

**Special Ed**

# **ECOLOGY**

## **BIOMES & FOOD CHAINS**



**ALSO INCLUDES GOOGLE SLIDES**

*Special Needs for Special Kids*



This unit was created with this guy in mind. He has autism and an intellectual disability. He is a non-reader, has a very short attention span, and struggles to sit still. With some support he is able to do this unit, and enjoys the challenge. He is my tester!!

# Ecology Unit

By  
Christa Joy  
Special Needs for Special Kids



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Also included in this resource as separate files:

- Lesson plans
- Links and directions to digital activities
- PowerPoints (**these are the books in the lesson plans**)
- Voice recorded PowerPoint
- Activities in black and white

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This unit contains almost **200 pages** of material plus **70 google slides**. I have included a detailed lesson plan to help you make the most of everything in this unit including how to add some group activities.

It comes in 2 separate files. One in color and one in black and white.

# Ecology Lesson Plan

## Preparation

- Print out a vocabulary board for each student to use throughout unit
  - Laminate or place in page protector
- Book
  - Print out, laminate, and bind
  - OR your students can listen to the pre-recorded version
- Vocabulary cards
  - Print out a set of cards onto cardstock and laminate
  - Make one set for each student and also one for the teacher to use in I Spy games

## Preassessment (do day 1 before starting lesson)

- Choose the form of the assessment that best fits the learning level of your students
- Give the assessment to assess what your students may already know
- I cannot emphasize enough how important this step is. If you want to see growth, this preassessment is so important!!

## Teaching Tips

1. *Color Coding:* this is a really easy way to add more structure to a matching activity. Outline or color in an empty box or sorting label. Outline or color in the corresponding picture symbols the same colors. Becomes a color matching task.
  - a. For more info, read more here:  
<https://specialneedsforspecialkids.org/2015/09/05/using-color-coding-for-differentiation/>
  - b. I also have a blog post on differentiating one activity 3 ways:  
<https://specialneedsforspecialkids.org/2018/10/22/differentiating-1-activity-3-ways-easily-and-effectively/>
2. *Make you own copies of the activities:* Every day I review the activity we did yesterday. For that reason:
  - a. I often complete the activity myself and often laminated it for easy review that I could use year after year.
  - b. My copies were also helpful as either a model for students who needed more support or as a way for more advanced students to self-check their work.



The lesson plans contain:

Overall tips for teaching  
students with significant  
needs

## Quick Look

Day	Activity	Day	Activity	Day	Activity
1	<ul style="list-style-type: none"> <li>• <b>Ecology</b> Book</li> <li>• Vocab cards activity</li> <li>• Circle map</li> </ul>	8	<ul style="list-style-type: none"> <li>• <b>Ecology</b> Book</li> <li>• Vocab cards activity</li> <li>• Sorting activity</li> </ul>	15	<ul style="list-style-type: none"> <li>• <b>Biomes</b> Book</li> <li>• Vocab cut and paste</li> <li>• Close worksheet</li> </ul>
2	<ul style="list-style-type: none"> <li>• <b>Ecology</b> Book</li> <li>• Vocab cards activity</li> <li>• Labeling Activity</li> </ul>	9	<ul style="list-style-type: none"> <li>• <b>Biomes</b> Book</li> <li>• Vocab cards activity</li> <li>• Circle map</li> </ul>	16	<ul style="list-style-type: none"> <li>• <b>Biomes</b> Book</li> <li>• Vocab cut and paste</li> <li>• Close worksheet</li> </ul>
3	<ul style="list-style-type: none"> <li>• <b>Ecology</b> Book</li> <li>• Vocab cards activity</li> <li>• Circle map</li> </ul>	10	<ul style="list-style-type: none"> <li>• <b>Biomes</b> Book</li> <li>• Vocab cards activity</li> <li>• Sorting activity</li> </ul>	17	<ul style="list-style-type: none"> <li>• Assessment</li> <li>• Vocabulary puzzle</li> </ul>
4	<ul style="list-style-type: none"> <li>• <b>Ecology</b> Book</li> <li>• Vocab cards activity</li> <li>• How did it change activity</li> </ul>	11	<ul style="list-style-type: none"> <li>• <b>Biomes</b> Book</li> <li>• Vocab cards activity</li> <li>• Reading food chains</li> </ul>		
5	<ul style="list-style-type: none"> <li>• <b>Ecology</b> Book</li> <li>• Vocab cards activity</li> <li>• How did it change activity</li> </ul>	12	<ul style="list-style-type: none"> <li>• <b>Biomes</b> Book</li> <li>• Vocab cards activity</li> <li>• Reding food chains</li> </ul>		
6	<ul style="list-style-type: none"> <li>• <b>Ecology</b> Book</li> <li>• Vocab cards activity</li> <li>• How did it change activity</li> </ul>	13	<ul style="list-style-type: none"> <li>• <b>Ecology</b> Book</li> <li>• Vocab cut and paste</li> <li>• Close worksheet</li> </ul>		
7	<ul style="list-style-type: none"> <li>• <b>Ecology</b> book</li> <li>• Vocab cards activity</li> <li>• Sorting activity</li> </ul>	14	<ul style="list-style-type: none"> <li>• <b>Ecology</b> book</li> <li>• Vocab cut and paste</li> <li>• Close worksheet</li> </ul>		

The lesson plans contain:

A quick look at what you will do each day

## Day 2

Activity	Notes	Materials
Read or listen to a recording of the <b>Ecology</b> book (10 minutes)	<ul style="list-style-type: none"><li>• Read through the story, asking lots of questions<ul style="list-style-type: none"><li>◦ Therefore, it usually takes me a little longer to read each day. I can ask more questions as they get more familiar with the material.</li><li>◦ You <b>don't want to ask so many questions</b> you lose the flow of the story, but enough to make sure your students are truly engaged</li></ul></li><li>• Continue to make connections between book and vocabulary board</li></ul>	<ul style="list-style-type: none"><li>• book</li><li>• Vocabulary board</li></ul>
Vocabulary cards <b>I Spy Game</b> (10 minutes)	<ul style="list-style-type: none"><li>• I play this game, or variations of it the first few days<ul style="list-style-type: none"><li>◦ Determine how many cards your students can handle in front of them. This can vary, some students may be able to have all the cards, so may only be able to handle a field of 3-5</li></ul></li><li>• Since this is the first time playing this game, I make it easy. Hold up a card, and have students find the matching one and hold it up</li><li>• Discuss relevant points on the card<ul style="list-style-type: none"><li>◦ You can also play this game in this manner having them find the symbol on their vocabulary board</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Vocabulary cards (student set and teacher set)</li><li>• Vocabulary board</li></ul>
Circle map review (5 minutes)	<ul style="list-style-type: none"><li>• Review the worksheet completed yesterday</li></ul>	<ul style="list-style-type: none"><li>• Worksheet completed yesterday</li></ul>
Labeling Activity (10 minutes)	<ul style="list-style-type: none"><li>• Choose the best version depending on the learning level of your students (see worksheet directions for more details)</li><li>• Add color coding if needed</li><li>• Students complete the worksheet</li><li>• Make connections to the book as necessary</li></ul>	<ul style="list-style-type: none"><li>• Worksheet</li><li>• Scissors</li><li>• Glue</li></ul>
Sharing (10 minutes)	<ul style="list-style-type: none"><li>• Each student shares their finished worksheet with the group using the communication method of their choice</li></ul>	<ul style="list-style-type: none"><li>• Completed worksheets</li><li>• Communication devices</li></ul>



The lesson plans contain:

Detailed instructions on how that day's lesson should run



This unit comes with a vocabulary board.

Vocabulary boards are great for ALL students to assist with participation and engagement in group discussions.

Tips on how to use in the unit!!

Ecology and the idea that all things live in a balance within the world around them, has been studied for a very long time.



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Within each biome, there are specific ecosystems. Within these ecosystems, plants and animals learn to survive by finding different ways to find food and energy.



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There are 2 books (one on Ecology and one on Biomes and Food Chains) with simple text and engaging photos.

It comes in a PowerPoint version as well as a voice-recorded PowerPoint (so you don't have to print it out.) There is also a movie version you can use in google slides.



## ecology

Study of the relationship between living and non-living things and their environment.



## ecologists

Scientists who study how things are related to their environment.



## biotic

Living things in the environment.



## abiotic

Non-living things in the environment.



## prey

Animal that is often the food source for others.



## producers

Use the sun to make energy; plants.



## consumers

Get energy from eating others.



## predator

An animal that eats other animals.

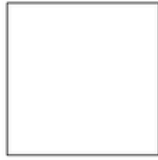


There are 30 vocabulary cards that come in color and black and white.

Included are suggestions for group activities to do with these each day.

### terrestrial

Biomes covered in land: desert, forest, grassland, and tundra.



### interdependent

When the survival of one species is dependent on another.



### generalists

Organisms that eat a variety of foods.



### specialists

Organisms that eat only one food and are at high risk for extinction.



There is an activity where students will match either the picture to the definition or the definition to the picture (harder).

### individual



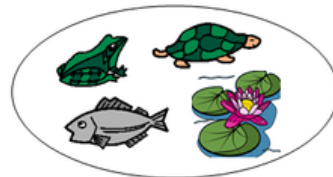
### species



### population



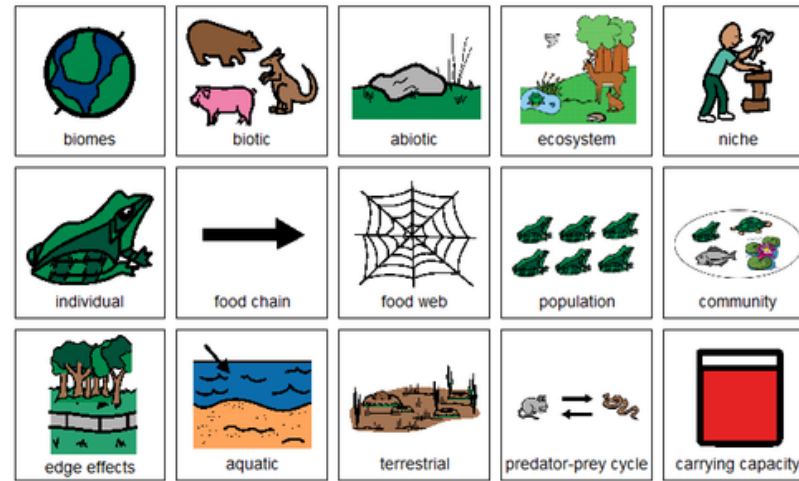
### community



Plants or animals that have similar genes and look very similar.	Living things that have similar genes and look very similar.
Animal that is often the food source for others.	Made up of many different species. The organisms in a community depend on each other for food.
Biomes covered in water: saltwater and freshwater.	The job a plant or animal does in its environment.
The balance between predators and prey that keeps things in balance.	Map that shows how plants and animals rely on others for food.
Number of organisms a region can support without degrading.	Scientists who study how things are related to their environment.

Errorless version

Cut apart pictures and place in circle map about ecology.



Cut apart pictures and place in circle map **ONLY IF** they relate to ecology.

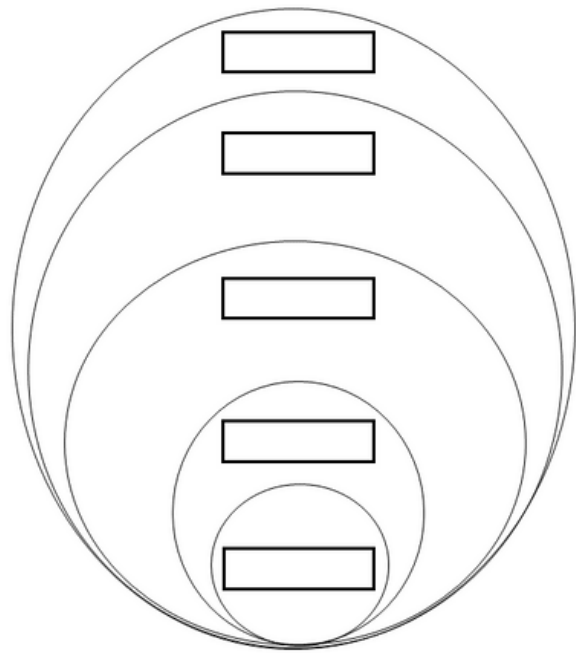


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There are 3 circle maps, one on ecology, one on food chains, and one on changes in the environment.

Circle maps are a great way for students to see the concept at a glance. There are 2 versions:

- One is errorless
- One has wrong answers mixed in students will have to set aside



Biosphere

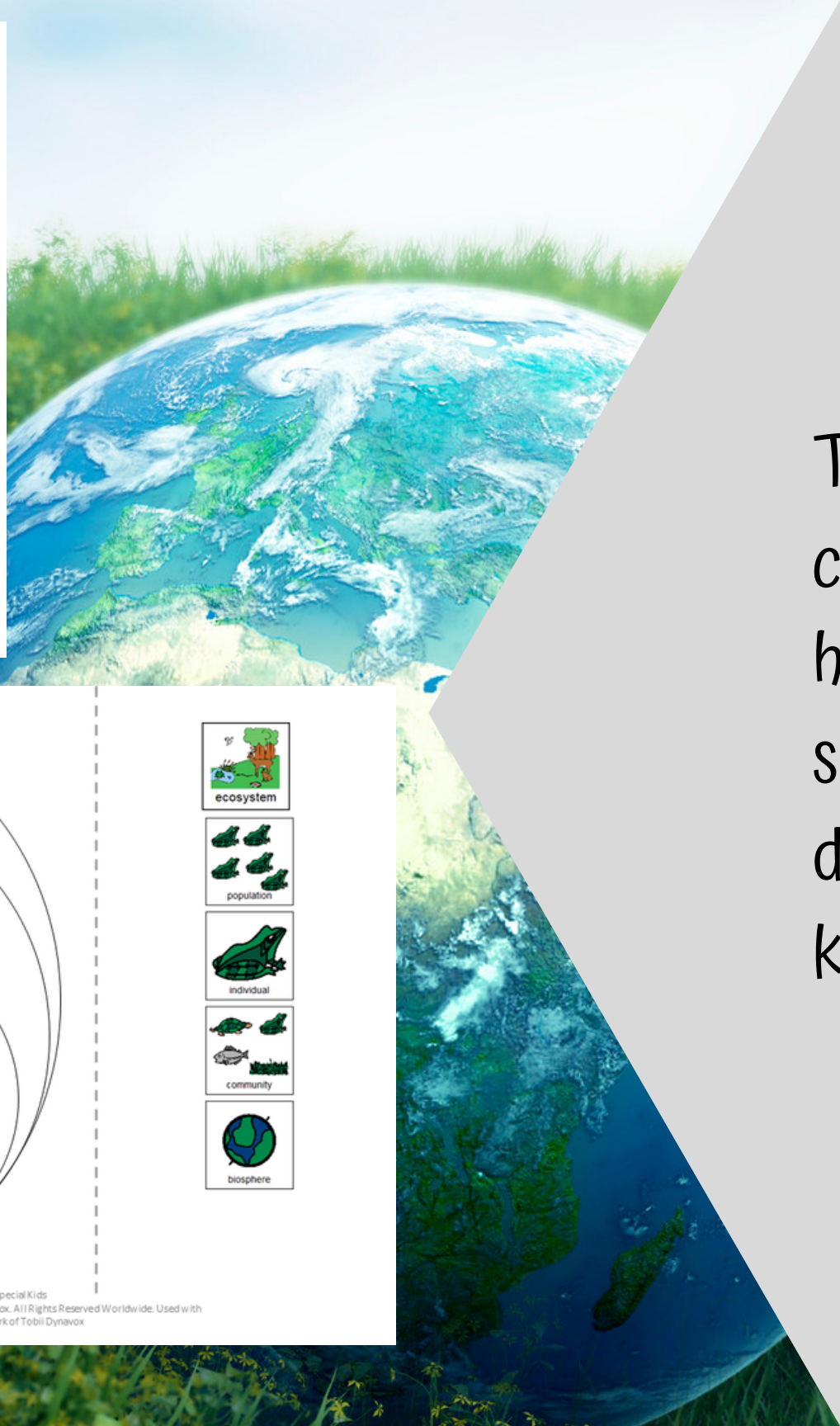
Population

Individual

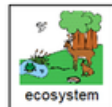
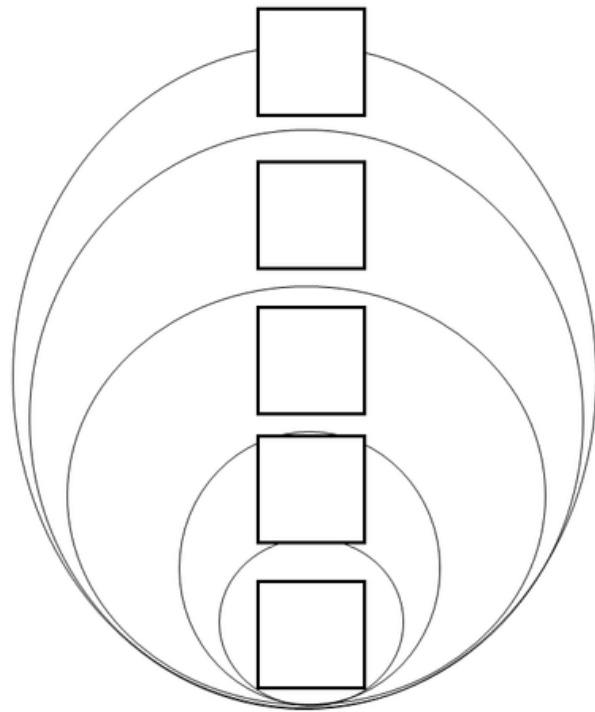
Ecosystem

Community

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There is a labeling activity. It comes in 2 versions, one that has pictures for more support. Suggestions for differentiation and answer key included.



ecosystem



population



individual



community



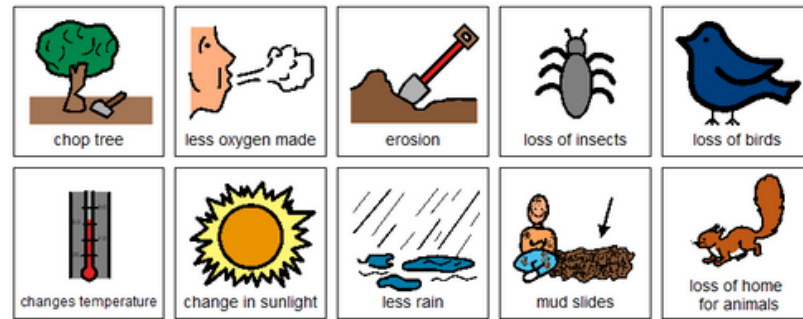
biosphere

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# How did it change?



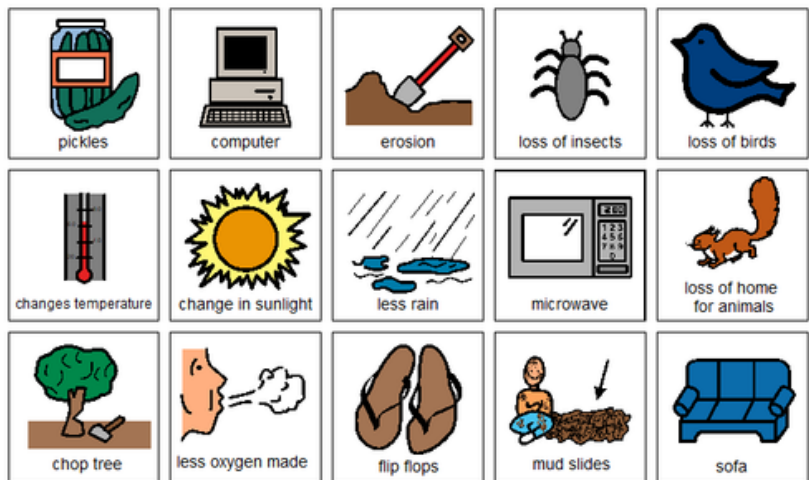
Place the following images on the previous page to show how people changed the forest.



errorless

Place the following images on the previous page **ONLY** IF they show how people changed the forest.

The  
v



There are 3 activities where students look at 2 pictures and note how things have changed. It comes with an errorless version and a version with wrong answers mixed in.

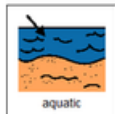


prey

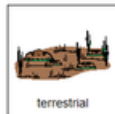


predator


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aquatic



terrestrial


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herbivore



carnivore

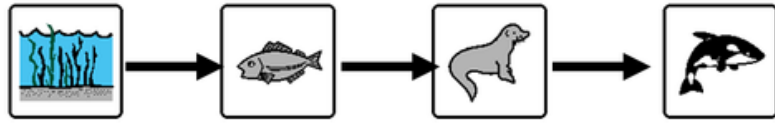


omnivore


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There are 3 sorting activities that review facts from both books. They come with photos (color activities) and picture symbols. Suggestions for differentiation and answer key included.

#4



Killer whales feed on:

Fish eat:

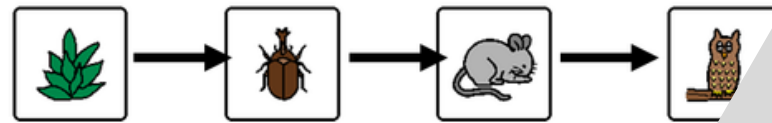
These animals are prey:

<input type="text"/>	<input type="text"/>
----------------------	----------------------

The main predator of the seal is:



#5



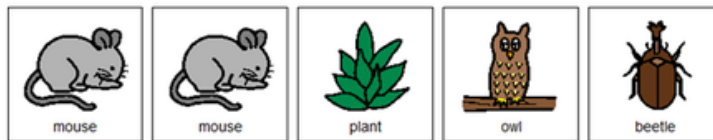
The main predator is the:

These animals are prey:

<input type="text"/>	<input type="text"/>
----------------------	----------------------




















The food for beetles is:

Beetles are food for the:





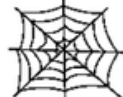






There are 5 food chains for students to look at and answer questions about. Suggestions for differentiation and answer key included.

# Ecology

 biome		 prey		 predator	
 consumer		 biome		 niche	
	 producer	 consumer	 predator	 biome	 niche
 predator	 biome		 prey	 producer	
 producer				 consumer	
 niche	 consumer				

















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# Ecology

	 prey	 predator	 food web
 predator			
	 ecosystem	 food web	
 food web	 predator	 prey	

boards for Special Kids  
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Place the following images in the empty squares on the previous page, completing the sudoku puzzle.

 producer	 producer	 producer	 consumer	 consumer	 prey
 prey	 prey	 prey	 predator	 predator	 predator
 niche	 niche	 niche	 biome	 biome	

There is a Sudoku puzzle in this unit as well. This is a great way to work with the new vocabulary!!

There are 2 versions plus answer keys.



## Ecology

J T J H A B E N P B Z K L D H Q J V G U  
 P W E S D V Q F O I J R I O F R V E L D  
 M J C P K Z B L P O Y D S A K I D C L R  
 M J O E G S F E U T T M T J E S U V A R  
 T M L C N R K C L I W E H U E Z A V A S  
 E D O I F U K R A C E C O S Y S T E M G  
 R Z G E F X M T T H X V P O A M T D S M  
 R O Y S C Q R N I O N H R Q H A L C M N  
 E F F A H V W L O M Z E O M V Y I A F R  
 S U B I O M E B N N S R D B M R A R J W  
 T X D P W X C L M I E B U O X L Q N H P  
 R C X R M A V T W V C I C C D R U I V J  
 I Z H E N N X V T O U V E Z W I A V I P  
 A K D Y N I C H E R B O R G T L T O G R  
 L Y O B H U G J A E Y R N T F M I R Q E  
 A F C O N S U M E R L E V K M A C E B D  
 N B B O G U A W R G F L L J S K G V U A  
 W U F B N H R M R S C O M M U N I T Y T  
 W R L E E M P N N W H F Y T B C M L O O  
 A J N Y V X I I D K P G K Y M V D N N R

terrestrial	population	herbivore	community
ecosystem	predator	omnivore	carnivore
consumer	species	producer	aquatic
ecology	niche	biotic	biome
prey			

## Ecology

J T J H A B E N P B Z K L D H Q J V G U  
 P W E S D V Q F O I J R I O F R V E L D  
 M J C P K Z B L P O Y D S A K I D C L R  
 M J O E G S F E U T T M T J E S U V A R  
 T M L C N R K C L I W E H U E Z A V A S  
 E D O I F U K R A C E C O S Y S T E M G  
 R Z G E F X M T T H X V P O A M T D S M  
 R O Y S C Q R N I O N H R Q H A L C M N  
 E F F A H V W L O M Z E O M V Y I A F R  
 S U B I O M E B N N S R D B M R A R J W  
 T X D P W X C L M I E B U O X L Q N H P  
 R C X R M A V T W V C I C C D R U I V J  
 I Z H E N N X V T O U V E Z W I A V I P  
 A K D Y N I C H E R B O R G T L T O G R  
 L Y O B H U G J A E Y R N T F M I R Q E  
 A F C O N S U M E R L E V K M A C E B D  
 N B B O G U A W R G F L L J S K G V U A  
 W U F B N H R M R S C O M M U N I T Y T  
 W R L E E M P N N W H F Y T B C M L O O  
 A J N Y V X I I D K P G K Y M V D N N R

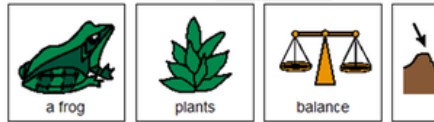
terrestrial	population	herbivore	community
ecosystem	predator	omnivore	carnivore
consumer	species	producer	aquatic
ecology	niche	biotic	biome
prey			

There is also a word search to work with vocabulary. If your students cannot do a word search, have them highlight the circle words on the answer key.



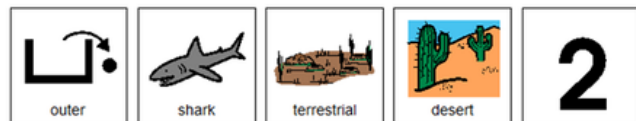
## Ecology

1. There is a  between living and non-living things and their environment.
2. An example of a biotic factor affecting the ecosystem is .
3.  is an example of an abiotic factor.
4. The niche of flowers is to provide pollen for .
5. Herbivores only eat .



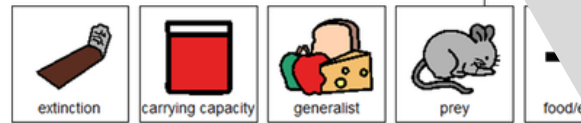
## Biomes

1. There are  main biomes: aquatic & .
2. The tundra is an example of a  biome.
3.  is an animal that would live in an aquatic biome.
4. The biome is the  most layer.
5. A camel would live in a  ecosystem.



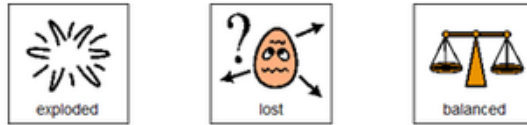
## Food Chains

1. Food chains show the path of  from one animal to another.
2. Plants and animals that are eaten by others are .
3.  are animals that can eat different types of food.
4. Specialists are at risk for  because they only eat one type of food.
5. The predator-prey cycle helps to maintain the .

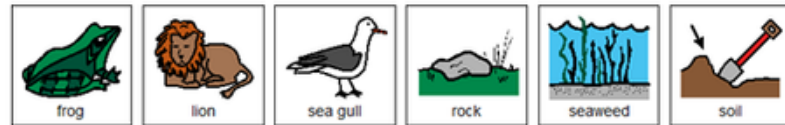


There are 4 fill-in-the-blank worksheets. These allow you to review and focus on smaller amounts of material and identify areas to review before the assessment.

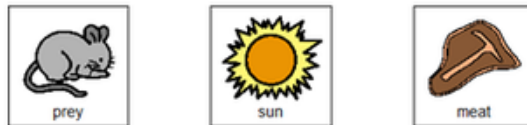
1. Ecology is the study of how living things, non-living things, and the environment are:



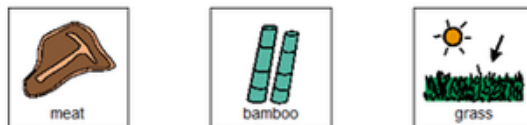
2. Circle all those things that are biotic:



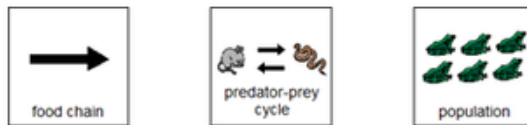
3. Producers use this for energy:



4. Carnivores eat:



5. This is the natural cycle between predators and prey that keeps things in balance:



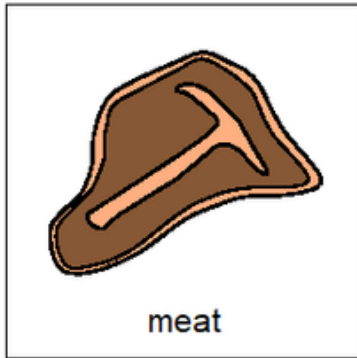
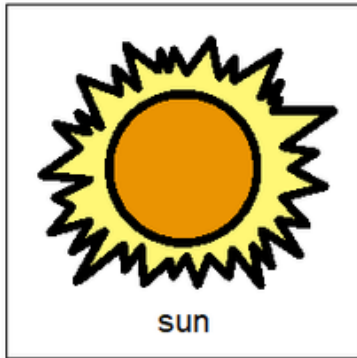
There is a 10 question assessment.

There are 3 versions. This version has 10 questions with 3 picture choices for each question.

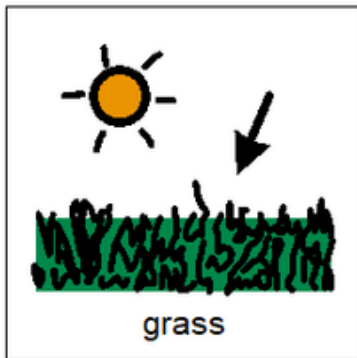
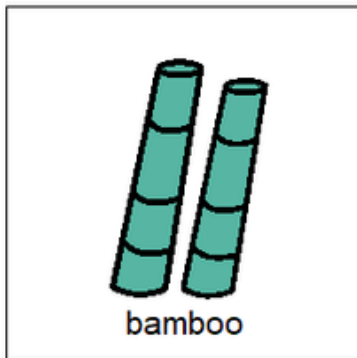
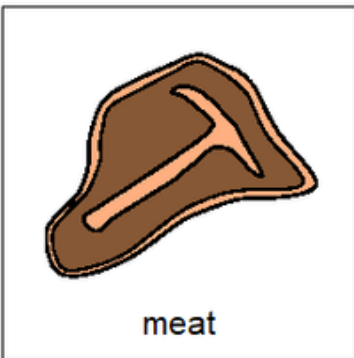
Answer key included.

Print onto cardstock or mount on index cards. Cut pictures apart and show student answer choices for each question.

Q 3

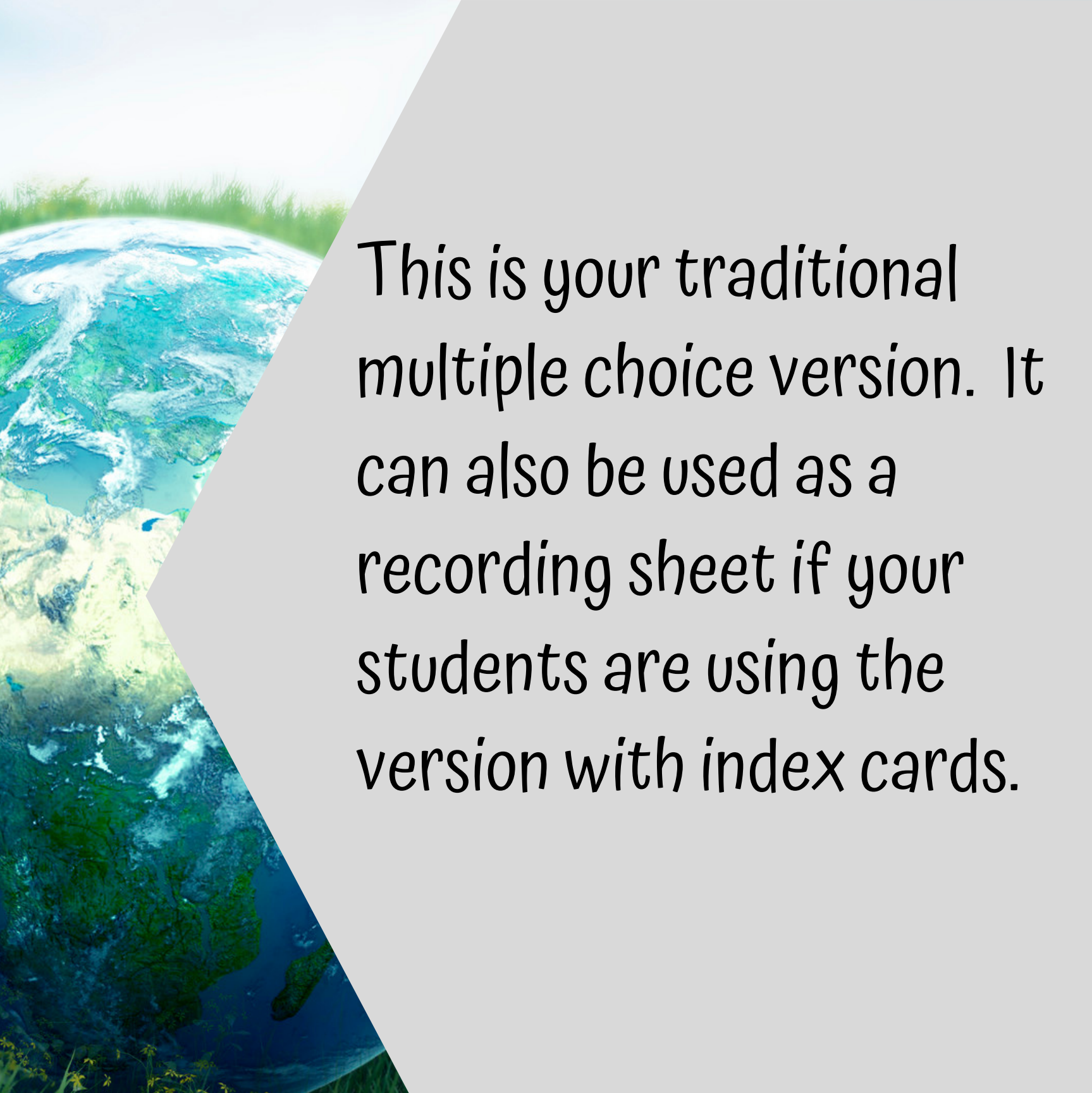


Q 4



With this version, you cut out the answer choices and glue them on index cards. Ask the student the question, and they point to the correct answer.



1. Ecology is the study of how living things, non-living things, and the environment are:
  - A. exploded
  - B. lost
  - C. balanced
2. Circle all those things that are biotic:
  - A. frog
  - B. lion
  - C. sea gull
  - D. rock
  - E. seaweed
  - F. soil
3. Producers use this for energy:
  - A. prey
  - B. sun
  - C. meat
4. Carnivores eat:
  - A. meat
  - B. bamboo
  - C. grass
5. This is the natural cycle between predators and prey that keeps things in balance:
  - A. food chain
  - B. predator-prey cycle
  - C. population
6. Circle all the things that can cause major changes in an ecosystem.
  - A. excavator
  - B. lion
  - C. cyclone
  - D. earthquake
  - E. people
  - F. worm



*This is your traditional multiple choice version. It can also be used as a recording sheet if your students are using the version with index cards.*

Watch the movie on Ecology

But what about the rest of the pond? What about the field where the pond is found? What about all those plants and animals that live around the field?



Christa Joy, Special Needs for Special Kids

Watch the movie on Biomes and Food Chains

Within each ecosystem, plants and animals are busy looking for food. This is the most important job they have.



Christa Joy, Special Needs for Special Kids

*This unit also includes digital versions of the activities.*

*Students can watch a movie book version of the book rather than printing it out.*



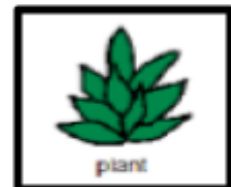
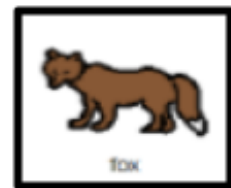
Rabbits get food from:

Rabbits are a source of food for:

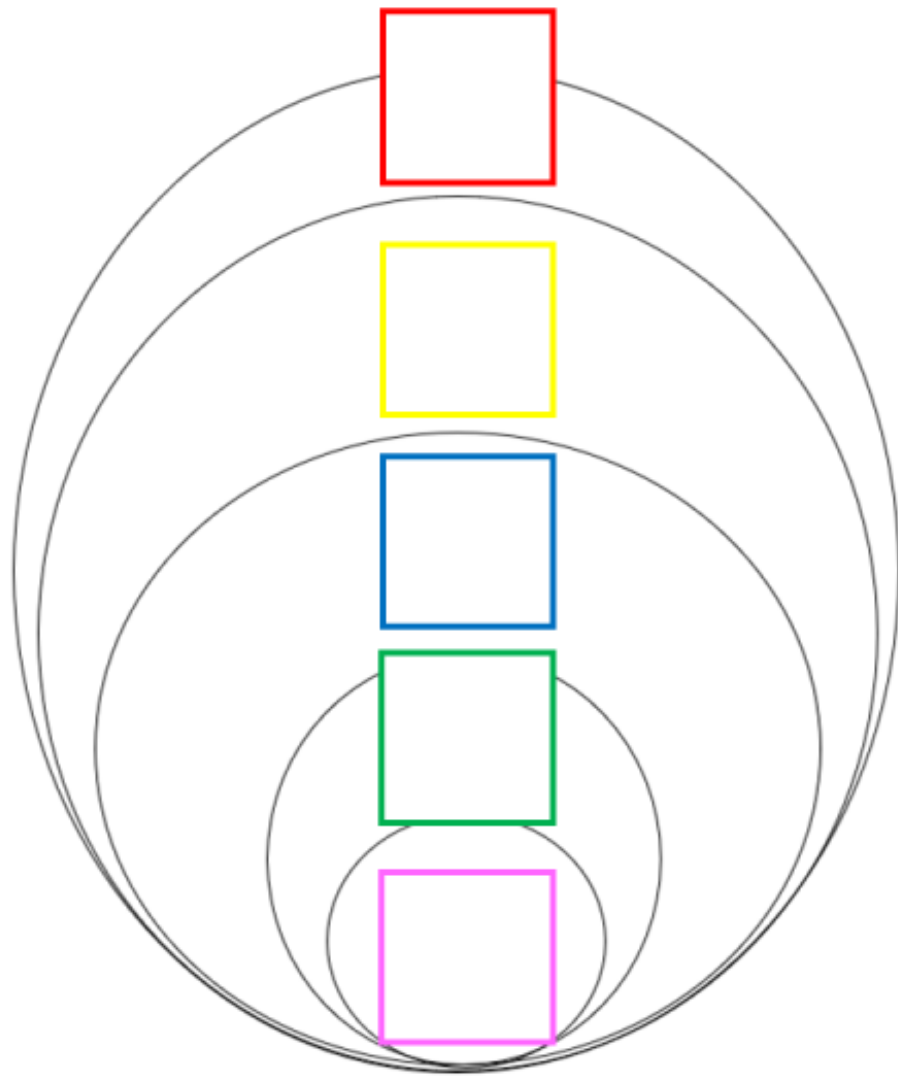
This animal is the prey:

This animal is the predator:

Look at the food chain, then answer the questions.



Each activity is set up so students can click and drag answers. No typing is required.

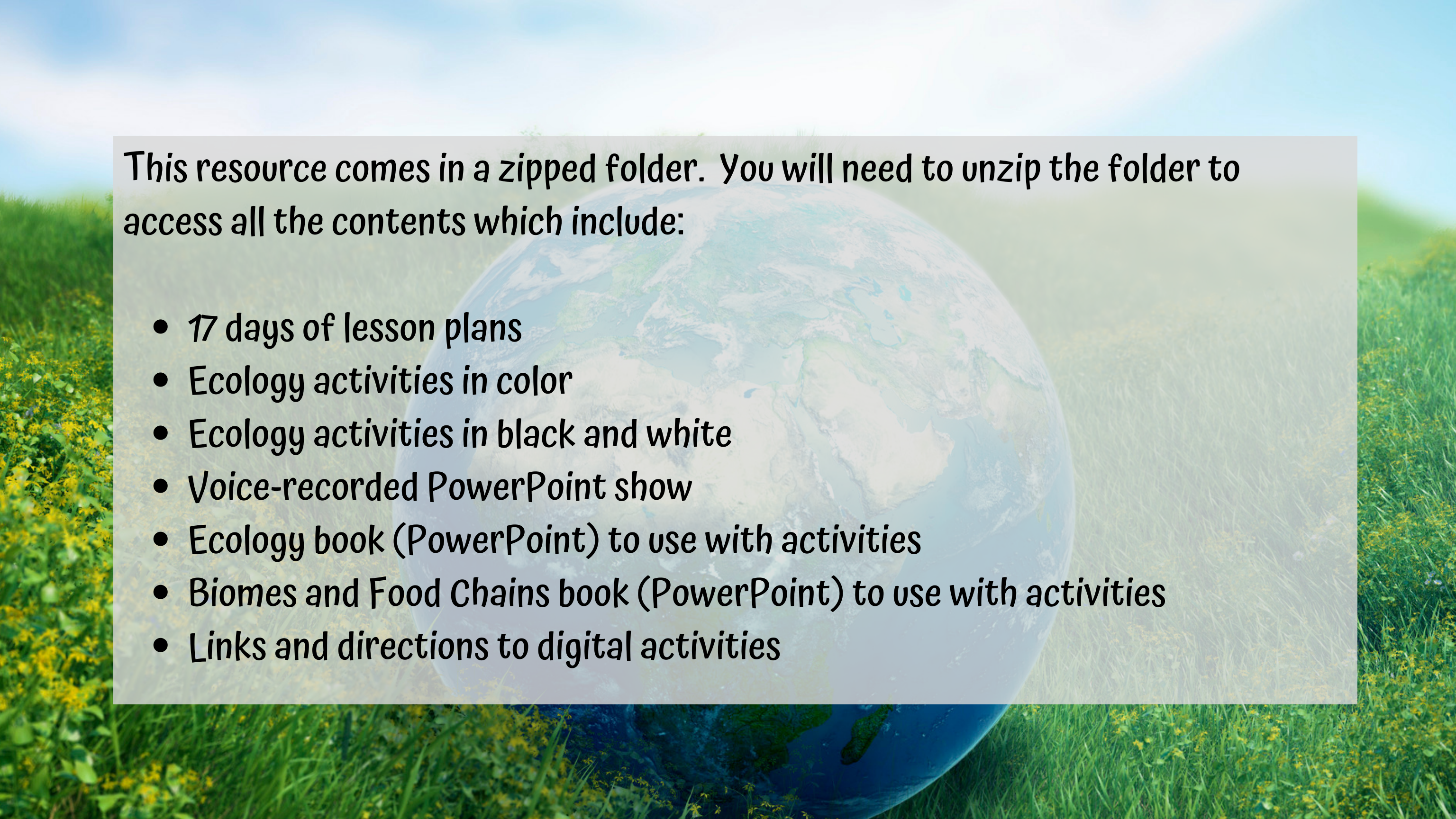


Label the layers.



The second set of slides uses color for differentiation and extra support for students who may need it. Mix and match slides from both sets to make the perfect set for each student.





**This resource comes in a zipped folder. You will need to unzip the folder to access all the contents which include:**

- **17 days of lesson plans**
- **Ecology activities in color**
- **Ecology activities in black and white**
- **Voice-recorded PowerPoint show**
- **Ecology book (PowerPoint) to use with activities**
- **Biomes and Food Chains book (PowerPoint) to use with activities**
- **Links and directions to digital activities**