fill the tray with the adjectives to describe the nouns. Read the adjective card and have them match the adjective to a

noun that it describes. Phrases may be symbolized and recorded. This exercise can be repeated independently. You can also gather words that make a logical phrase. Give the words to the child and ask them to put them in order. You can also use this technique with sentences as you add more parts of speech.

4. At another sitting, label some of the nouns on the mat. Add articles and adjectives to them. Now read the verbs and ask something like, Who eats? Match the verb with a logical subject. A subject and an action constitute a sentence. A period can be added to the end of the sentence. Add the verbs to the box for independent work.
5. After introducing the preposition, have the children make some sentences and ask questions such as, Where is the butterfly? - It is **beside** the flower. Show the children how they can describe the location of nouns with prepositions. Add the prepositions to the box.
6. Make a sentence like, The turtle walks. Ask the children, How does he walk? Introduce the orange cards and have the children pick an adverb that applies. Match other adverbs to verbs and make sentences from there. Add the adverbs to the box for making sentences. Put out blank orange labels and see what the children might come up with.
7. Take out the verb eats. Ask, What eats? Have the children find different nouns that answer the question. Make additional labels for eats: The bird eats. The lizard eats. Bring out the conjunction and. Ask how you can use the conjunction and to make one sentence. Note that you have to exchange the verb eats for the verb eat to make it sound right. Find other things that eat and extend the sentence. Show the children how you can replace the and labels with commas, leaving the last and in place. Use the conjunctions to make a list of verbs to describe what the butterfly does. Leave the conjunction labels out with the work to see how the children's sentences are enhanced.
8. At any of the above levels, the children may work independently to compose a sentence about the Backyard Biome Mat using the Grammar Labels.