

A fish is adapte water. It is color. It lays a that for they h. The fish water v

The cov over its t thro

The he pointe water. It is alt rest of neck.

The er on eit Most f Fish d

Smc and of sr Fish rem nize and

Fish tak mouth. This wa Fish als feeding. Most fe when it lost.

Fish oxyg Wat mou gills e

The fir move water rays c it shap

The the it ke rolli sud

The pe locate on eit. They c

The p fins. They c under. They c or dov turning quick

The o along fish be. They c. They k during

By mo and fo throug

Along the side of the fish is a sensory organ calle lateral line. The fish can sense movement in the w objects that disturb. It can detect sound

a fish



				
a bird	a mammal	a biome	the nitrogen cycle	a reptile
				
the soil	globe	a plant	the carbon cycle	an amphibian

# Introduction to the Biomes with Curriculum- Elementary Guide to Presentation

# **Introduction to the Biomes with Curriculum - Elementary**

*(suitable for children 6 to 12 years of age)*

## **Contents of Introduction to the Biomes with Curriculum - Elementary:**

- *The Waseca Biomes Curriculum Guide*
- *Introduction to Biomes - Parts of a Biome* three-part cards
- *Introduction to Biomes - The Biomes* three-part cards
- *Climate Zones Labels\**
- *Living or Nonliving Labels\**
- *Herbivore, Carnivore, or Omnivore Labels\**
- *Animal Adaptations* cards
- *Biome Picture Sort Labels\**
- *Q & A* cards

## **Introduction**

Sharon Duncan, the founder behind our materials, began producing curriculum and materials for her classroom over 20 years ago. The aim of these lessons and materials was to weave together isolated subject matter - Geography, Earth Science, Math, Language, Cultural Studies - to present a comprehensive ecological view of the world around us, to encourage creative and critical thinking about our interdependent environment, and to foster engagement in the learning process.

*The Waseca Biomes Curriculum Guide* serves as the consolidation of the lessons and presentations we have designed with this goal in mind. It outlines a framework for the incorporation and integration of our materials with traditional Montessori lessons as you progress from exploring the creation of the Universe through to more detailed studies of the biomes here on Earth, including your home biome. Keeping Montessori frameworks and a Systems Thinking approach in mind, each section of *The Waseca Biomes Curriculum Guide* explores a part of the whole to foster holistic understanding.

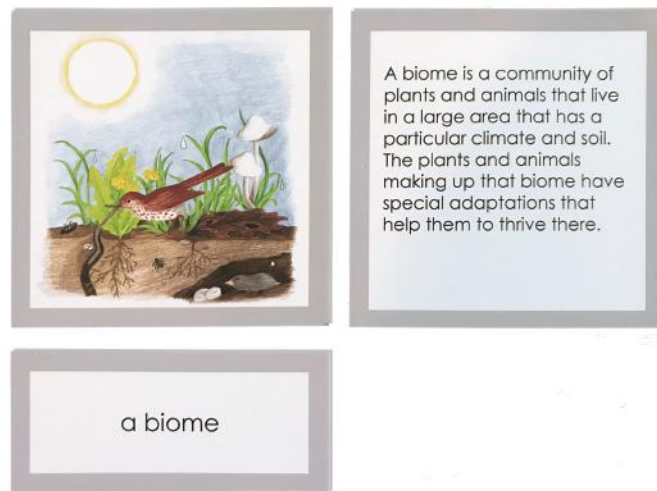
The Introduction to the Biomes with Curriculum - Elementary is a foundational curriculum to work your way through these lessons. *The Waseca Biomes Curriculum Guide* contains the detailed lessons and presentations. The following pages review how to use the nomenclature cards (three-part cards) and the progression of lesson presentations with the associated cards and blacklines from the The Introduction to the Biomes with Curriculum - Elementary. *Please note that we do not include hard copies of the blacklines. They are available to download from our website ([wasecabiomes.org](http://wasecabiomes.org)) in the A - Z PDF Library.*

*\* If you purchased your Introduction to the Biomes with Curriculum - Elementary prior to May 2018, hard copies of these were not included. There are blacklines for these available for download in our A - Z PDF Library on our website: [wasecabiomes.org](http://wasecabiomes.org)*

## Nomenclature Cards

Nomenclature Cards (three-part cards) are used to teach children the names of things. We name the different parts of something in order to make distinctions about their function. It is these distinctions, not the memorization of names, that are important. If you supply the name and ask the child to show you the card illustrating that name, you can structure the lesson for success. Always point out how the part relates to the whole in order to reinforce the ecological concept that nothing exists in isolation.

Each nomenclature card set includes pictures, labels, and definitions. They are coded on the back to be sorted into sets and to provide a control of error. You can use the masters to make your own set of cards. If you do so, part of the process would be to do the research with your student(s) to write the definitions.



## Presentation of Nomenclature Cards

Introduce each picture card to a small group beginning with the whole. In this example, the whole is “a biome.” Discuss each part and its function as you lay out each picture card. Place the label cards out and ask the children to find and place the matching label for each part under the picture. Read, or have the children read, the descriptions and match them to the pictures. Ask the children to point to each picture as you name the parts of the biome.

Make additional copies of the blackline drawing. Invite the children to color in each part separately and label it as shown on the cards. Once completed, have the child lay out their pages and hand them to you as you ask for each part. Once in order, staple them to make a book of each child’s pages. Depending on ability, have the child label and write a definition in his/her own words for each picture using the blank pages on the back of the pictures. After the lesson, the set of cards may be placed on a shelf or at a center for students to match picture, label, and description independently.

**Lesson in *The Waseca Biomes Curriculum Guide***

**associated cards and blacklines**

The Globe as a Model of the Earth.....24

Living or Nonliving.....50

Parts of a Biome Nomenclature.....52

Length of the Rays of the Sun.....67

Climate Zones.....68

Our Planet Collage.....79

What Makes Wind.....87

Parts of the Soil.....106

Layers of the Soil.....108

The Carbon Cycle.....111

The Nitrogen Cycle.....113

Flowering or Non-Flowering Plant Sorting.....132

Parts of a Flowering Plant.....132

Five Classes of Vertebrates (Chordates).....143

Parts of the Vertebrates (Chordates).....144

Herbivore, Carnivore, or Omnivore.....146

Adaptation Strategies.....147

Biome Picture Sort.....160

Introduction to the Biomes.....164

Biomes Questions and Answers.....165

*Parts of a Biome - Parts of the Globe* three-part cards

*Living or Non-Living Labels*

What is a biome? blackline  
*Parts of a Biome* three-part cards

Length of the Rays of the Sun blackline

Climate Zones blackline  
*Climate Zones Labels*

North and South America hemisphere template blackline

What Makes Wind blacklines 1 and 2  
Arrows for What Makes Wind blacklines

Soil blackline  
*Parts of a Biome - Parts of the Soil* three-part cards

Soil blackline  
*Parts of a Biome - Layers of the Soil* three-part cards

The Carbon Cycle blackline  
*Parts of a Biome - The Carbon Cycle* three-part cards

The Nitrogen Cycle blackline  
*Parts of a Biome - The Nitrogen Cycle* three-part cards

Flowering/Non-Flowering blacklines 1 and 2  
*Living or Non-Living Labels*

Parts of a Plant blackline  
*Parts of a Biome - Parts of a Plant* three-part cards

5 Classes of Vertebrates blacklines 1 and 2  
*Living or Non-Living Labels*

Parts of a Fish blackline  
*Parts of a Biome - Parts of a Fish* three-part cards  
Parts of an Amphibian blackline  
*Parts of a Biome - Parts of an Amphibian* three-part cards  
Parts of a Reptile blackline  
*Parts of a Biome - Parts of a Reptile* three-part cards  
Parts of a Bird blackline  
*Parts of a Biome - Parts of a Bird* three-part cards  
Parts of a Mammal blackline  
*Parts of a Biome - Parts of a Mammal* three-part cards  
Parts of an Invertebrate blackline\*  
*Parts of a Biome - Parts of an Invertebrate* three-part cards\*

Herbivore, Carnivore, or Omnivore blacklines 1 and 2  
*Herbivore, Carnivore, or Omnivore Labels*

*Animal Adaptations* cards

*Biome Picture Sort Labels*

The Biomes blacklines 1 and 2  
*Introduction to Biomes - The Biomes* three-part cards

Q & A cards

\* The Parts of an Invertebrate three-part cards and blackline can be used as an extension of the Parts of the Vertebrates (Chordates) lesson as a point of comparison with vertebrates. We have selected an insect as our example of an invertebrate. For a more in-depth exploration of the wide variety of physiological traits of invertebrates, we recommend working with our Tree of Life.

