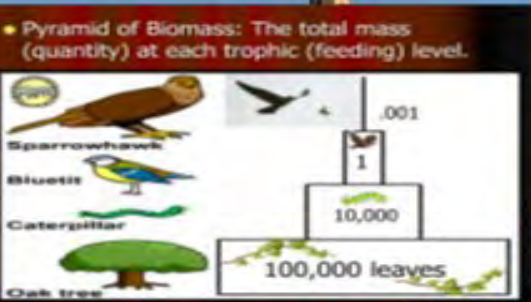
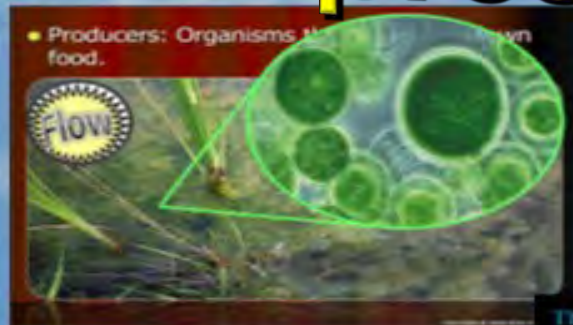


Ecology Feeding Levels Full Unit

Preview is a compressed file



Food Chain: A group of organisms where each member is eaten by another member.

Less energy is available at each feeding level.



Interactive Slideshows

- What trophic feeding level belongs to these teeth?

- A.) Producer
- B.) Consumer - Herbivore
- C.) Consumer - Carnivore**
- D.) Decomposer



Ecological systems are organized within each other. The effects on one system will affect them all. All systems are interconnected.

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- Which is **phytoplankton**, and which is **zooplankton**?

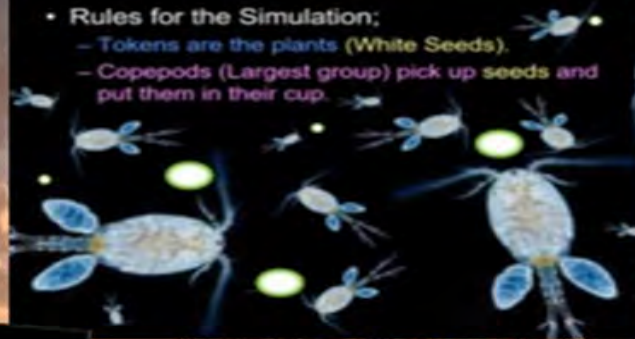


- Which teeth below are **homodont**, and which are **heterodont**?



- Rules for the Simulation;

- Tokens are the plants (White Seeds).
- Copepods (Largest group) pick up seeds and put them in their cup.



- Quiz 1-10 Animal Dentition.

- Identify the feeding level based on the teeth. **Carnivore, Herbivore, Omnivore.**
- Also identify the tooth that the arrow is pointing to, **Incisor, Canine, Premolar, Molar.**
- Homodont dentition or the skull structure.

QUIZ WIZ

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Carnivore



- Eco-Challenge Board Game.
- More on next slide.



This is an animal that eats other animals.
Carnivore (OWL + 1pts)



CARNIVORE

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Activities, Assessments, Games, Keys, and more

- Practice! Which is the **herbivore**, which is the **carnivore**? How do you know?

Herbivore

A Premolars



Carnivore

B Incisors



These are organisms that feed on plants or other organisms.



This is a community of organisms where each member is eaten in turn by another member. **Food Chain**



ppm = parts per million

Pollutants .04 ppm

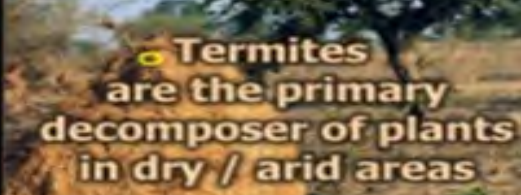
- Which skull below is a herbivore?

11



- How many mushrooms do we see in this very dry area?

None. Why? Because there are no mushrooms.



Termites are the primary decomposer of plants in dry / arid areas

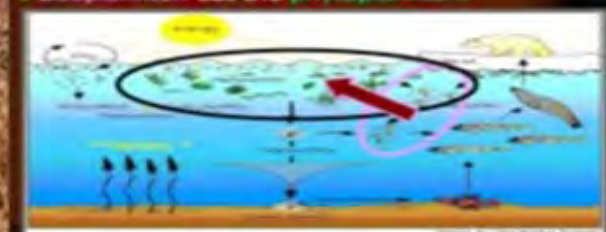
- Reptiles: Homodont teeth
- They have many of the same type of teeth.



- Biomagnification:** When contaminants increase at each step of the food chain.



- The sun provides the energy for the **phytoplankton**. Phyto = Light.
- Zooplankton** eat the **phytoplankton**.



1 Part, 13 Lessons, 23 Page Work Bundle (5th/6th Grade-Easier)

Areas of Focus: What is Ecology, Creation and monitoring of student Bio-domes.

Concepts in Ecology, Concept-There is no such thing as a free lunch, Energy Comes from the Sun, Food Chains, Trophic Feeding Levels, Feeding Levels Simulation, Producers, Consumers, Decomposers, Termites Role in the Ecosystem Case Study, Stacking Cup Activity, Carnivores, Herbivores, Omnivores, Aquatic Food Chains, Phytoplankton, Zooplankton, Bioaccumulation of Toxins in the Food Chain, Biomagnification of toxins in the Food Chain, Biomagnification Simulation Activity, Animal Dentition, Making Dental Imprint Activity, Pyramid of Biomass, Pyramid of Numbers, Pyramid of Biomass and Numbers Activity with clump of grass, Box Game Wrap Up, Board Game, Crossword Puzzle, Unit Assessment

Additional and Printables

Ecology Feeding Levels Unit Part 1 Lesson 1 Energy Flow

Ecology Feeding Levels Unit Part 1 Lesson 2 Food Chain

Ecology Feeding Levels Unit Part 1 Lesson 3 Feeding Groups

Ecology Feeding Levels Unit Part 1 Lesson 4 Tag Game and Review

Ecology Feeding Levels Unit Part 1 Lesson 5 Aquatic Food Chain

Ecology Feeding Levels Unit Part 1 Lesson 6 Bioaccumulation

Ecology Feeding Levels Unit Part 1 Lesson 7 Animal Dentition

Ecology Feeding Levels Unit Part 1 Lesson 8 Homodont Heterodont

Ecology Feeding Levels Unit Part 1 Lesson 9 Biomass Pyramid

Ecology Feeding Levels Unit Part 1 Lesson 10 Wrap Up Review

Ecology Feeding Levels Unit Part 1 Lesson 11 Board Game

Ecology Feeding Levels Unit Part 1 Lesson 12 Review Game

Ecology Feeding Levels Unit Part 1 Lesson 13 Review Game Answers

Part 1 Work Bundle Answers

Part 1 Work Bundle Print with Notes

Part 1 Work Bundle Print

Part 1 Work Bundle Writable pdf

Part 1 Unit Notes Modification

[Ecology Feeding Levels Unit](#)

SlideSpark Science

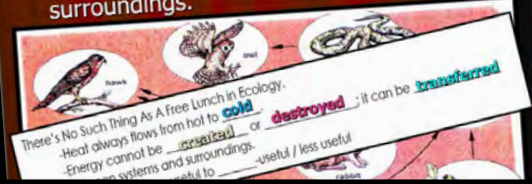


MIDDLE-LEVEL EDUCATIONAL RESOURCES

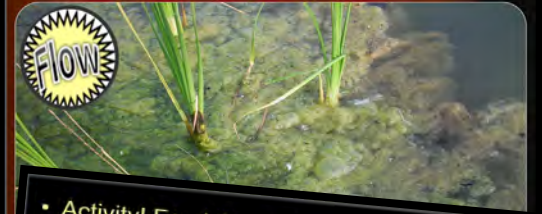
Interactive slideshows provide the roadmap for an amazing learning experience for students in grades 5-9. A Detailed set of work bundles chronologically follow the digital learning, providing a clear and intuitive roadmap to understanding. As the teacher or student advances through a slideshow, exciting hands-on activities, fantastic visuals, fill-in notes, review opportunities, video links, assessments, and much more are strategically placed throughout. Interactive learning unfolds step by step and supported by the work bundle to reach all types of learners. Everything you need to run to an amazing learning experience is provided in this one-of-a-kind science curriculum.

Each unit in the curriculum is designed to help teachers deliver the best possible learning experience for their students. Our interactive science slideshows are filled with questions and answers, important fill-in notes, hands-on activities, projects, games, built-in quizzes, and end of the unit assessment pieces. Students follow along with a work bundle that documents the entire learning experience for a fantastic review and assessment piece.

- Energy cannot be created or **destroyed**; it can be **transferred** between systems and surroundings.

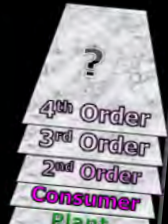


- Producers: Organisms that make their own food.

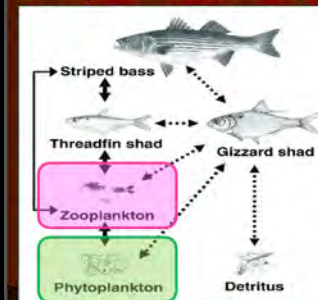


• Activity! Food Chain Cup Stacking.

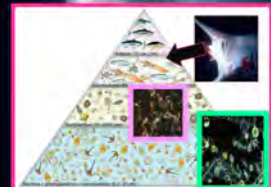
- Each student gets six Styrofoam cups.
- Label the top / side of the cup with a name and draw a sketch.
 - First cup Sun
 - Second cup Plant
 - Third cup consumer
 - Fourth cup second order consumer
 - Fifth cup third order consumer
 - Sixth cup fourth order consumer or decomposer.



- The sun provides the energy for the **phytoplankton**.
- Zooplankton eat the **phytoplankton**.



This energy then moves up the food chain



- Ecology: A study of the relationship between living things and the environment.



PART 1 ECOLOGY FEEDING LEVELS

Name: _____

Ecology: A study of the relationship between _____ things and the _____

Why should we care about ecology in the environment / biology?



Organisms need energy to survive. Energy from the sun flows into and out of systems. This energy drives our world and the organisms in it. Energy is lost "not destroyed" when it changes form. Flows Hot to Cold.



Ecological systems are organized within each other. The affects on one system will affect them all. All systems are interconnected.



All organisms are in a constant state of change over time with the environment. Some organisms will change with another and will develop special interactions. Others with the nonliving world.



Matter and energy cycle through the living and nonliving world. Organisms rely on this matter and energy cycling to survive.



Animals are interconnected in a complex web of life. Changes on one part of the web will affect other parts of the web and the stability of the entire ecosystem.



Ecosystems have a way to balance changes so that up and down fluctuations are part of the natural balance of the whole.

Red Slide Notes: Help students record important information in a fun and easy-to-understand way. Designed red-colored slides contain a few pieces of crucial information that students must record into their work bundle to complete the notes. Students will use these important notes throughout the work bundle.

The set-up of the slideshows are designed to make learning fun and interactive for students. With a mix of questions and answers, teachers can use these slides to get their students thinking and actively participating in their education. Plus, the answers are always revealed on the next slide, providing students with immediate feedback and helping teachers assess their understanding.

- What trophic feeding level belongs to these teeth?

- A.) Producer
- B.) Consumer - Herbivore
- C.) Consumer - Carnivore
- D.) Decomposer



Ecological systems are organized within each other. The affects on one system will affect them all. All systems are interconnected.

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Ecological systems are organized within each other. The affects on one system will affect them all. All systems are interconnected.

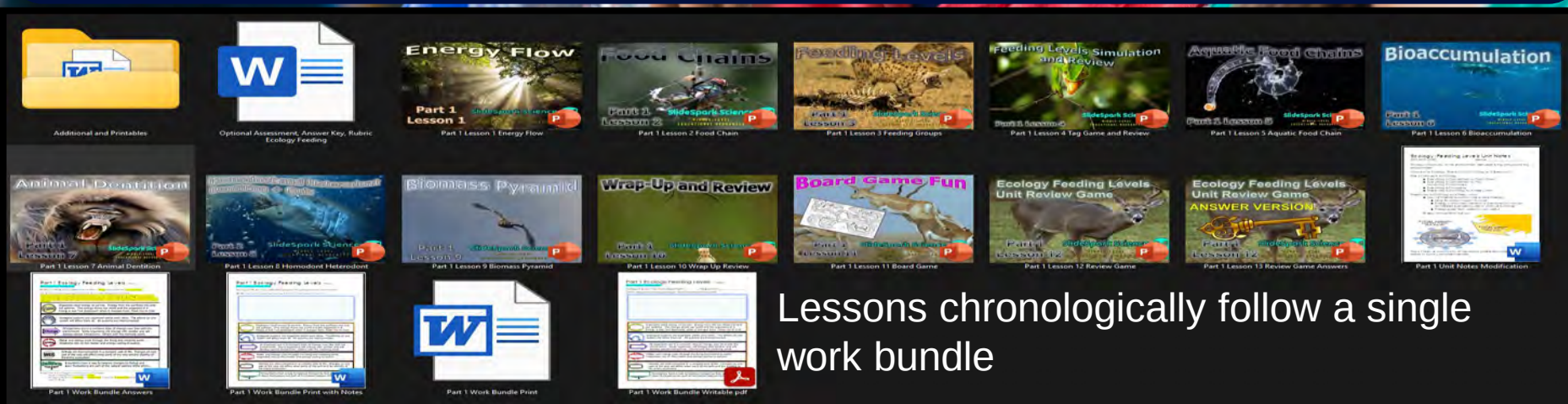
Next Slide

slideshow supports
Work Bundle



Lesson Planning

Daily lessons space exciting hands-on activities, red slide notes, video and academic links, projects, simulations, readings, built-in quizzes, and review opportunities throughout the slideshows. A typical day may have many different learning styles being targeted. Daily lesson planning becomes advancing through the slideshow roadmap the night before. Each lesson is roughly 50 minutes, but sometimes things can speed up or slow down. The best strategy is just to go at your classes own pace. The work bundle chronologically follows the interactive slideshow and you can always spend extra time assessing the quality of the writing within. If you don't quite finish a lesson, you can always pick it up the next day where you left off. The only real trick in timing is not starting a larger activity if you don't have the available time to complete. The slideshows have been designed to be a low stress, go at your classes own pace experience. Most activities are designed to be cost effective, using general materials that can be gathered from your local stores.



Lessons chronologically follow a single work bundle

Follow Along Work Bundle

Each science unit includes a single printable work bundle that stays with students from start to finish. Just print and distribute on day one—no daily handouts needed. The bundle follows the unit chronologically and includes everything: fill-in notes, diagrams, quizzes, lab activities, with follow up questions and much more. It's used daily, supports the end-of-unit quiz game, and is handed in for an additional assessment. Answer keys, some writable .pdf versions, and digital versions are also included for flexible classroom use..

PART 1 ECOLOGY FEEDING LEVELS

Home:

Part 1 Lesson 1 Energy Flow

Ecology: A study of the relationship between _____ things and the _____.

Why should we care about animals in the environment / Ecology?

-  Organisms need energy to survive. Energy from the sun flows into and out of systems. This energy drives our world and the organisms in it. Energy is lost "not destroyed" when it changes form. Flows Hot to Cold.
-  Ecological systems are organized within each other. The effects on one system will affect them all. All systems are interconnected.
-  All organisms are in a constant state of change over time with the environment. Some organisms will change with another and will develop special interactions. Others with the nonliving world.
-  Matter and energy cycle through the living and nonliving world. Organisms rely on this matter and energy cycling to survive.
-  Animals are interconnected in a complex web of life. Changes on one part of the web will affect other parts of the web and the stability of the entire ecosystem.
-  Ecosystems have a way to balance changes so that up and down fluctuations are part of the natural balance of the whole.

There's No Such Thing as a Free Lunch in Ecology.

- Energy always flows from hot to _____ or _____ it can be _____.
- Energy cannot be _____ or _____ between systems and surroundings.
- Energy goes from useful to _____, useful / less useful.

Please respond to the picture below. Use your understanding of energy.

Energy Creator and Destroyer Blaster



Why do animals need to eat? To...



Please use the picture below to show where the energy on Earth comes from.



Part 1 Lesson 2 Food Chain

Food Chain: A group of organisms where each member is _____ by another member (use a red colored pencil to sketch some metabolic path arrows. (Hint) as described in the directions for the food chain below.



Will there be more producers (algae) or Consumers (Mosquito larvae)?
Will there be more dragonfly larvae or minnows?
Will there be more perch (small fish) or more pike (big fish)?
What happens to the available energy as you move through the food chain?

Producers: Organisms that make their gas _____.
Photosynthesis: The process a plant uses to combine sunlight, _____ and _____ to produce _____ and _____ (energy).
Consumers: Feed on _____ or other animals.

Complete the feeding levels diagram below as described in the directions.



Herbivore: General name for an animal that only eats plants.

with Answer Key

Review Games / Assessments

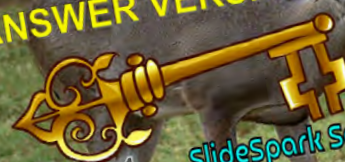
This unit concludes with a review quiz. Answers are provided in slideshow form so students can self assess. A blank template sheet is provided in the work bundle. Students can benefit from working together in small table groups with quiet communication. You can decide if you want to allow the use of work bundles or not. These are a nice review opportunity and get the students looking through their work bundles for the answers.

Ecology Feeding Levels Unit Review Game

Part 1
Lesson 12

SlideSpark Science

Ecology Feeding Levels Unit Review Game ANSWER VERSION



Part 1
Lesson 12

SlideSpark Science

Part 1 Review Game

1-20 = 5 pts.
*20-25 = Bonus = 1 pt.
(Students write out to correct guess = 1 pt)
Final Question = 5 pt wager

GET ENERGETIC	FEEDING LEVELS TIME	ANIMAL IDENTIFICATION	GET WITH THE FLOW
1) WARM TO GOLD	4) PRODUCER	11) Amphibians	14) SACRIFICIAL CRUST
2) CREATED OR DESTROYED	7) CONSUMER	12) ROCKS	17) BIOMASS PYRAMID
3) THE SUN	8) HERBIVORE	13) CARNIVORE	18) MORE VIOLET
4) FOOD CHAIN	9) CARNIVORE (owl's tip)	14) MOUSE	19) NO MAGNETIC ARCH
5) DECREASE	10) CARNIVORE	15) DASTARD	20) DECOMPOSERS

Final Question Wager: 25 Answer: ZYGOMATIC ARCH

Part 1 Review Game

1-20 = 5 pts.
*20-25 = Bonus = 1 pt.
(Students write out to correct guess = 1 pt)
Final Question = 5 pt wager

GET ENERGETIC	FEEDING LEVELS TIME	ANIMAL IDENTIFICATION	GET WITH THE FLOW	LUNCH TIME Bonus round 1 pt each
1) WARM TO GOLD	4) PRODUCER	11) Amphibians	14) SACRIFICIAL CRUST	21) SEVEN SANDWICH
2) CREATED OR DESTROYED	7) CONSUMER	12) ROCKS	17) BIOMASS PYRAMID	22) BT
3) THE SUN	8) HERBIVORE	13) CARNIVORE	18) MORE VIOLET	23) OURKARGO
4) FOOD CHAIN	9) CARNIVORE (owl's tip)	14) MOUSE	19) NO MAGNETIC ARCH	24) MC MAC
5) DECREASE	10) CARNIVORE	15) DASTARD	20) DECOMPOSERS	25) WHOPPER

Final Question Wager: 25 Answer: ZYGOMATIC ARCH

Food Chain Quiz Game

This is a community of organisms where each member is eaten in turn by another member. **Food Chain**



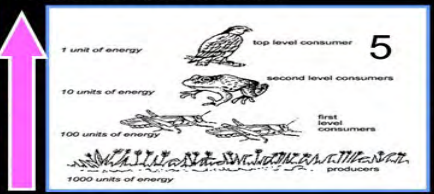
These are organisms that feed on plants or other organisms.



This is the general name given to an animal that only eats plants.



The amount of available energy decreases as you move up the food chain.



This is an animal that eats other animals? **Carnivore**



Which skull below is a herbivore? 11



These teeth are used for cutting? **Incisors**



Part 1 Review Game

Score: _____

Time: _____

GET ENERGIC (1-2)

FEEDING LEVEL (3-4)

ANIMAL CONNECTION (5-6)

GET WITH THE FLOW (7-8)

FEEDING LEVEL (9-10)

ANIMAL CONNECTION (11-12)

GET WITH THE FLOW (13-14)

FEEDING LEVEL (15-16)

ANIMAL CONNECTION (17-18)

GET WITH THE FLOW (19-20)

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ANIMAL CONNECTION (23-24)

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ANIMAL CONNECTION (491-492)

GET WITH THE FLOW (493-494)

FEEDING LEVEL (495-496)

ANIMAL CONNECTION (497-498)

Activities / Labs

Our science activities are designed to help students explore and understand complex scientific concepts in an engaging and interactive way. Each science unit includes several hands-on activities that encourage students to collect data and think critically about the world around them. Our easy-to-follow slideshow provides detailed visuals, simple materials, and clear directions, making it easy for both students and teachers to navigate the activities.

• Food Chain Tag Game (Optional)

– If you get tagged hold your arms up and walk to the "jail". The teacher will reassign you based on the health of the ecosystem.

- i.e.- Does the system need more producers, herbivores, carnivores, or decomposers to be balanced?



Balance Ecosystems have a balance of up and down fluctuations.

• Activity! Food Chain Cup Stacking.

– Each student gets six Styrofoam cups.

– Label the top / side of the cup with a name and draw a sketch.

- First cup Sun
- Second cup Plant
- Third cup consumer
- Fourth cup second order consumer
- Fifth cup third order consumer
- Sixth cup fourth order consumer



• Advanced Option: An eco-column / aqua terra column / bottle biology.



Teacher will cut bottles as it's dangerous and assign groups. Students will assemble column, add specimens (pond water and forest soil work best), inventory, make structurally secure using clear tape. Water weekly, and monitor health.



• Activity! Gum in school just this once.

- Chew a couple pieces of gum and make a large wad (Don't choke!). Make an imprint with your premolars and canines.
- Make a quick sketch in your journal and label each tooth.



• Rules for the Simulation;

- Tokens are the plants (White Seeds).
- Copepods (Largest group) pick up seeds and put them in their cup.



• Biomass Pyramid Available Sheet.

Biomass Pyramid		
Energy Level	Mass (g)	Number of Organisms
1		
2		
3		
4		
5		

(Below create a similar pyramid graph of energy with numbers.)



Pyramid of Numbers Biomass Pyramid

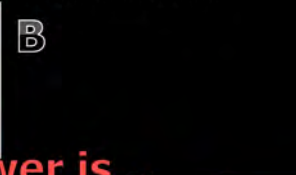
Built-in Questions and Assessments

Many slides will have relevant terms covered with a box. When advancing through the slideshow an outline around the box will glow with a bright color. The next slide will make the box disappear. These slides allow the teacher to call upon students or table groups / check for understanding before advancing. The team at SlideSpark has found that using this technique helps to keep the students focused. Constantly recalling and reviewing information learned is necessary when moving through a large unit. The slideshows don't just give everything away for free. Students should be able to demonstrate knowledge before moving on. Some slides have full questions instead of just covered terms. In these slides, the teacher should encourage small group work. The teacher can then call upon one or two groups to share before advancing the slide. The next slide will always reveal the correct answer.

• Which animal made these bite marks?



• Which animal made these bite marks?



Answer is....

Built-in Assessment

Each unit contains several built-in assessment questions that students answer in their work bundle. With the question revealed before the answer, the teacher can easily call on individual students or table groups to respond. These provide an effective and efficient way for teachers to assess student learning.

- Activity! Stand up and make the correct letter if the animal is a... **Herbivore** (eats plants), **Carnivore** (eats other animals), or **Omnivore** (eats both plants and animals) – Take your best guess. (No worries if wrong)

Carnivore **Herbivore** **Omnivore**



Please label the following skulls as herbivore, carnivore, or omnivore based on dentition and skull structure.



1. _____
2. _____
3. _____
4. _____
5. _____

Insectivores - Have _____ teeth that are all sharp for cutting insects.

Reptiles and Fish: _____ don't teeth.
They have many of the same type of teeth.

Amphibians also have teeth, but these are used to grab and hold prey and not for chewing.
Which skull has homodont dentition, and which has heterodont? (What do these two terms mean?)



Questions in Work Bundle

Built-in Video Links

Our science education program is designed with the modern, multimedia learner in mind, and our video links are a perfect complement to our educational materials. These short clips are embedded into the slideshow at just the right places for a fantastic review. Whether you're studying biology, chemistry or physics, our video links are an excellent way to reinforce your learning.

- Why should we care about animals in the environment / Ecology?
– <https://www.youtube.com/watch?v=GIWNuzrqe7U>

Why should we care about animals in the environment / Ecology?

Ecology is important because it helps us understand how humans impact the environment. Ecology provides knowledge about the relationship between people and nature, which is essential for proper management, human well-being, and prosperity.

- Try the trophic feeding levels online challenge as a class.

- Teacher will call a few groups of students up at a time. They pretend to move the animals and plants into the correct location. Teacher will control the actual movement on their computer.
- <http://www.sheppardsoftware.com/content/animal/skidscorner/games/foodchaingame.htm>



- Video Link. Jaguar catches Crocodile.

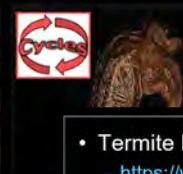
- https://www.youtube.com/watch?v=DBNYwxDZ_pA



- Video! Time lapse decomposition of a rabbit.
- http://www.youtube.com/watch?v=C6aFP_7Vozg



- Video! Time lapse decomposition of a Monitor Lizard
- <https://www.youtube.com/watch?v=Y-fddkKaMh8>



- Important Role of Decomposers.
- Dead stuff: The secret ingredient in our food chain
- John C. Moore - YouTube



- Termite Mounds

- <https://www.youtube.com/watch?v=PHNrRtBu6M>



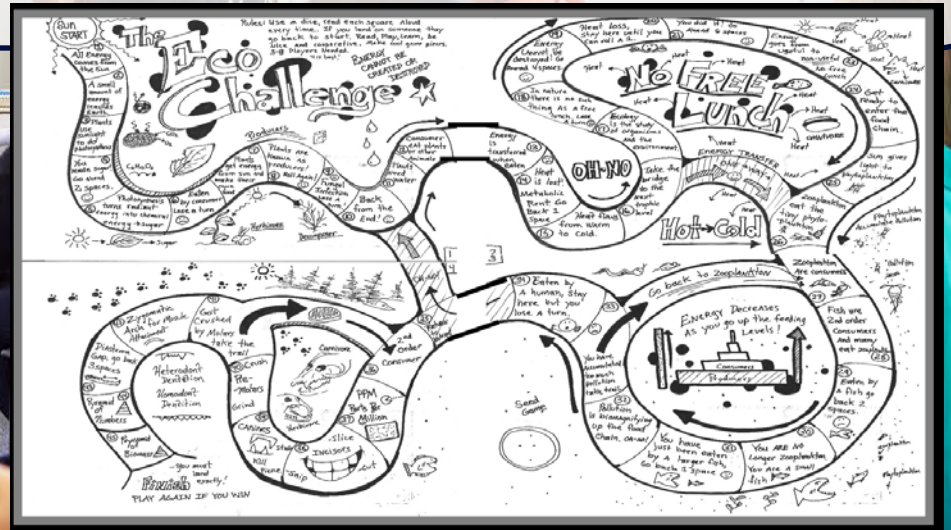
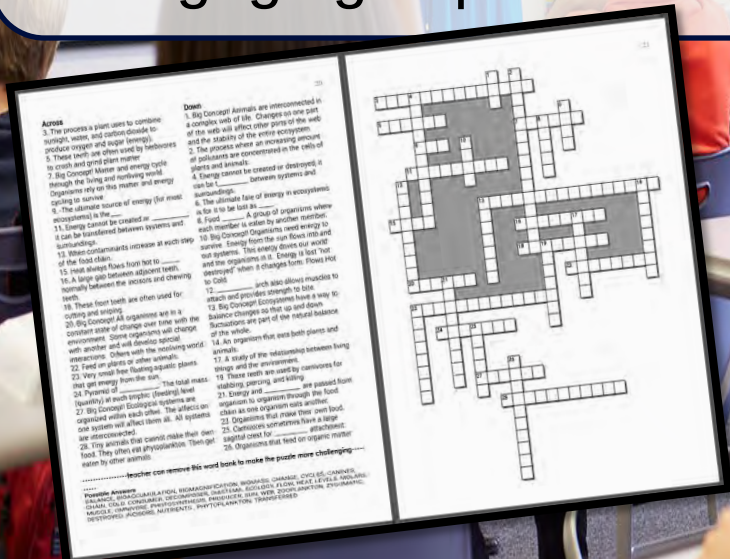
- Video Link (Optional) Decomposition of Fruit.

- <http://www.youtube.com/watch?v=c0En-BVbGc>

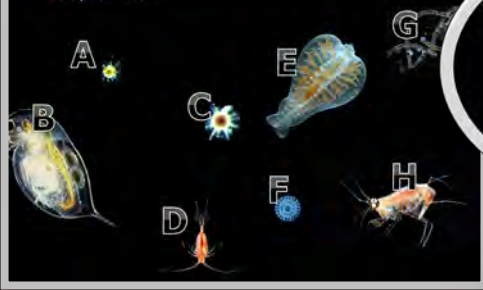


Games and Review

Games are a fantastic way for students to learn scientific concepts while having fun. We incorporate a variety of games into our curriculum, including interactive quizzes and puzzles that challenge students to think critically about the material. Our Hidden Box Games are a particularly popular feature, which conclude each unit by revealing a picture related to the topic. Students try to guess what the picture might be, making learning an engaging experience.



- Which is **phytoplankton**, and which is **zooplankton**?



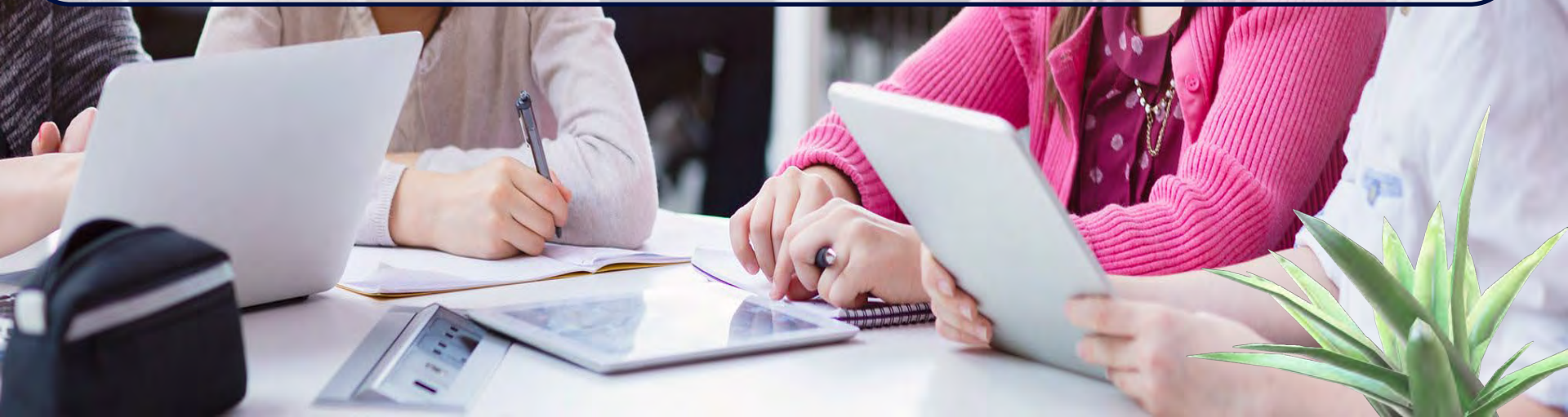
- Which is **phytoplankton**, and which is **zooplankton**?



The Owl - Each Part of the slideshow has a small clipart Owl hiding somewhere in a slide. The owl is incredibly small and blended into just the right slide. If a student spots the "Owl" they can raise their hand high into the air. When you call upon the student they can say "Owl" and be the student who spotted the Owl. Each PowerPoint Review game also has an owl hiding in it worth one point. Remind the students that they secretly write the word "owl" rather than yell it out during the review games. The Owl search is not included in every lesson. A slide at the beginning of the lesson will alert the students that today is an "Owl" day. Everything arrives editable so delete if you wish. You will find that some students will become the expert owl hunters in the group.

Google Classroom Compatible

Our digital learning programs are designed for students to learn science in a flexible and engaging environment. Our Google Classroom-compatible units provide a seamless learning experience whether your students are in the classroom or learning from home. Our step-by-step slideshows and student work bundles ensure that students can complete their work independently. The PowerPoint Slideshows and step-by-step work bundles can easily be loaded to your Google Drive and posted in your Google Classroom. These are great for daily lessons, students who need additional time, and for a student who was absent and looking to catch up in their work bundle.





[Part 1 Lesson 1 Energy Flow](#)

Google Slides



[Part 1 Lesson 2 Food Chain](#)

Google Slides



[Part 1 Lesson 3 Feeding Gro...](#)

Google Slides



[Part 1 Lesson 4 Tag Game a...](#)

Google Slides



[Part 1 Lesson 8 Homodont H...](#)

Google Slides



[Part 1 Lesson 7 Animal Denti...](#)

Google Slides



[Part 1 Lesson 6 Bioaccumul...](#)

Google Slides



[Part 1 Lesson 5 Aquatic Foo...](#)

Google Slides



[Part 1 Lesson 12 Review Ga...](#)

Google Slides



[Part 1 Lesson 11 Board Game](#)

Google Slides



[Part 1 Lesson 10 Wrap Up R...](#)

Google Slides



[Part 1 Lesson 9 Biomass Pyr...](#)

Google Slides

1 Part, 13 Lessons, 23 Page Work Bundle (5th/6th Grade-Easier)

Areas of Focus: What is Ecology, Creation and monitoring of student Bio-domes.

Concepts in Ecology, Concept-There is no such thing as a free lunch, Energy Comes from the Sun, Food Chains, Trophic Feeding Levels, Feeding Levels Simulation, Producers, Consumers, Decomposers, Termites Role in the Ecosystem Case Study, Stacking Cup Activity, Carnivores, Herbivores, Omnivores, Aquatic Food Chains, Phytoplankton, Zooplankton, Bioaccumulation of Toxins in the Food Chain, Biomagnification of toxins in the Food Chain, Biomagnification Simulation Activity, Animal Dentition, Making Dental Imprint Activity, Pyramid of Biomass, Pyramid of Numbers, Pyramid of Biomass and Numbers Activity with clump of grass, Box Game Wrap Up, Board Game, Crossword Puzzle, Unit Assessment

Additional and Printables

Ecology Feeding Levels Unit Part 1 Lesson 1 Energy Flow

Ecology Feeding Levels Unit Part 1 Lesson 2 Food Chain

Ecology Feeding Levels Unit Part 1 Lesson 3 Feeding Groups

Ecology Feeding Levels Unit Part 1 Lesson 4 Tag Game and Review

Ecology Feeding Levels Unit Part 1 Lesson 5 Aquatic Food Chain

Ecology Feeding Levels Unit Part 1 Lesson 6 Bioaccumulation

Ecology Feeding Levels Unit Part 1 Lesson 7 Animal Dentition

Ecology Feeding Levels Unit Part 1 Lesson 8 Homodont Heterodont

Ecology Feeding Levels Unit Part 1 Lesson 9 Biomass Pyramid

Ecology Feeding Levels Unit Part 1 Lesson 10 Wrap Up Review

Ecology Feeding Levels Unit Part 1 Lesson 11 Board Game

Ecology Feeding Levels Unit Part 1 Lesson 12 Review Game

Ecology Feeding Levels Unit Part 1 Lesson 13 Review Game Answers

Part 1 Work Bundle Answers

Part 1 Work Bundle Print with Notes

Part 1 Work Bundle Print

Part 1 Work Bundle Writable pdf

Part 1 Unit Notes Modification

[Ecology Feeding Levels Unit](#)

Ecology Interactions Unit

[Ecology Interactions Unit](#)

Ecology and the Environment: Interactions Unit

3 Parts, 30 Lessons (5th or 6th grade – Easier), Part 1 has 30 page bundle, Part 2 has a 15 page work bundle, Part 3 has a 24 page work bundle -Areas of Focus within The Ecology Interactions Unit: Levels of Biological Organization (Ecology), Parts of the Biosphere, Habitat, Ecological Niche, Types of Competition, Competitive Exclusion Theory, Animal Interactions, Food Webs, Predator Prey Relationships, Camouflage, Population Sampling, Abundance, Relative Abundance, Diversity, Mimicry, Batesian Mimicry, Mullerian Mimicry, Symbiosis, Parasitism, Mutualism, Commensalism, Plant and Animal Interactions, Coevolution, Animal Strategies to Eat Plants, Plant Defense Mechanisms, Exotic Species, Impacts of Invasive Exotic Species.



3 Parts, 30 Lessons (5th or 6th grade – Easier), Part 1 has 30-page bundle, Part 2 has a 15-page work bundle, Part 3 has a 24-page work bundle.

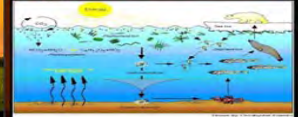
[Ecology Interactions Unit Part 1:](#) Levels of Biological Organization (Ecology), Big Concepts in Eco-Literacy, Diagram of the Levels of Biological Organization, Individuals, Populations, Communities, Ecosystems Large and Small, Biomes, Biosphere, Making a Pyramid of the Levels of Organization Activity, Earth's Spheres, Atmosphere, Hydrosphere, Cryosphere, Lithosphere, Geosphere, Ecosphere, Sphere Interactions, Examples of Sphere Interactions, Hydrosphere Interaction Demo, How Matter and Energy move through the Spheres, Sphere Interaction Project, Habitat, Examples of Animals and their Habitat, Microhabitats, Habitat Lab Activity, Needs of Organisms, Ecological Niche, Case Study on the African Dung Beetle, Fundamental Niche vs Realized Niche, Human Population Growth, Carrying Capacity, R and K Species, Animal Competition, Types of Competition, Intraspecific Competition, Interspecific Competition, Interference, Exploitative Competition, Competition Quiz, Competitive Exclusion Theory, Animal Competition Simulation of Spoon Beaks vs. Grabber Beaks, MacArthur's Warblers Case Study, Animal Interactions, Food Webs, Food Collapse Class Activity with String, Predator Prey Relationships, Feeding Strategies, Generalists vs. Specialist, Foraging Simulation with Bean Seeds in the Grass, Herbivore Survival Strategies, Predator Prey Cycles, Predatory Prey Cycle Notecard Toss Activity, Density Dependent and Density Independent Limiting Factors, Box Games, Board Game Review, Crossword Puzzle, Assessment.

[Ecology Interactions Unit Part 2](#) Part 2: Abundance, Relative Abundance, Calculating Relative Abundance from a Population, Pie Graph of Result, Species Composition, Diversity, Biodiversity, Importance of Biodiversity, Case Study on the Lord Howe Stick Insect, Biodiversity Jenga Activity, How to Maintain Biodiversity, Case Study of Plantation Forestry vs. Native Growth in Tasmania, Find the Animal Fun Camouflage Quiz, Camouflage, Four Types of Camouflage, Camouflage a Gecko in the School Project, Mimicry, Tour of the Worlds fantastic Mimics, Batesian Mimicry, Being a young bird Nastieeos and Tastieeos / Bean Boozled and experiencing Batesian Mimicry Simulation, Aggressive Mimicry, Case Study on the Alligator Snapping Turtle, Beat the Butterfly Man Challenge, Aposematic Coloration, Mullerian Mimicry, Mullerian Coloring Activity, Other Interesting Ways Animal Avoid Predation, Box Games, Crossword Puzzle, Assessment

[Ecology Interactions Unit Part](#) Part 3: Symbiosis, Types of Symbiosis, Parasitism, Major groups of Parasites, Complicated Life Cycle of Parasites, Case Study on the Zombie Snail, Endoparasites, Ectoparasites, Examples with Visuals of many Parasites across the globe, Case Study on the Sea Lamprey, Brood Parasitism and the Cowbird, Perfect Parasite Presentation Project, Coevolution, Ecological Relationships, Mutualism, Types of Mutualisms, Trophic Mutualisms, Case Study on Leaf Cutter Ants, Cleaning Symbiosis, Defensive Mutualism, Dispersive Mutualism, Commensalism, Moving Quiz, Herbivory, Animal Strategies to Eat Plants, Plant Defense Mechanisms, Types of Mechanical Defenses, Poisonous Plants, Case Study on Identifying Poison Ivy, Poison Ivy Quiz, Plants and Animals Defense and Offense Design Project, Exotic Species, How Humans Spread Exotic Species, Invasive Exotic Species, Impacts of Invasive Exotic Species, Group Research of an Invasive Exotic Species Project, Biological Controls, Invasive Exotic Species WANTED Poster Project, Box Games, Crossword, Board Game Review, Assessment

Ecology Interactions Unit

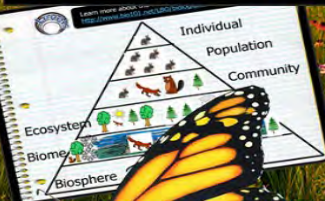
- Food Web: A complex network of many interconnected food chains and feeding interactions.



- Rain (the hydrosphere) drops land on atmosphere. These drop land on atmosphere (earth) and form streams and rivers that provide the drinking water for plants and animals in the biosphere.



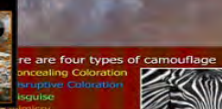
- Name the spheres?
- Warm water currents move up the Gulf Stream toward Europe?



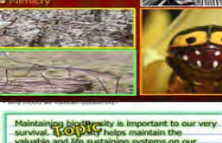
30 Lessons

Interactive Slideshows

- Name the correct type of camouflage for the picture? (Can only use each once 7-10)



- Habitat Activity Available Sheet



- Match the animal to its habitat.



- Ecosystem: The relationships of populations with each other and their environment.



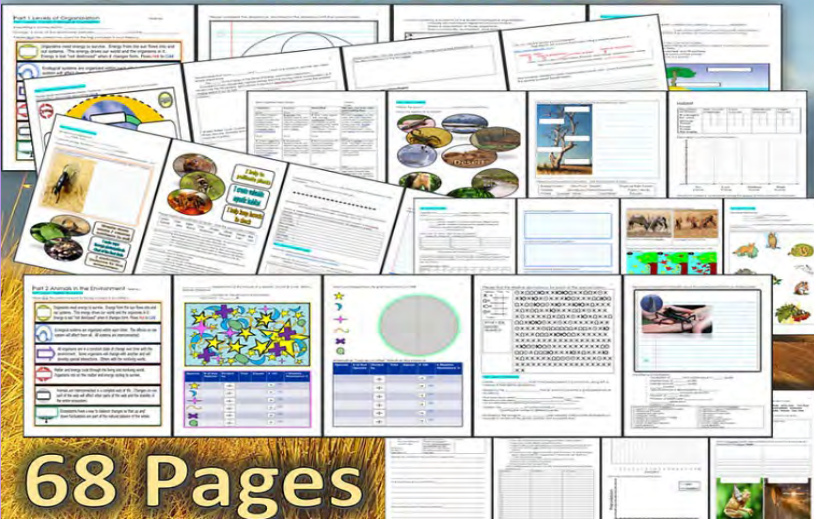
- The atmosphere cooled. The atmosphere got colder. The atmosphere got warmer. The atmosphere got hotter.



- Video Link! (Optional) Plantation Forestry vs. Native Regeneration Forestry (Tasmania)



With Follow Along Work Bundles

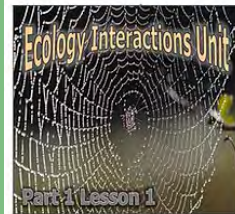


68 Pages

Activities, Assessments, Games, and more all built-in



Part 1: 13 Lessons of 50 minutes, and 30 Page Work Bundle, Levels of Biological Organization (Ecology), Big Concepts in Eco-Literacy, Diagram of the Levels of Biological Organization, Individuals, Populations, Communities, Ecosystems Large and Small, Biomes, Biosphere, Making a Pyramid of the Levels of Organization Activity, Earth's Spheres, Atmosphere, Hydrosphere, Cryosphere, Lithosphere, Geosphere, Ecosphere, Sphere Interactions, Examples of Sphere Interactions, Hydrosphere Interaction Demo, How Matter and Energy move through the Spheres, Sphere Interaction Project, Habitat, Examples of Animals and their Habitat, Microhabitats, Habitat Lab Activity, Needs of Organisms, Ecological Niche, Case Study on the African Dung Beetle, Fundamental Niche vs Realized Niche, Human Population Growth, Carrying Capacity, R and K Species, Animal Competition, Types of Competition, Intraspecific Competition, Interspecific Competition, Interference, Exploitative Competition, Competition Quiz, Competitive Exclusion Theory, Animal Competition Simulation of Spoon Beaks vs. Grabber Beaks, MacArthur's Warblers Case Study, Animal Interactions, Food Webs, Food Web Collapse Class Activity with String, Predator Prey Relationships, Feeding Strategies, Generalists vs. Specialist, Foraging Simulation with Bean Seeds in the Grass, Herbivore Survival Strategies, Predator Prey Cycles, Predatory Prey Cycle Notecard Toss Activity, Density Dependent and Density Independent Limiting Factors, Box Games, Board Game Review, Crossword Puzzle, Assessment.



Part 1 Lesson 1 Levels of Organization



Part 1 Lesson 3 Sphere Interactions



Part 1 Lesson 4 Sphere Project



Part 1 Lesson 5 Habitat



Part 1 Lesson 6 Need Niches



Part 1 Lesson 7 Population Growth



Part 1 Lesson 8 Competition



Part 1 Lesson 9 Food Webs



Part 1 Lesson 10 Feeding Simulation



Part 1 Lesson 11 Predator Prey Cycles



Part 1 Lesson 12 Wrap Up



Part 1 Lesson 13 Review Game



Part 1 Lesson 14 Review Game Answers



Part 1 Work Bundle Print



Part 1 Work Bundle Write on pdf



Part 1 Work Bundle Answers



Part 1 Work Bundle Print with Notes

Ecology Interactions Unit Part 1

Part 2: 7 Lessons of about 50 minutes and 15 Page Work Bundle, Abundance, Relative Abundance, Calculating Relative Abundance from a Population, Pie Graph of Results, Species Composition, Diversity, Biodiversity, Importance of Biodiversity, Case Study on the Lord Howe Stick Insect, Biodiversity Jenga Activity, How to Maintain Biodiversity, Case Study of Plantation Forestry vs. Native Growth in Tasmania, Find the Animal Fun Camouflage Quiz, Camouflage, Four Types of Camouflage, Camouflage a Gecko in the School Project, Mimicry, Tour of the Worlds fantastic Mimics, Batesian Mimicry, Being a young bird Nastieeos and Tastieeos / Bean Boozled and experiencing Batesian Mimicry Simulation, Aggressive Mimicry, Case Study on the Alligator Snapping Turtle, Beat the Butterfly Man Challenge, Aposematic Coloration, Mullerian Mimicry, Mullerian Coloring Activity, Other Interesting Ways Animal Avoid Predation, Box Games, Crossword Puzzle, Assessment

Ecology Interactions Unit Part 2



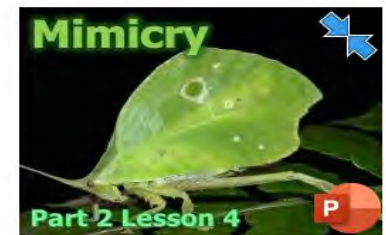
Part 2 Lesson 1 Relative Abundance



Part 2 Lesson 2 Biodiversity



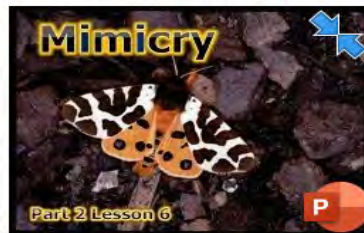
Part 2 Lesson 3 Camouflage



Part 2 Lesson 4 Mimicry



Part 2 Lesson 5 Batesian Mimicry



Part 2 Lesson 6 Mullerian Mimicry



Part 2 Lesson 7 Review Game



Part 2 Lesson 8 Review Game Answers



Part 2 Work Bundle Answers



Part 2 Work Bundle pdf Writable



Part 2 Work Bundle Print with Notes



Part 2 Work Bundle Print

Part 3: 11 Lessons of 50 minutes and 24 Page Work Bundle, Symbiosis, Types of Symbiosis, Parasitism, Major groups of Parasites, Complicated Life Cycle of Parasites, Case Study on the Zombie Snail, Endoparasites, Ectoparasites, Examples with Visuals of many Parasites across the globe, Case Study on the Sea Lamprey, Brood Parasitism and the Cowbird, Perfect Parasite Presentation Project, Coevolution, Ecological Relationships, Mutualism, Types of Mutualisms, Trophic Mutualisms, Case Study on Leaf Cutter Ants, Cleaning Symbiosis, Defensive Mutualism, Dispersive Mutualism, Commensalism, Moving Quiz, Herbivory, Animal Strategies to Eat Plants, Plant Defense Mechanisms, Types of Mechanical Defenses, Poisonous Plants, Case Study on Identifying Poison Ivy, Poison Ivy Quiz, Plants and Animals Defense and Offense Design Project, Exotic Species, How Humans Spread Exotic Species, Invasive Exotic Species, Impacts of Invasive Exotic Species, Group Research of an Invasive Exotic Species Project, Biological Controls, Invasive Exotic Species WANTED Poster Project, Box Games, Crossword, Board Game Review, Assessment

Ecology Interactions Unit Part 3



Part 3 Lesson 1 Symbiosis Parasites



Part 3 Lesson 2 Parasite Project



Part 3 Lesson 3 Mutualism



Part 3 Lesson 4 Animal Offenses



Part 3 Lesson 5 Plant Defenses



Part 3 Lesson 6 Presentation Wrap Up



Part 3 Lesson 7 Exotic Species



Part 3 Lesson 8 Negative Impacts



Part 3 Lesson 9 WANTED Poster



Part 3 Lesson 10 Board Game



Part 3 Lesson 11 Review Game



Part 3 Lesson 12 Review Game Answers



Part 3 Work Bundle Answers



Part 3 Work Bundle pdf Writable



Part 3 Work Bundle Print with Notes



Part 3 Work Bundle Print

Ecology Abiotic Factors

Ecology and the Environment: Abiotic Factors Unit

2 Parts, 24 Lessons+ (5th and 6th grade – Easier) Part 1 has a 32 Page work bundle, and Isopod Project, Part 2 has a 24 Page Work Bundle

[Ecology Abiotic Factors, Biogeochemical Cycles Unit](#)



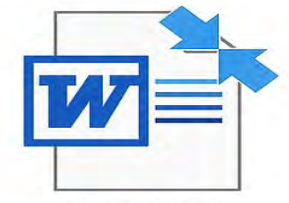
Ecology Abiotic Factors

[Part 1 Ecology Abiotic Factors](#) Part 1 Ecology Abiotic Factors Unit: 12 Lessons of 50 minutes and 32 Page Work Bundle, Creation and monitoring of Student bio-domes / terrarium (Optional), What is Ecology?, Big Concepts in Eco-Literacy, Biotic Factors vs. Abiotic Factors, The Big 8 abiotic Factors, Optional Range of Tolerance and Brine Shrimp Eggs Lab, How organisms are affected by Light, Factors on Earth that affect the amount of light, Light and Organisms Movement, Phototropism, Phototaxis, Bioluminescence, How organisms are connected to Light, Temperature, How temperature Impacts Organisms, Thermoregulation, Adaptations, Physiological Adaptations, Behavioral Adaptations, Desert Adaptations, Hypothermia, Warning Signs and Prevention, Hyperthermia, Warning Signs and Prevention, Warm and Cold Bloodedness, Advantages and Disadvantages of Each, Abiotic Factor Water, Spheres and their Impact on Water Available, Mtn Rain Shadow Effect, Water Requirements and Plants, Animal Adaptations in the Desert, Isopods, Isopod Lab Activity with Live Isopods and Abiotic Factors, Scientific Method and Study Set-up, Graphing Findings, Writing a Lab Report, Wind, Positives and Negatives of Wind, How Plants and Animals Use Wind, Plant Seed Dispersal, Wind, Water, Animals, Tension, Seed Dispersal Project where student built a wind dispersed seed mechanism, Island Biogeography, MacArthur-Wilson Equilibrium Theory, Island Biogeography Activity, Seed Dispersal, Animal Dispersal, Quiz to Review Seed Dispersal, Fire Ecology, Fire Adaptation in Plants, Case Study of 1988 Yellowstone Wildfire Season, Let it Burn Philosophy, Case Study of Smoke Jumpers, Benefits and Negatives of Wildland Fires, Box Games, Crossword Puzzle, End of the Unit Assessment.

[Part 2](#) Biogeochemical Cycles: 16 Lesson of 50 Minutes and 24 Page work Bundle, Biogeochemical Cycles, Earth's Spheres, Water's States of Matter on Earth, Hydrologic Cycle, Kinetic Molecule Theory, Movement of Atoms in various States of Matter, Solids, Liquids, Gases, State of Matter Diagram, Diagram of the Water Cycle, Evaporation, Condensation Precipitation, Water Cycle in a Bottle Activity, Building a Solar Still Activity, Sublimation, Transpiration, Transpiration Activity, Surface Run-off, Percolation, Percolation in a Bottle Activity, Groundwater Discharge and Storage, Water Cycle Quiz, Box Games, Crossword, Assessment, Carbon Cycle, Carbon Reservoirs, Energy Flow of Life, Photosynthesis, Photosynthetic Equation, Understanding the Equation with M&M's, Photosynthesis Overview, Cellular Respiration, Overview of Molecules and Foods Macronutrients, Understanding Respiration Equation, Blow up a balloon with yeast demo, Basics of Citric Acid Cycle, Aerobic vs. Anaerobic Respiration, Oxygen Carbon Dioxide Balance with plants/protists/bacteria and animals, Box Game Review, Nitrogen Cycle, Nitrogen Cycle Diagram, Nitrogen Fixation, Denitrification, Nutrient Pollution, Acids and Bases, pH Scale, Penny Perfect Activity, Using pH indicators to test common household solutions, Acid Rain, Acid Rain Diagram, Acid Rain and Chemical Weathering Activity with Vinegar and Chalk, Phosphorus Cycle, Phosphorus Cycle Diagram, Importance of Phosphorus, Nutrients and Aquatic Systems, Nutrient Pollution, Eutrophication, Visual Quiz, Box Game, Crossword Puzzle, End Assessment

Part 1 Ecology Abiotic Factors Unit: 12 Lessons of 50 minutes and 32 Page Work Bundle, Creation and monitoring of Student bio-domes / terrarium (Optional), What is Ecology?, Big Concepts in Eco-Literacy, Biotic Factors vs. Abiotic Factors, The Big 8 abiotic Factors, Optional Range of Tolerance and Brine Shrimp Eggs Lab, How organisms are affected by Light, Factors on Earth that affect the amount of light, Light and Organisms Movement, Phototropism, Phototaxis, Bioluminescence, How organisms are connected to Light, Temperature, How temperature Impacts Organisms, Thermoregulation, Adaptations, Physiological Adaptations, Behavioral Adaptations, Desert Adaptations, Hypothermia, Warning Signs and Prevention, Hyperthermia, Warning Signs and Prevention, Warm and Cold Bloodedness, Advantages and Disadvantages of Each, Abiotic Factor Water, Spheres and their Impact on Water Available, Mtn Rain Shadow Effect, Water Requirements and Plants, Animal Adaptations in the Desert, Isopods, Isopod Lab Activity with Live Isopods and Abiotic Factors, Scientific Method and Study Set-up, Graphing Findings, Writing a Lab Report, Wind, Positives and Negatives of Wind, How Plants and Animals Use Wind, Plant Seed Dispersal, Wind, Water, Animals, Tension, Seed Dispersal Project where student built a wind dispersed seed mechanism, Island Biogeography, MacArthur-Wilson Equilibrium Theory, Island Biogeography Activity, Seed Dispersal, Animal Dispersal, Quiz to Review Seed Dispersal, Fire Ecology, Fire Adaptation in Plants, Case Study 1988 Yellowstone Wildfire Season, Let it Burn Philosophy, Case Study of Smoke Jumpers, Box Games, Crossword Puzzle, End of the Unit Assessment

Part 1 Ecology
Abiotic Factors

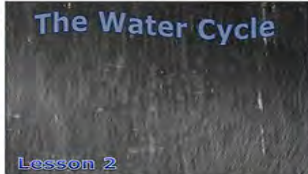


Part 2: 16 Lesson of 50 Minutes and 24 Page work Bundle, Biogeochemical Cycles, Earth's Spheres, Water's States of Matter on Earth, Hydrologic Cycle, Kinetic Molecule Theory, Movement of Atoms in various States of Matter, Solids, Liquids, Gases, State of Matter Diagram, Diagram of the Water Cycle, Evaporation, Condensation Precipitation, Water Cycle in a Bottle Activity, Building a Solar Still Activity, Sublimation, Transpiration, Transpiration Activity, Surface Run-off, Percolation, Percolation in a Bottle Activity, Groundwater Discharge and Storage, Water Cycle Quiz, Box Games, Crossword, Assessment, Carbon Cycle, Carbon Reservoirs, Energy Flow of Life, Photosynthesis, Photosynthetic Equation, Understanding the Equation with M&M's, Photosynthesis Overview, Cellular Respiration, Overview of Molecules and Foods Macronutrients, Understanding Respiration Equation, Blow up a balloon with yeast demo, Basics of Citric Acid Cycle, Aerobic vs. Anaerobic Respiration, Oxygen Carbon Dioxide Balance with plants/protists/bacteria and animals, Box Game Review, Nitrogen Cycle, Nitrogen Cycle Diagram, Nitrogen Fixation, Denitrification, Nutrient Pollution, Acids and Bases, pH Scale, Penny Perfect Activity, Using pH indicators to test common household solutions, Acid Rain, Acid Rain Diagram, Acid Rain and Chemical Weathering Activity with Vinegar and Chalk, Phosphorus Cycle, Phosphorus Cycle Diagram, Importance of Phosphorus, Nutrients and Aquatic Systems, Nutrient Pollution, Eutrophication, Visual Quiz, Box Game, Crossword Puzzle, End Assessment

Part 2



Part 2 Lesson 1 Biogeochemical Cycles



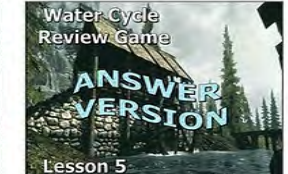
Lesson 2



Lesson 3



Lesson 4



Lesson 5



Part 2 Lesson 6 Carbon Cycle Photosyn



Part 2 Lesson 7 Photosynthesis Cont



Part 2 Lesson 8



Part 2 Lesson 9 Cell Respiration Wrap Up



Part 2 Lesson 10 Nitrogen Cycle



Part 2 Lesson 11 Nitrogen Review



Part 2 Lesson 12 Acids and Bases



Part 2 Lesson 13 Acid Rain



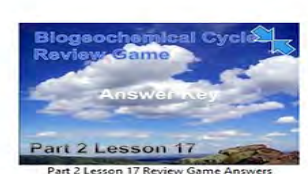
Part 2 Lesson 14 Phosphorus Cycle



Part 2 Lesson 15 Eutrophication



Part 2 Lesson 16 Review Game



Part 2 Lesson 17 Review Game Answers



Part 2 Work Bundle Answers



Part 2 Work Bundle Print with Notes



Part 2 Work Bundle Print

Curriculum Guide

Number of Lessons in each unit (50 min, daily lessons) and difficult rating scale / intended grade level.

 =Easier,

 = More difficult,

 =Most difficult

Earth Science Units	Daily Lessons	Intended Grade	
Geology Topics Unit	60 Lessons	6-8 medium difficulty	
Weather and Climate Unit	40 Lessons	6-8 medium difficulty	
Astronomy Unit	60 Lessons	6-8 medium difficulty	
Weathering, Soil Sciences	28 Lessons	5-7 easier	
Rivers and Water Quality	25 Lessons	5-7 easier	
Water Molecule Unit	20 Lessons	5-7 easier	

Life Science Units

Life Science Units	Daily Lessons	Intended Grade	
Ecology Feeding Levels Unit	13 Lessons	5-6 easier	
Ecology Interactions Unit	30 Lessons	5-6 easier	
Ecology Abiotic Factors Unit	24 Lessons	5-6 easier	
Botany Unit	50 Lessons	5-7 easier	
Evolution and Natural Selection	40 Lessons	5-7 easier	
Taxonomy and Classification	50 Lessons	6-8 medium difficulty	
Infectious Diseases Unit	30 Lessons	7-9 more difficult	
DNA and Genetics Unit	42 Lessons	8-10 most difficult	
Human Body Systems Unit	85 Lessons	6-8 medium difficulty	
Cell Biology Unit	30 Lessons	8-10 most difficult	

Physical Science

	Daily Lessons	Intended Grade	
Laws of Motion and Machines Unit	33 Lessons	8-10 most difficult	
Matter Energy and the Environment	58 Lessons	7-10 medium difficulty	
Atoms and Periodic Table Unit	44 Lessons	8-10 most difficult	
Science Skills Unit	30 Lessons	5-7 medium difficulty	

[Physical Science Curriculum](#)

[Entire SlideSpark Science Curriculum](#)



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Our fully editable .pptx and .doc resources are perfect for educators looking to bring enthusiasm and creativity to their lessons. We encourage you to make changes to fit your needs and style. As science educators, we're committed to providing students with the tools they need to succeed in the classroom and beyond. Each unit in the curriculum includes a range of resources that have been developed through extensive research and use in a busy classroom. Our teaching approach is designed to make science education engaging and exciting for learners of all ages. We offer a one-of-a-kind science curriculum that will challenge, inspire, and educate students to become tomorrow's scientists and leaders. Join us today and learn more about how our program can help you achieve your classroom goals.

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Sincerely,

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