Ecology Abiotic Factors Bundle

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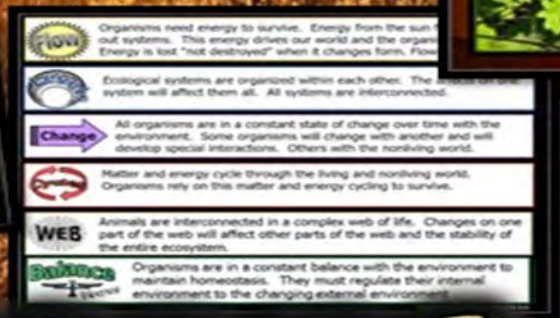
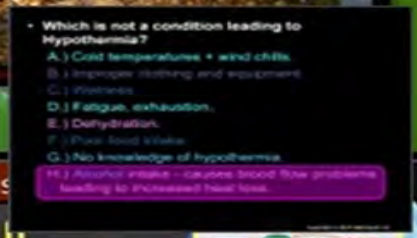
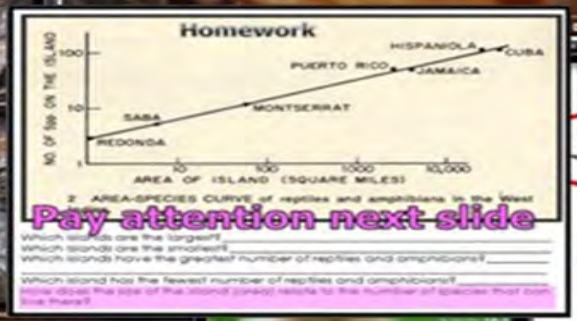
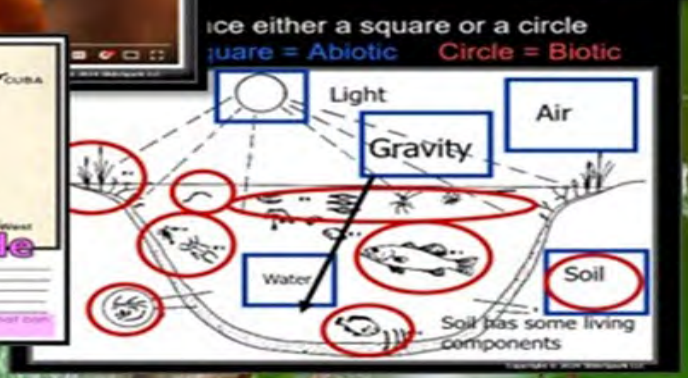


12 Lessons

Interactive Slideshows







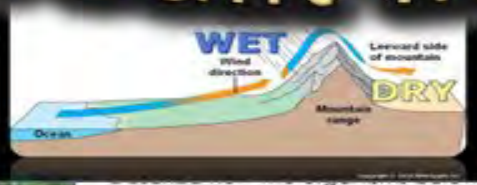
Follow Along Work Bundle

30 Pages

Projects, Activities, Video Links, Assessments, All Built-In

- Adaptation: A process whereby an organism becomes better suited to its habitat.
  - Characteristic which aids survival.

- Video! Snake eating an egg.
  - http://www.youtube.com/watch?v=LLk4rsCNFFU
  - Snakes can detach their lower jaw, and the upper jaw is not fused to their braincase, both working together can allow a snake to eat large prey items.



connected to light? Using complex vocabulary words that we have learned is encouraged.

- http://www.youtube.com/watch?v=eloiM

- Activity! Quiz 1-10 – Name that seed dispersal mechanism.
  - Wind, Water, Animals, Tension,

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.

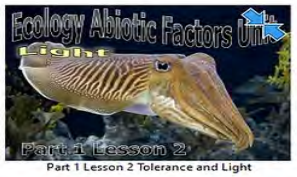
Add roughly same amount eggs (.5 tsp) to each container, cover, and place at room temperature. Stir occasionally

– Label cups No NaCl, 1% NaCl (5ml), 2% NaCl (10ml), 10% NaCl 50ml (1 tablespoon = 14.78 ml)

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 1 Lesson 1 Abiotic Factors



Part 1 Lesson 2 Tolerance and Light

Part 1 Lesson 3 Temperature

Part 1 Lesson 4 Hypo Hyphermia

Part 1 Lesson 5 Bloodedness

Part 1 Lesson 6 Water

Part 1 Lesson 7 Isopod Lab Set Up

Part 1 Lesson 8 Wind

Part 1 Lesson 9 Water Dispersal Islands

Part 1 Lesson 10 Animal Dispersal

Part 1 Lesson 11 Fire Ecology

Part 1 Lesson 12 Review Game

Part 1 Lesson 13 Review Game Answers


Part 1 Work Bundle Answers


Part 1 Work Bundle Print with Notes

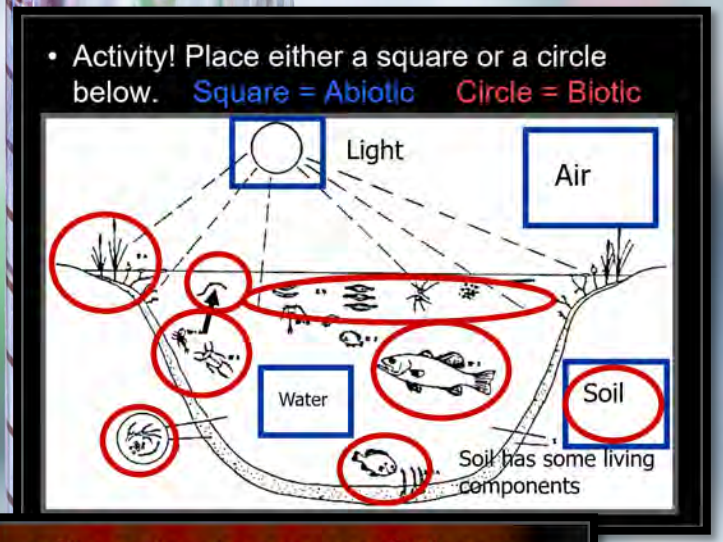

Part 1 Work Bundle Print

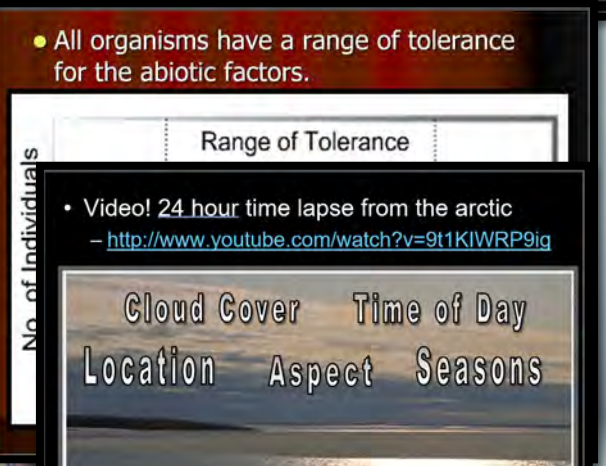
SlideSpark Science

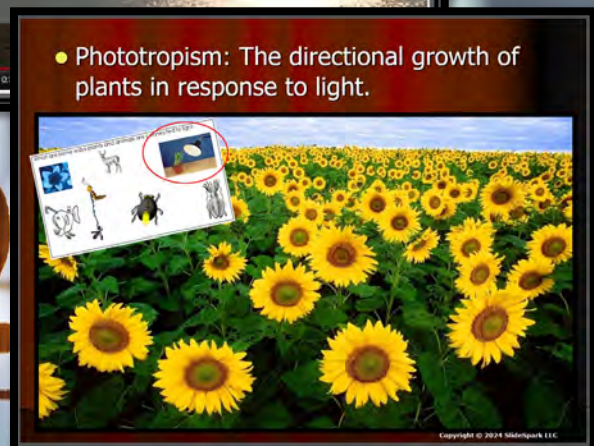
MIDDLE-LEVEL EDUCATIONAL RESOURCES

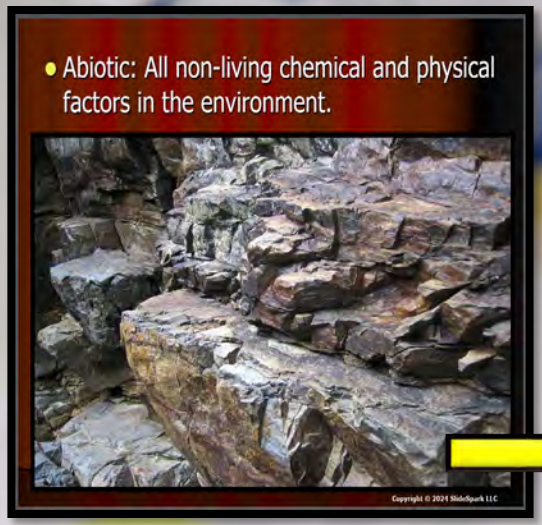
Interactive slideshows provide the roadmap for an amazing learning experience for students in grades 5-9. A Detailed set of work bundles chronologically follow the digital learning, providing a clear and intuitive roadmap to understanding. As the teacher or student advances through a slideshow, exciting 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.

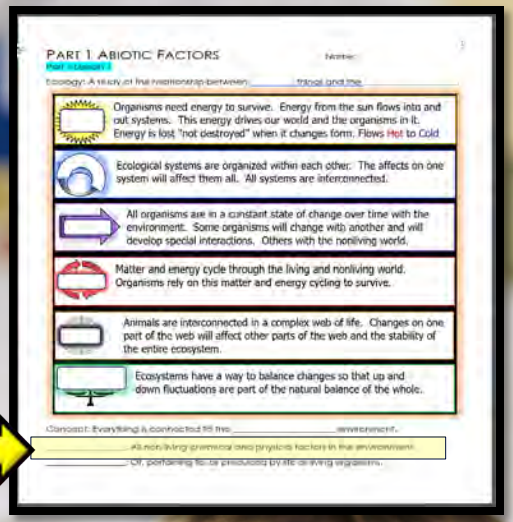
Each unit in the curriculum is designed to help teachers deliver the best possible learning experience for their students. Our interactive science slideshows are filled with questions and answers, important fill-in notes, hands-on activities, projects, games, built-in quizzes, and end of the unit assessment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





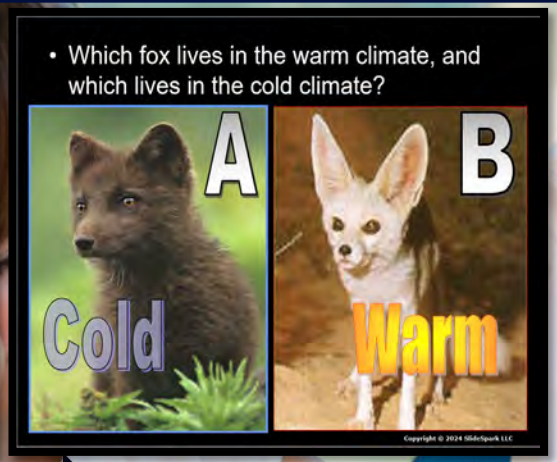






Red Slide Notes: Help students record important information in a fun and easy-to-understand way. Designed red-colored slides contain a few pieces of crucial information that students must record into their work bundle to complete the notes. Students will use these important notes throughout the work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

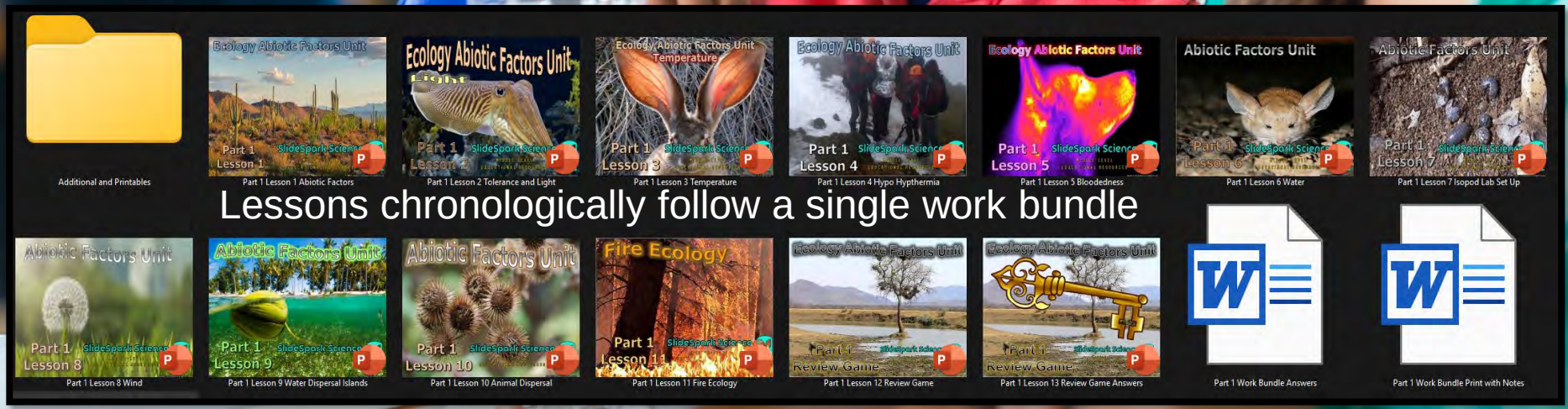


Next Slide

Slideshow supports Work Bundle

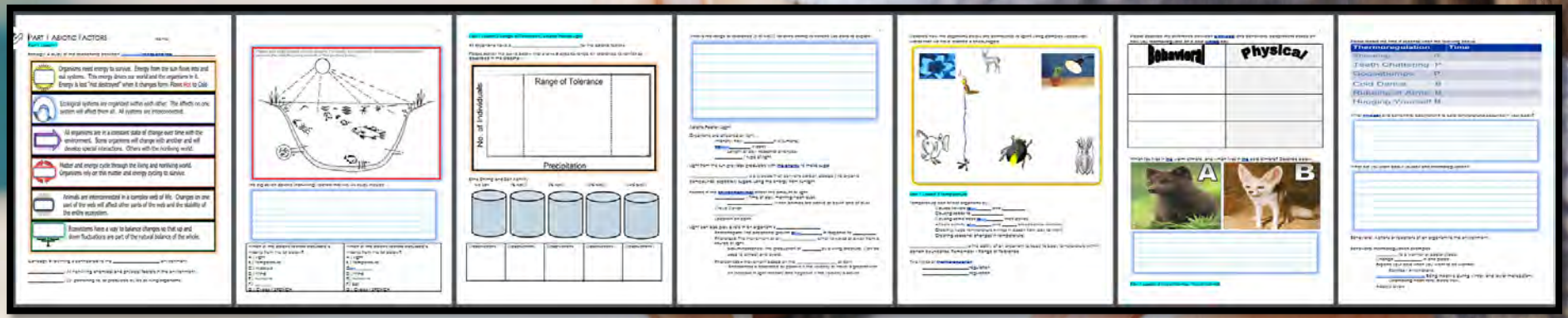
Lesson Planning

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.

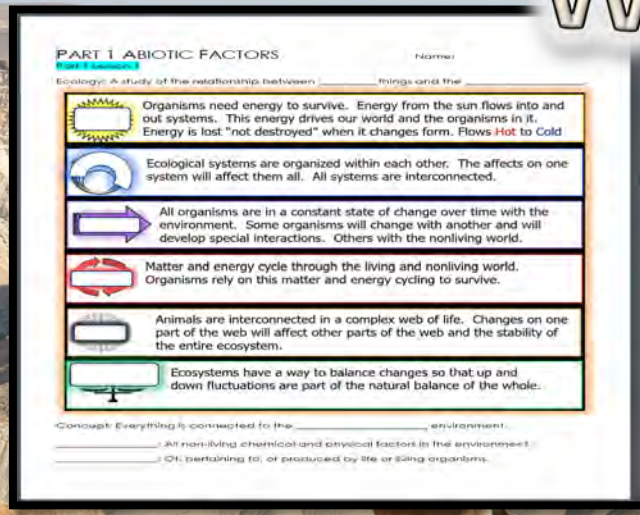


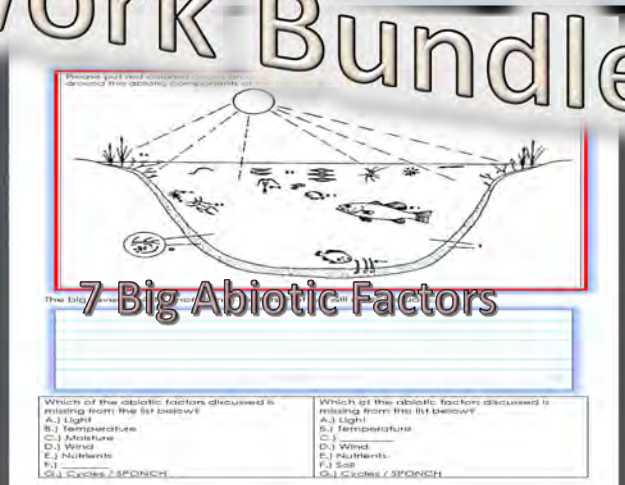
Follow Along Work Bundle

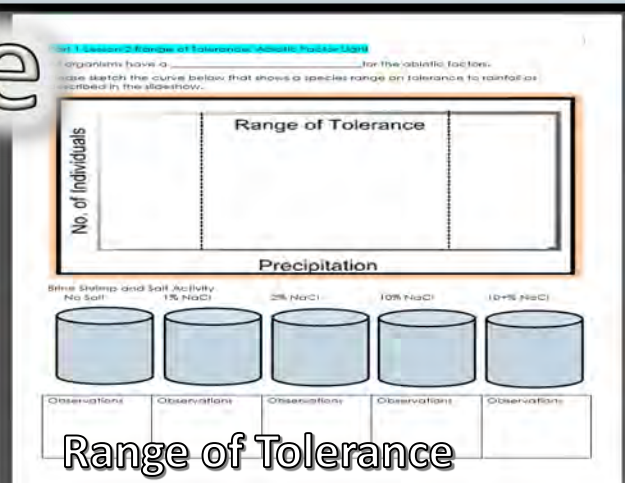
Each science unit includes a single printable work bundle that stays with students from start to finish. Just print and distribute on day one—no daily handouts needed. The bundle follows the unit chronologically and includes everything: fill-in notes, diagrams, quizzes, lab activities, with follow up 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..

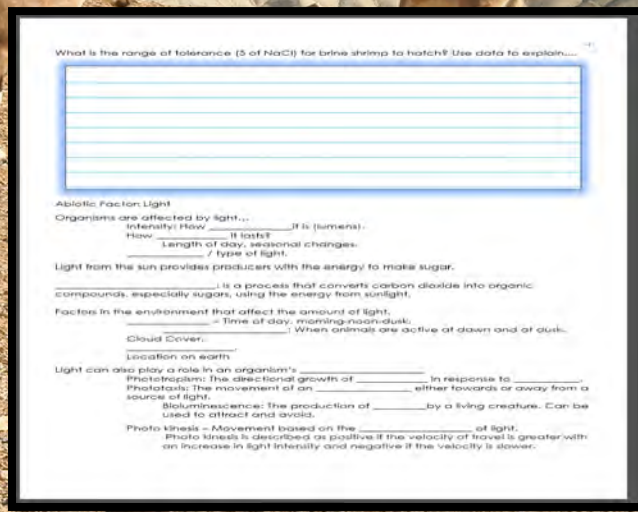


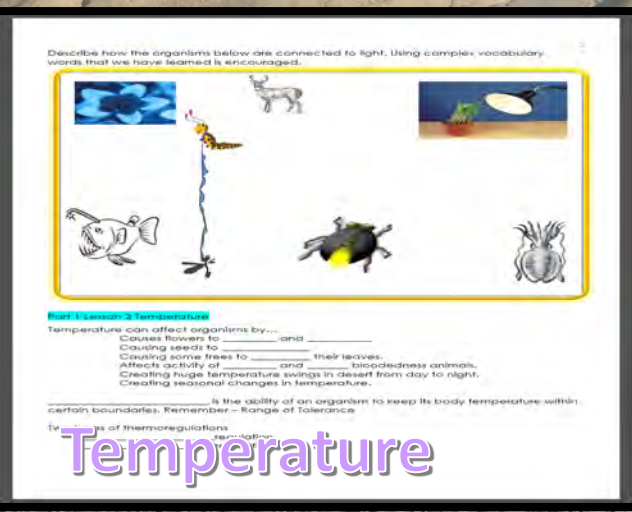
Ecology Abiotic Factors Work Bundle

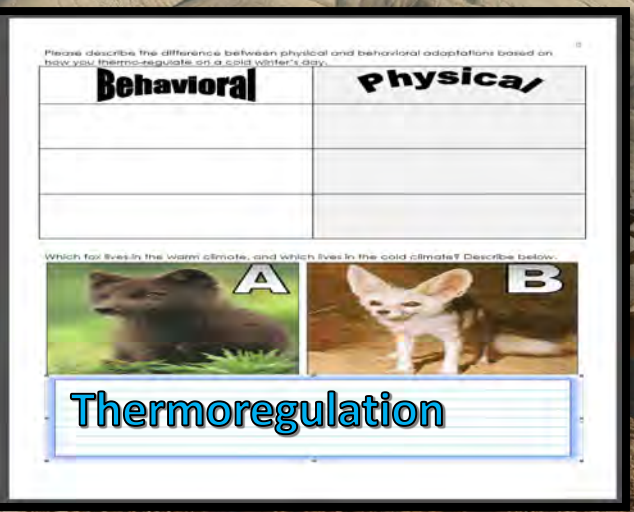












Part 1 Lesson 4 Hypothermia / Hyperthermia

Please record the time in seconds when the following occurs:

Thermoregulation		Time
Shivering	P	
Teeth Chattering	P	
Goosebumps	P	
Cold Dance	B	
Rubbing of Arms	B	
Hugging Yourself	B	

What physical and behavioral adaptations to cold temperatures occurred in your body?

What did you learn about yourself and thermoregulation?

Behavioral: Actions or reactions of an organism to the environment.

Behavioral thermoregulation examples.

_____ to a warmer or cooler place.
Change _____ in one place.
Expand your cells when you want to be warmer.
Reptiles / Amphibians.
_____: Being inactive during winter, and lower metabolism
Decreasing heart rate and blood flow.

Adding layers

_____: A process whereby an organism becomes better suited to its habitat.
Characteristic which aids survival.

Physiological: The functions of the _____

Physiological adaptations to temperature.
-These you generally _____ control, your body does them automatically.
-Utilize evaporation.
-Changes in circulation of _____
-Growing or losing insulation.
-Have thermal windows (_____)

Blubber Hands Optional

Type of Hands	Times of each student added together and then divide by the number of students who participated.
Bare Skin	
Blubber	

Part 1 Lesson 4 Thermoregulation: Hypothermia and Hyperthermia

Thermoregulation is the ability of an organism to keep its _____ within certain boundaries, even when the surrounding temperature is very different.

_____: Muscles contract and relax when it is cold, this generates heat.
Teeth chattering: A form of localized shivering. It means your cold.

_____: Skin muscles tighten, forming bumps, which cause your hairs to raise, trapping more air and keeping you warmer.

This is my best handwriting before I go outside into the cold.
-Your signature

_____: A decrease in the core body temperature to a level at which normal muscular and brain functions are impaired.

Mild Hypothermia
Core temperature 98.6 - 96 degrees F
Shivering - not under voluntary control
Trouble with complex motor functions (set-up tent, make a fire, zip parka, cell phone-call for help)

Conditions Leading to Hypothermia
Cold temperatures + wind chills
Improper clothing and equipment
Wetness
Fatigue, exhaustion
Dehydration
Poor food intake
No knowledge of hypothermia
Alcohol intake - causes blood flow problems leading to increased heat loss.

Moderate Hypothermia -
Core temperature 95 - 93 degrees F
Dazed consciousness.
Loss of fine motor coordination - particularly in hands - Can't zip up parka, due to restricted peripheral blood flow.
Slurred speech
Violent shivering.
Irrational behavior - Person starts to take off clothing, unaware she/he is cold.

Severe Hypothermia - core temperature 92 - 86 degrees and below (immediately life threatening)
Shivering occurs in waves: violent then pause, pauses get longer until shivering finally ceases.
A person falls to the ground, can't walk, curls up into a fetal position to conserve heat.
Muscle rigidity develops - because peripheral blood flow is reduced and due to lactic acid and CO2 buildup in the muscles.
My skin is pale.
Pupils dilate.
Pulse rate decreases.
At 90 degrees the body tries to move into hibernation, shutting down all peripheral blood flow and reducing breathing rate and heart rate.
at 86 degrees the body is in a state of "metabolic icebox." The person looks dead but is still alive.

Which is not true of mild hypothermia?
A.) Shivering - not under voluntary control.
B.) You can still do complex motor functions.
C.) Impaired Judgement
D.) You can still walk and talk.

Which is not true of moderate hypothermia?
A.) Dazed consciousness.
B.) Loss of fine motor coordination - particularly in hands - can't zip up parka, due to restricted peripheral blood flow.
C.) Slurred speech.
D.) Mild shivering.
E.) Irrational behavior - Person starts to take off clothing, unaware she/he is cold.

Which is not true of severe hypothermia?
A.) Shivering occurs in waves, violent then pause, pauses get longer until shivering finally ceases.
B.) Person falls to the ground, can't walk, curls up into a fetal position to conserve heat.
C.) Muscle rigidity develops - because peripheral blood flow is reduced and due to lactic acid and CO2 buildup in the muscles.
D.) Skin is pale.
E.) Pupils dilate.
F.) Pulse rate increases.
G.) At 90 degrees the body tries to move into hibernation, shutting down all peripheral blood flow and reducing breathing rate and heart rate.
H.) at 86 degrees the body is in a state of "metabolic icebox." The person looks dead but is still alive.

Which is not a condition leading to Hypothermia?
A.) Cold temperatures + wind chills.
B.) Improper clothing and equipment.
C.) Wetness.
D.) Fatigue, exhaustion.
E.) Dehydration.
F.) Good food intake.
G.) No knowledge of hypothermia.
H.) Alcohol intake - causes blood flow problems leading to increased heat loss.

Which is not a condition leading to Hypothermia?
A.) Warm temperatures + Sun light
B.) Improper clothing and equipment
C.) Wetness
D.) Fatigue, exhaustion
E.) Dehydration
F.) Poor food intake
G.) No knowledge of hypothermia
H.) Alcohol intake - causes blood flow problems leading to increased heat loss.

Which is not a condition leading to Hypothermia?
A.) Cold temperatures + wind chills.
B.) Improper clothing and equipment.
C.) Wetness.
D.) Fatigue, exhaustion.
E.) Dehydration.
F.) Poor food intake.
G.) No knowledge of hypothermia.
H.) Warm fluid intake - causes blood flow problems leading to increased heat loss.

_____: Having a body temperature that is too high, causes heart failure, among other problems and death.

What are some conditions that lead to hyperthermia? Please describe next to each picture.

Which two are not heat exhaustion warning signs?
A.) Abnormally high temperature.
B.) So hot you might collapse.
C.) Pale Appearance.
D.) So dehydrated you can't sweat.
E.) Hyperactivity

Which tip is bogus from the list below to avoid heat exhaustion and heat stroke.
A.) Be smart about when you are going to be active, high noon on the hottest day ☺.
B.) Know the weather and heat index.
C.) Limit your water and rehydrating fluids.
D.) Seek shade, and wear loose fitting clothing.
E.) Take rest breaks (rehydrate)
F.) Place cool damp towels on your forehead.
G.) Don't drink alcohol.

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E) Avoid rest breaks.
F) Place cool damp towels on your forehead.
G) Don't drink alcohol.

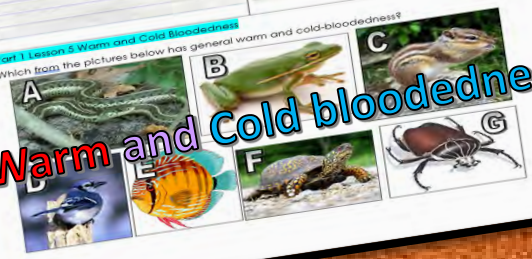
Describe how you have a range of tolerance when it comes to temperature. Please use the words below in your discussion of this topic.

Hypothermia

Hyperthermia

Part 1 Lesson 5 Warm and Cold Bloodedness

Which from the pictures below has general warm and cold-bloodedness?



Warm and Cold bloodedness

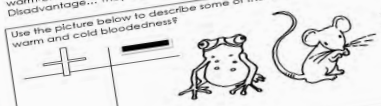
_____-bloodedness (endothermy): Maintaining a _____ temperature independent of environmental conditions.
Advantage: Warm-blooded animals can remain _____ in cold environments.
Disadvantage: Is that warm-blooded bodies provide a nice warm environment for _____ bacteria and parasites to live in.

_____-Bloodedness: When organisms can't regulate their internal temperature. When it's cold they _____ when it's warm, they're more active.

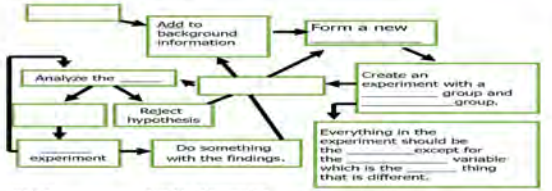
Why is this turtle sitting on a log? Explain using some terms discussed in class.

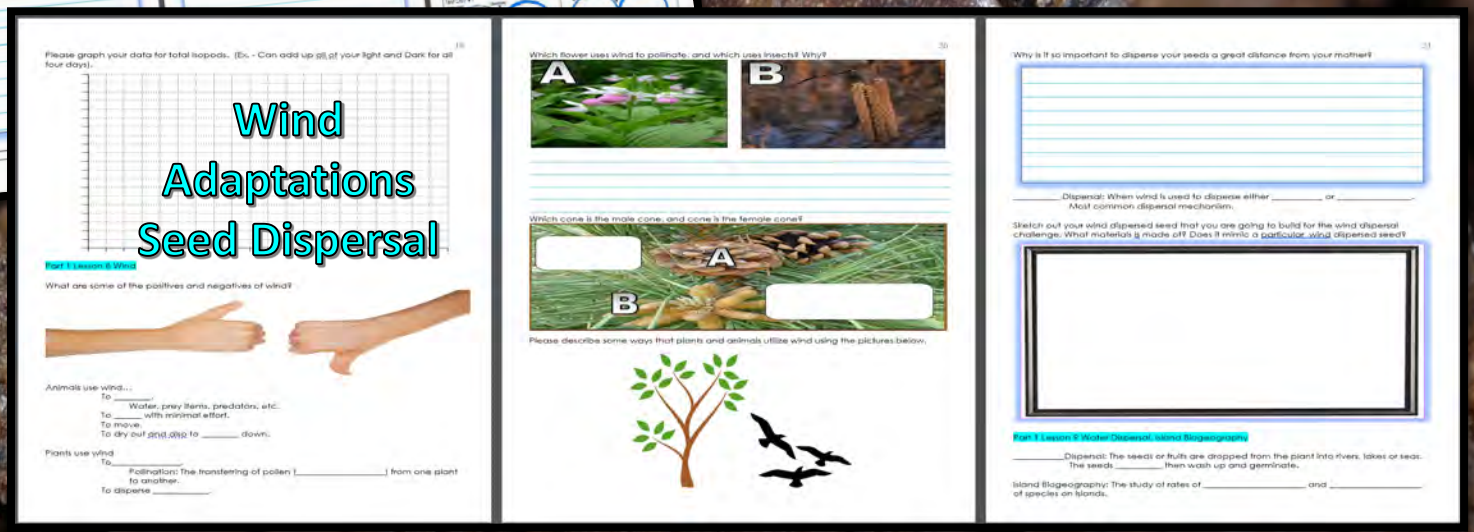
_____ / torpor: A state of inactivity and metabolic depression in animals.
(Slow breathing, lower body temp)
Advantage: Cold-blooded animals require _____ energy to survive than warm-blooded animals do.
Disadvantage... They can't _____ in cold places during the winter.

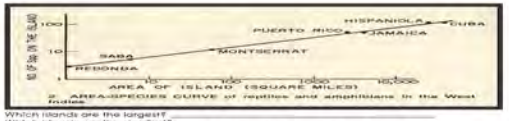
Use the picture below to describe some of the advantages and disadvantages to having warm and cold bloodedness?



Isopod Study

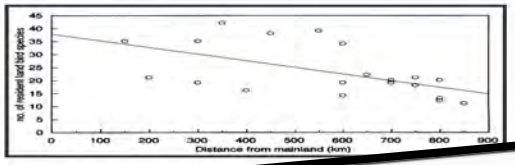






Which islands are the largest? _____
Which islands are the smallest? _____
Which islands have the greatest number of species of reptiles and amphibians?

Which island has the fewest number of reptiles and amphibians?
How does the size of the island (area) relate to the number of species that can live there?



How many bird species can be found on islands that are 650 kilometers (km) from the mainland? Use data in your response.

How many bird species can be found on islands that are 150 kilometers (km) from the mainland? Use data in your response.

What's the correlation between the number of bird species and the distance an island is from the mainland?

MacArthur-Wilson Equilibrium Theory
Island _____ and _____ from mainland determine level of _____ and the rate of _____ on the island.

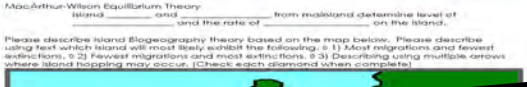
Please describe Island Biogeography theory based on the map below. Please describe using text which island will most likely exhibit the following. ◊ 1) Most migrations and fewest extinctions, ◊ 2) Fewest migrations and most extinctions. ◊ 3) Describing using multiple arrows where island hopping may occur. (Check each diamond when complete)

Keep track of the number of migrations that hit the island using the check system:

Island	Number of migrations
A	
B	
C	
D	

Why did each island get that amount of migrations? (A,B,C,D)

Place the following words next to the correct yellow / red island. Green = mainland
- A - High level of migrations
- B - Small level of migrations
- C - High level of extinctions
- D - Low level of extinctions



Part 1 Lesson: III Animal Dispersal

Animal _____ dispersal: When animals did _____ seeds.
Animal dispersal. _____ to _____ plants.
Animals help dispose _____ and drop seeds.
They _____ to an animal and hitch a ride to fall off later and in a new location.
Seeds sometimes _____ the seeds many hours later
Animals _____ stashes of seeds and then forget where.
Animals eat fruits that contain seeds. They then _____
into nutrient rich, moisture retaining, pile of feces far from plant.
spread seed crops.

Tension dispersal. Abiotic –
Tension builds and seeds are ejected a short distance

Activity! Quiz 1-10 – Name that seed dispersal mechanism.
– Wind, Water, Animals, Tension.

1)	2)	3)	4)
5)	6)	7)	8)
9)	10)	*11)	Score =

Please describe the type of seed dispersal below.

Part 1 Lesson: I Fire Ecology

Are Forest Fires Good or Bad? Start Question

Fire _____: A branch of ecology that focuses on the origins of wildland fire and its _____ to the environment that surrounds it, both living and non-living.

Does a forest fire help create plant growth?
Dominating plants are substantially _____ by fire which provide room for the less dominating and sometimes more palatable species.

Fire: Some _____ a fire event or very hot temperature after they have been dispersed to germinate.

Fire Dependence: this concept applies to species of plants that _____ on the effects of fire to make the _____ more hospitable for their regeneration and growth.

Fire Adaptation: Plants have _____ with special traits contributing to successful abilities to survive fires at various stages in their life cycles.

Which is not part of the "Let It Burn Philosophy," and the answer is... A.) Large destructive fires result from fuel accumulations above historic levels. B.) Both firefighters and the public risk loss of life or serious injury. C.) Fire poses a serious risk to the ecology of a forest and should be suppressed. D.) Intense or long-lasting smoke caused by large uncontrolled fire can impact air quality and seriously affect respiratory health. E.) The costs of controlling larger and more damaging wildland fires have risen dramatically.	Summary -Fire is an important and inevitable part of America's Wild Lands. -It's now widely recognized that we must restore fire to many areas from which it has been excluded. -Wild Land fires can produce both benefits and damages - to the environment and to people's interests. -By working together, people can maximize the benefits of Wild Land fire and minimize the damages, including threats to public health.

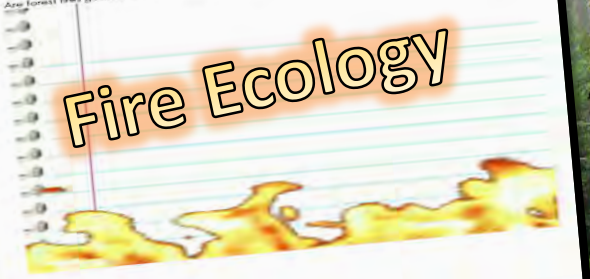
Which is not part of the "Let It Burn Philosophy."

A.) Large destructive fires result from fuel accumulations above historic levels.
B.) Forest fires do not have any risks associated with them.
D.) Intense or long-lasting smoke caused by large uncontrolled fire can impact air quality and seriously affect respiratory health.
E.) The costs of controlling larger and more damaging wildland fires have risen dramatically.

Which is a bogus statement from the summary below?

A.) Fire is an important and inevitable part of America's Wild Lands.
B.) It's now widely recognized that we must restore fire to many areas from which it has been excluded.
C.) Wild Land fires only produce damages to the environment and to people's interests.
D.) By working together, people can maximize the benefits of Wild Land fire and minimize the damages, including threats to public health.

Are forest fires good End Question? Please answer this question in the space below.



Across

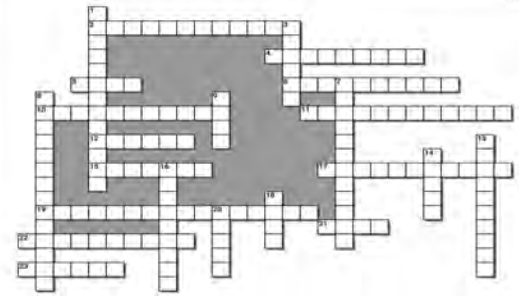
2. Having a body temperature that is too high, causes heart failure, among other problems and death.
4. Water _____. The seeds or fruits are dropped from the plant into rivers, lakes or seas. The seeds float then wash up and germinate.
5. _____ Bloodedness. When organisms can't regulate their internal temperature. When it's cold they can't move, when it's warm they're more active.
6. A process whereby an organism becomes better suited to its habitat. Characteristic which aids survival.
10. A decrease in the core body temperature to a level at which normal muscular and brain functions are impaired.
11. The directional growth of plants in response to light.
12. _____ Biogeography: The study of rates of colonization and extinction of species on islands.
15. All non-living chemical and physical factors in the environment.
17. _____ / torpor: A state of inactivity and metabolic depression in animals. (Slow breathing, lower body temp)
19. The ability of an organism to keep its body temperature within certain boundaries. Remember – Range of Tolerance
21. _____ Dispersal: When wind is used to disperse either pollen or seeds.
22. Two types of thermoregulation Physiological regulation. _____ regulation.
23. Of, pertaining to, or produced by life or living organisms.

_____ teacher can remove this word bank to make puzzle more challenging ——

Possible Answers
PHYSIOLOGICAL, ABIOTIC, ADAPTATION, ANIMAL, BEHAVIORAL, BIOTIC, COLD, DISPERSAL, FIRE, HIBERNATION, HYPERTHERMIA, HYPOTHERMIA, ISLAND, LIGHT, PHOTOKINESIS, PHOTOSYNTHESIS, PHOTOTAXIS, PHOTOTROPISM, THERMOREGULATION, WARM, WATER , WIND, TOLERANCE

Down

1. Two types of thermoregulation _____ regulation. Behavioral regulation.
3. _____ seed dispersal: When animals aid carrying away seeds.
7. Movement based on the intensity of light
8. Is a process that converts carbon dioxide into organic compounds, especially sugars, using the energy from sunlight.
9. _____ blooded (endothermy): Maintaining a warm body temperature independent of environmental conditions
13. The movement of an organism either towards or away from a source of light.
14. _____ is essential for life, and all organisms depend on it.
16. All organisms have a range of _____ for the abiotic factors
18. _____ ecology: A branch of ecology that focuses on the origins of wildland fire and its relationship to the environment that surrounds it, both living and non-living
20. Organisms are affected by _____ Intensity: How bright it is (lumens). How long it lasts? Length of day, seasonal changes. Quality / type of light.



Unit Notes:

Part 1 Review Game Lesson 12 Name:
1-10 = 3 pts. _____ * Bonus = 1 pt
(Secretly write owl in correct space +1 pt)
Final Question = 5 pt wager

Dice Today:
Score _____ / 100

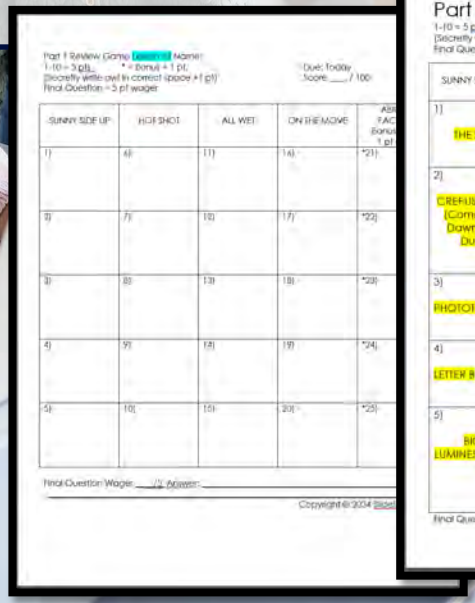
SUNNY SIDE UP	HOT SHOT	ALL WET	ON THE MOVE	ABIOTIC FACTORS Bonus round 1 pt each
1)	6)	11)	16)	*21)
2)	7)	12)	17)	*22)
3)	8)	13)	18)	*23)
4)	9)	14)	19)	*24)
5)	10)	15)	20)	*25)

Final Question Wager: _____ / 5 Answer: _____

Answer Version

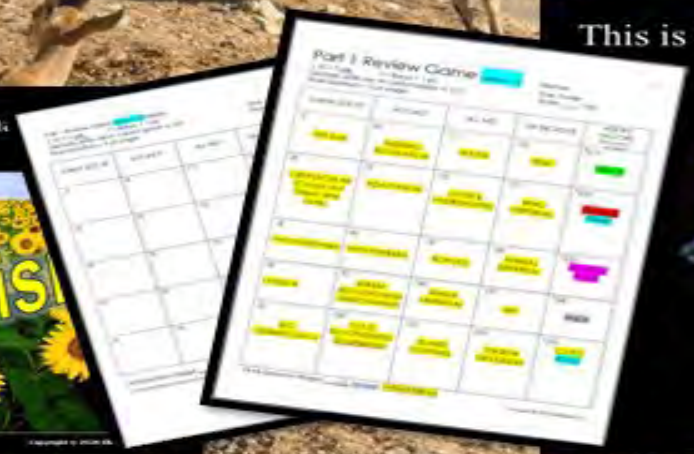
Review Game / Assessments

Each of the three parts 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 Abiotic Factors

QUIZ GAME



This is essential for life and all organisms depend on it.

Thermoregulation is the ability of an organism to keep its body temperature within certain boundaries.

This condition is a decrease in the core body temperature to a level at which normal muscular and brain functions are impaired.

These type of organisms
their internal temperatur
When it's cold they can't move
more active.

These type of animals are capable of maintaining a warm body temperature independent of environmental conditions.

This is a process whereby an organism becomes better suited to its habitat. A characteristic which aids survival.

20 Questions

What type of seed dispersal is represented by the picture below? Water Dispersal

- This picture best represents these type of plants?
  - A.) Neophytes
  - B.) Hydrophytes
  - C.) Mesophytes
  - D.) Xerophytes
  - E.) Nobody Knows

What type of dispersal is shown below?

This is the term for how species spread through an island chain? Island Hopping

Which Island will have the most species / colonization? And which Island will have the most extinctions? (and fewest migrations)

15

Larger Island

More Migrations and Fewer Extinctions

These organisms (science name please) require water because they breathe water vapor through external gills?

What type of seed dispersal mechanism is represented by the seed below?

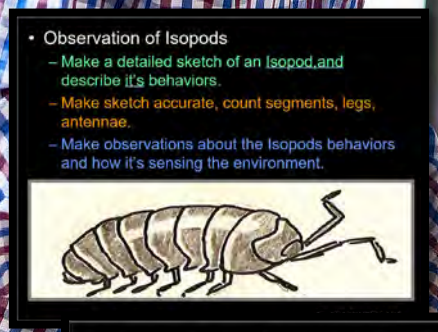
What is required to open this serotinous cone?

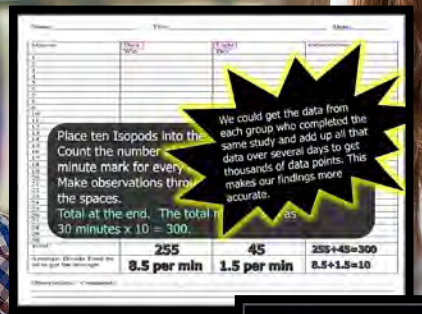
What type of [illegible] dispersal mechanism is represented b[illegible]

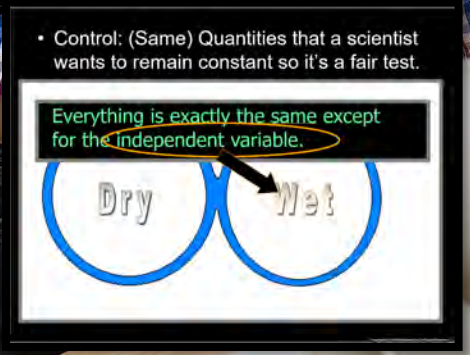
- Final Question
  - This condition occurs when your body temperature is too high, causes heart failure, among other problems and death.

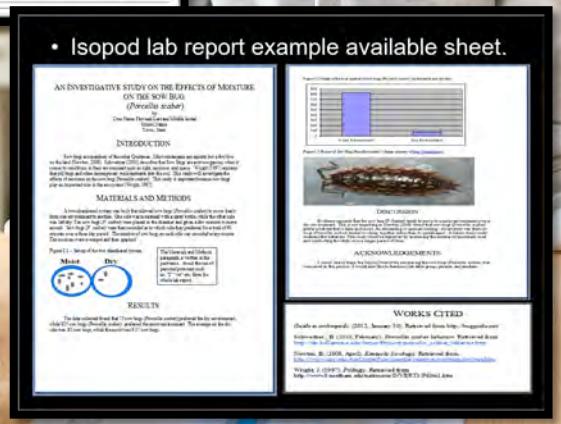
Activities / Labs

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.



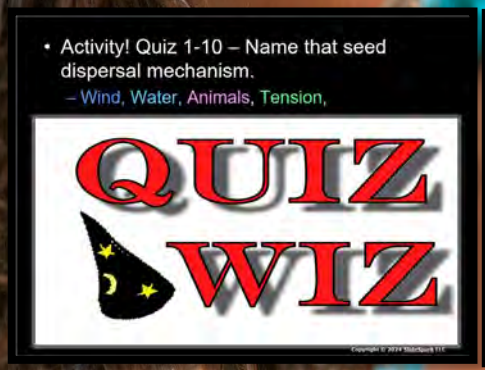


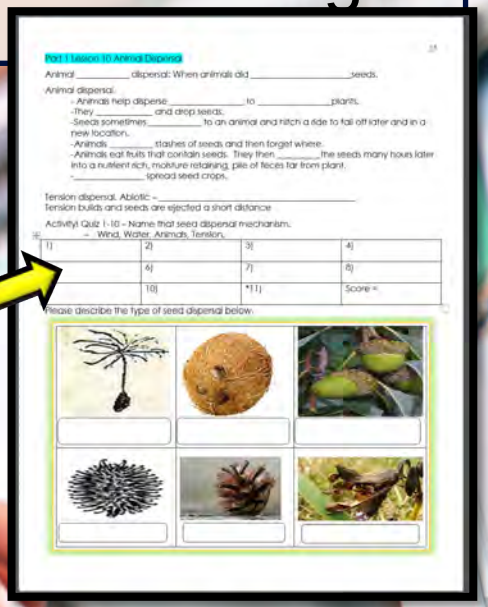




Built-in Assessment

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.





Questions in Work Bundle

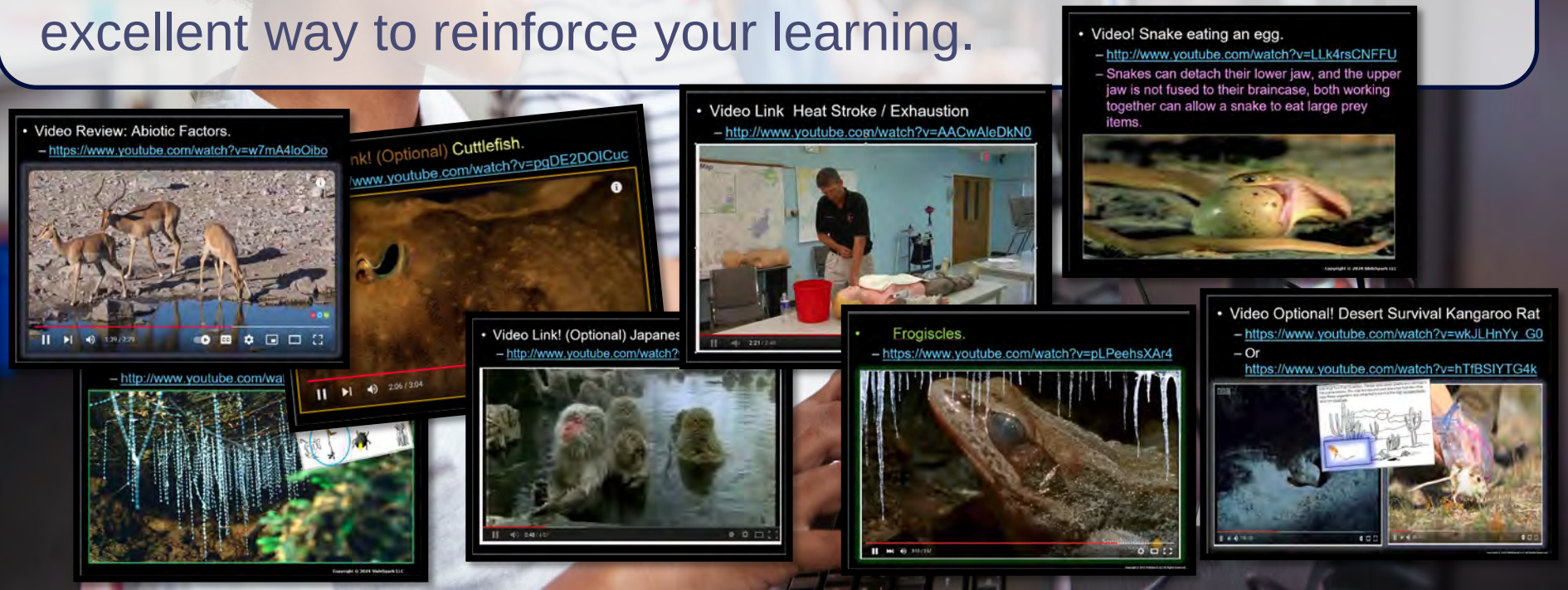
Built-in Assessment

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.

Questions in Work Bundle

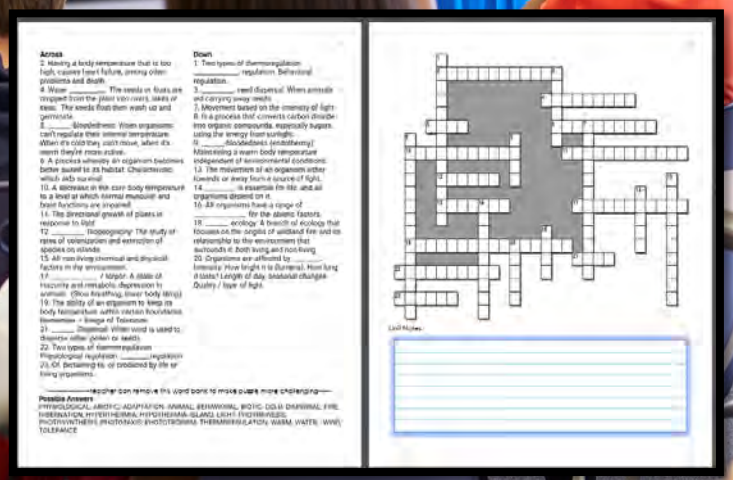
Built-in Video Links

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.



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.



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 6 Water

Google Slides

Part 1 Lesson 8 Wind

Google Slides

Part 1 Lesson 10 Animal Dis...

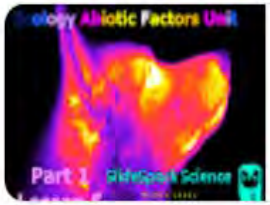
Google Slides

Part 1 Lesson 1 Abiotic Fact...

Google Slides

Part 1 Lesson 7 Isopod Lab ...

Google Slides



Part 1 Lesson 5 Bloodedness

Google Slides

Part 1 Lesson 9 Water Dispe...

Google Slides

Part 1 Lesson 2 Tolerance a...

Google Slides

Part 1 Lesson 11 Fire Ecology

Google Slides

Part 1 Lesson 12 Review Ga...

Google Slides

Part 1 Lesson 4 Hypo Hypth...

Google Slides

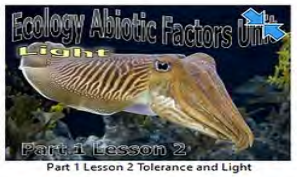
Part 1 Lesson 3 Temperature

Google Slides

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 1 Lesson 1 Abiotic Factors



Part 1 Lesson 2 Tolerance and Light

Part 1 Lesson 3 Temperature

Part 1 Lesson 4 Hypo Hyphermia

Part 1 Lesson 5 Bloodedness

Part 1 Lesson 6 Water

Part 1 Lesson 7 Isopod Lab Set Up

Part 1 Lesson 8 Wind

Part 1 Lesson 9 Water Dispersal Islands

Part 1 Lesson 10 Animal Dispersal

Part 1 Lesson 11 Fire Ecology

Part 1 Lesson 12 Review Game

Part 1 Lesson 13 Review Game Answers


Part 1 Work Bundle Answers


Part 1 Work Bundle Print with Notes


Part 1 Work Bundle Print

Curriculum Guide

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

=Easier, 

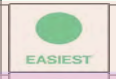
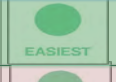
= More difficult, 

=Most difficult

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

Earth Science Curriculum

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	

Life Science Curriculum

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

Dear Valued Educator,

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.

With appreciation,

Support@SlideSpark.net

Thank you for your time and interest in our Science curriculum. We strive to provide students with engaging and informative lessons that will spark their curiosity and encourage scientific exploration. Should you have any questions or concerns, please do not hesitate to contact us. Thank you again for considering our curriculum, and we wish you all the best in your educational journey.

Sincerely,

Support@slidespark.net

SlideSpark Science

MIDDLE-LEVEL

EDUCATIONAL RESOURCES

SlideSpark Science on TpT