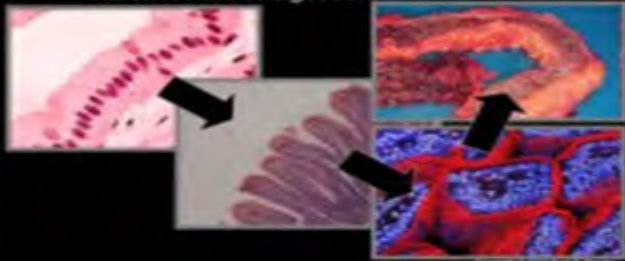


# Levels of Biological Organization

- Different cells include...

– Absorbing Cells such as those in your intestines aid in digestion.



- Form Follows Function: Means that the form of a body part or structure is related to its function.

- The form or shape of a structure within an organism is correlated to the purpose or function of that structure.



- Heart: Part of Circulatory System.



- Form Follows Function: Parts of the body are shaped to perform a particular job.



- Lungs: Part of the Respiratory System.

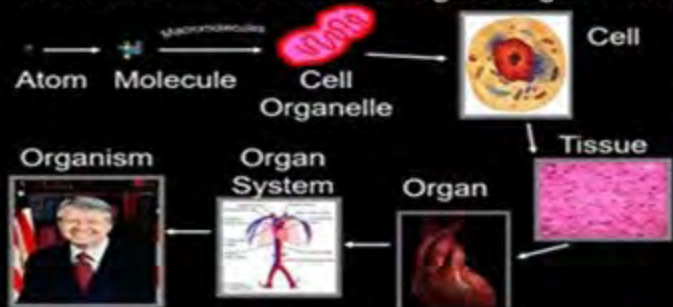


## 5 Lessons



# Truly Interactive Slides

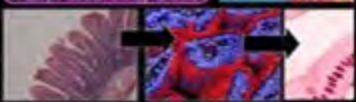
- Area of Focus: Levels of Biological Organization.



- These type of tissues can contract / shorten?

- These are absorbing cells such as the your intestines that aid in digestion.

- A.) Connective Cells
- B.) Assembly Cells
- C.) Movement Cells
- D.) Nervous Cells
- E.) Absorbing Cells



Smooth Muscle Tissue

Skeletal Muscle Tissue

Cardiac Muscle Tissue



- This is the concept that parts of the body are shaped to perform a particular job.

- A.) Life, Liberty, Happiness
- B.) Cells, Organs, Organ Systems

C.) Form Follows Function

- D.) Homeostasis vs. Structure
- E.) When tissues perform a specific job.

1

answer is...

- This is the ability of an organism or cell to maintain an internal equilibrium regardless of outside conditions.

Homeostasis<sup>9</sup>

answer is...

Answers will vary but you should notice a very slight increase in temperature if at all. Important note: Your temperature increased only slightly. Your temperature did not increase in the same way your pulse did. If it did, you would be dead.



Plant Cell Low Power

Oxelon Cell



Low Power 400X

Cheek Cell Low Power

Cheek Cell



Low Power 400X

Plant Cell High Power

Oxelon Cell



High Power 400X

Cheek Cell High Power

Cheek Cell



High Power 400X

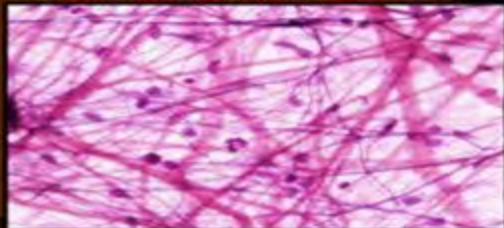






# Notes, Questions, Activities, Assessments, Keys, and more all built-in

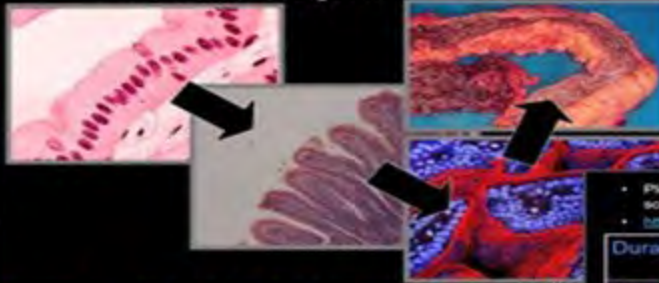
- Tissue: A group of similar cells that perform the same function.



- What were the four types of tissues?

- A.) Cellular, Skin, Bone, and Neck Tissues.
- B.) Sac, Layered, Elongated, and Heightened Tissues.
- C.) Intestinal, Brain, Heart, and Lung Tissue.
- D.) Connective, Muscle, Epithelial, and Nervous Tissues.

- Different cells include...
  - Absorbing Cells such as those in your intestines aid in digestion.



- Activity! Record the time in seconds that it takes for your nerves to sense the mystery item that will be dropped into your hand.
- Don't tell anyone what it is / say aloud.
- In some cases, the signal must travel up your arm to your brain. The reaction in your muscles comes after the brain has recognized the object.



- Please record the following spreadsheet into your journal. - Have some good music ready! Or 80's classic dance music (3:50) at... <https://www.youtube.com/watch?v=cF0pGTY0uE8>

Duration	Pulse Rate 15 sec. x 4 and temperature
Resting (Baseline data)	
1 minute of jog in place / jumping jacks	
-Rest in between and get pulse rate back to baseline	
3-5 minutes of jog in place / jumping jacks	

How long after the 5 minute rest does it take for your pulse to reach the resting? 1 hour later?

all living organisms.

- Humans have some 37.2 trillion cells
- Multi-cellular (More than one cell)
- Protists, Archaea, and Bacteria



## 2 Organ System

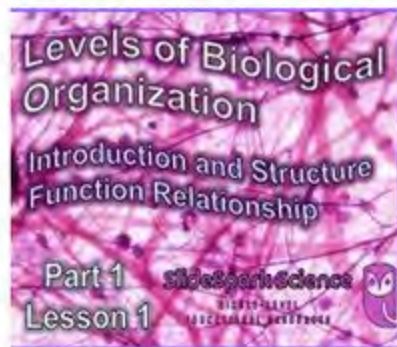
Digestive System





Human Body Systems Unit Part 1 Download : 5 Lessons of 50 Minutes and 11 Page Follow Along Work Bundle, For fun Quiz to see if student can name some Human Organs, Answers to the Quiz, Description of Anatomy, Introduction to Concept Form Follows Function, Describe how a classroom tool demonstrates Form Follow Function Activity, Description of Physiology, History of Anatomy, Body Part Name Game, Levels of Biological Organization, Cellular Organelle, Cell, Tissue, Organ, Organ System, Individual, Looking at Cheek and Onion Cells Under the Microscope, Differences between Plant and Animal Cells, Multi-cellular vs. Unicellular, Cells as the Unit of Structure of Function, Different Types of Cells in the Human Body, Tissues in the Human Body, Identifying Some Common Organs in the Human Body Visual Diagram, Organ Systems in the Human Body, Visual Quiz that Names a Level of Biological Organization, Answers to Quiz, Homeostasis, Homeostasis Activity with Pulse and Stand in Place Exercise, Box Game Review, Crossword Puzzle, End Unit Assessment

## Part 1: Levels of Biological Organization



Part 1 Lesson 1 Intro Structure Function



Part 1 Lesson 2 Levels and Cells



Part 1 Lesson 3 Cells and Tissues



Part 1 Lesson 4 Organ Homeostasis



Part 1 Lesson 5 Wrap Up Quiz



Part 1 Lesson 6 Quiz Answers



Part 1 Work Bundle Print Answers



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.





- **Form Follows Function:** Parts of the body are shaped to perform a particular job.



### Part 1 Levels of Biological Organization

Working in small groups, name the Organ of the human body and the system it belongs to if you know it. Use a new sheet of paper to record your answers. (Use Part 1)

11	41	71	40
61	42	72	41
62	73	113	120
114	140	130	140
171	180	190	200

Remember: The organ of the human body is the part of the body that performs a particular job.

Use a new sheet of paper to record your answers. (Use Part 1)

Make a quick sketch below:

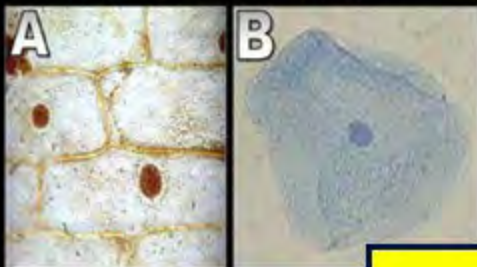


**Red Slide Notes:** Help students record important information in a fun and easy-to-understand way. Designed red-colored slides contain a few pieces of crucial information that students must record into their work bundle to complete the notes. Students will use these important notes throughout the work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

- Which is a cheek cell, and which is an onion cell? What is the difference?



- Which is a cheek cell, and which is an onion cell? What is the difference?



**Next Slide**

**slideshow supports  
Work Bundle**



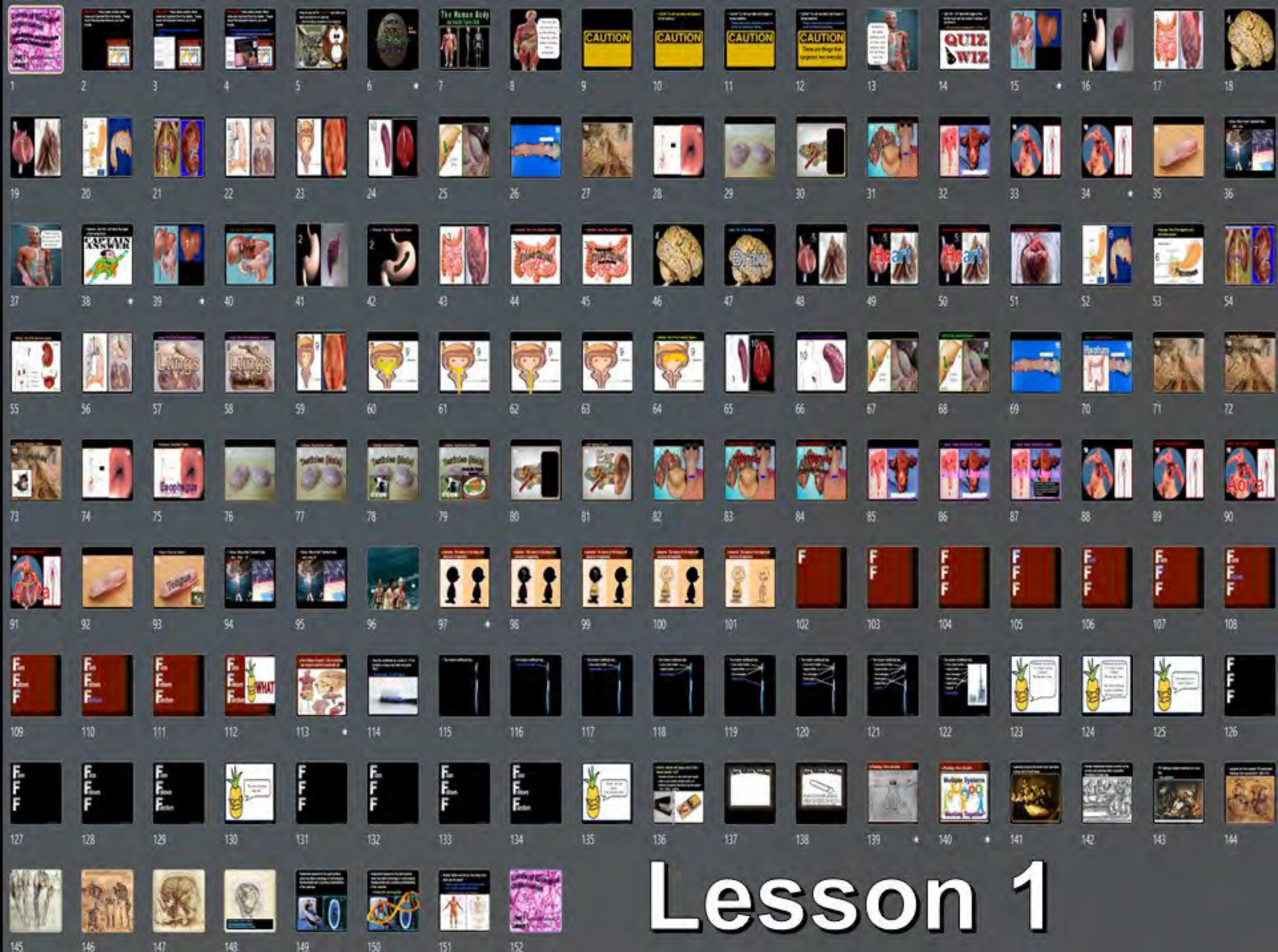


# Lesson Planning

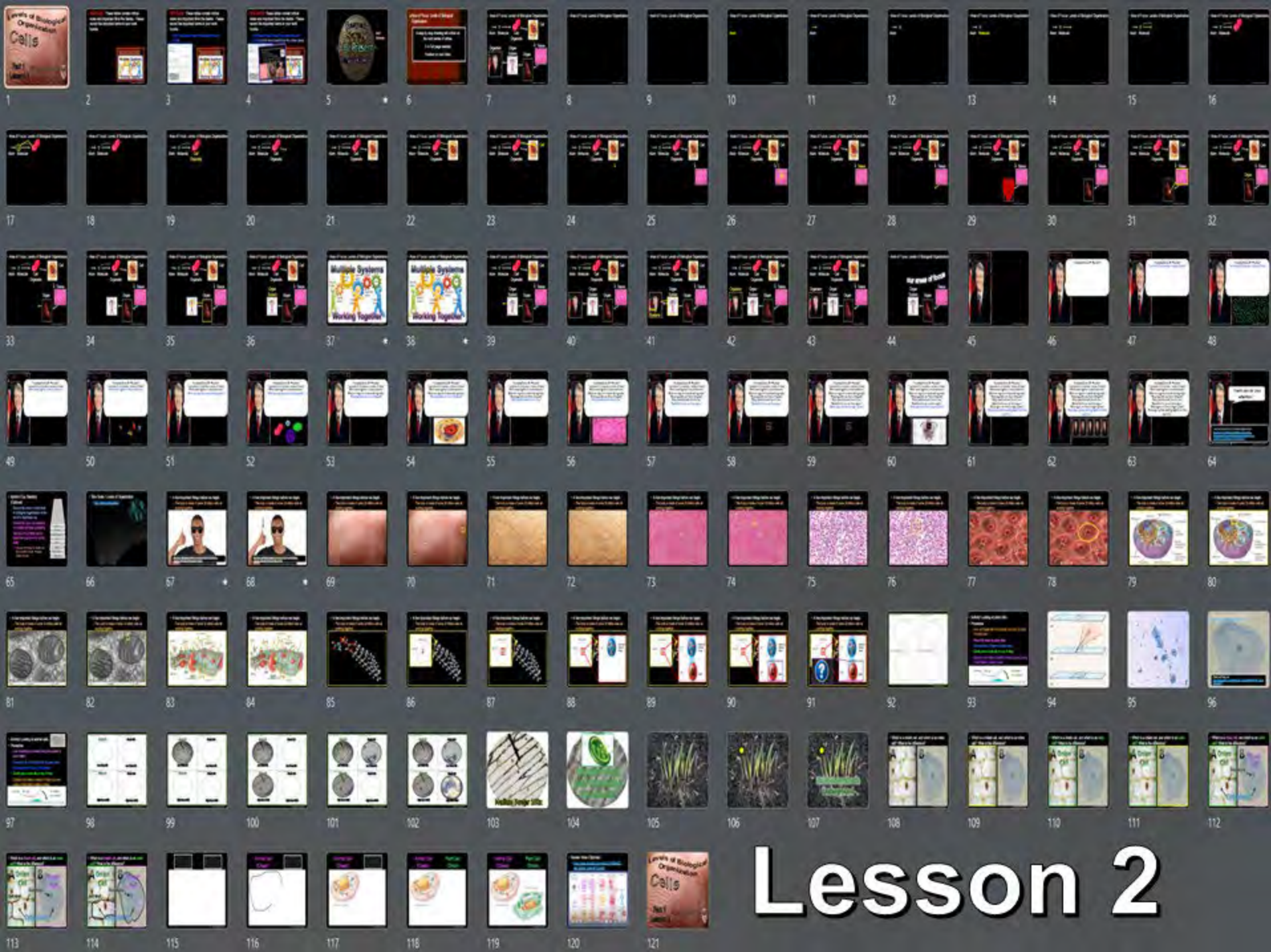
Daily lessons space exciting hands-on activities, red slide notes, video and academic links, projects, simulations, readings, built-in quizzes, and review opportunities throughout the slideshows. A typical day may have many different learning styles being targeted. Daily lesson planning becomes advancing 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.





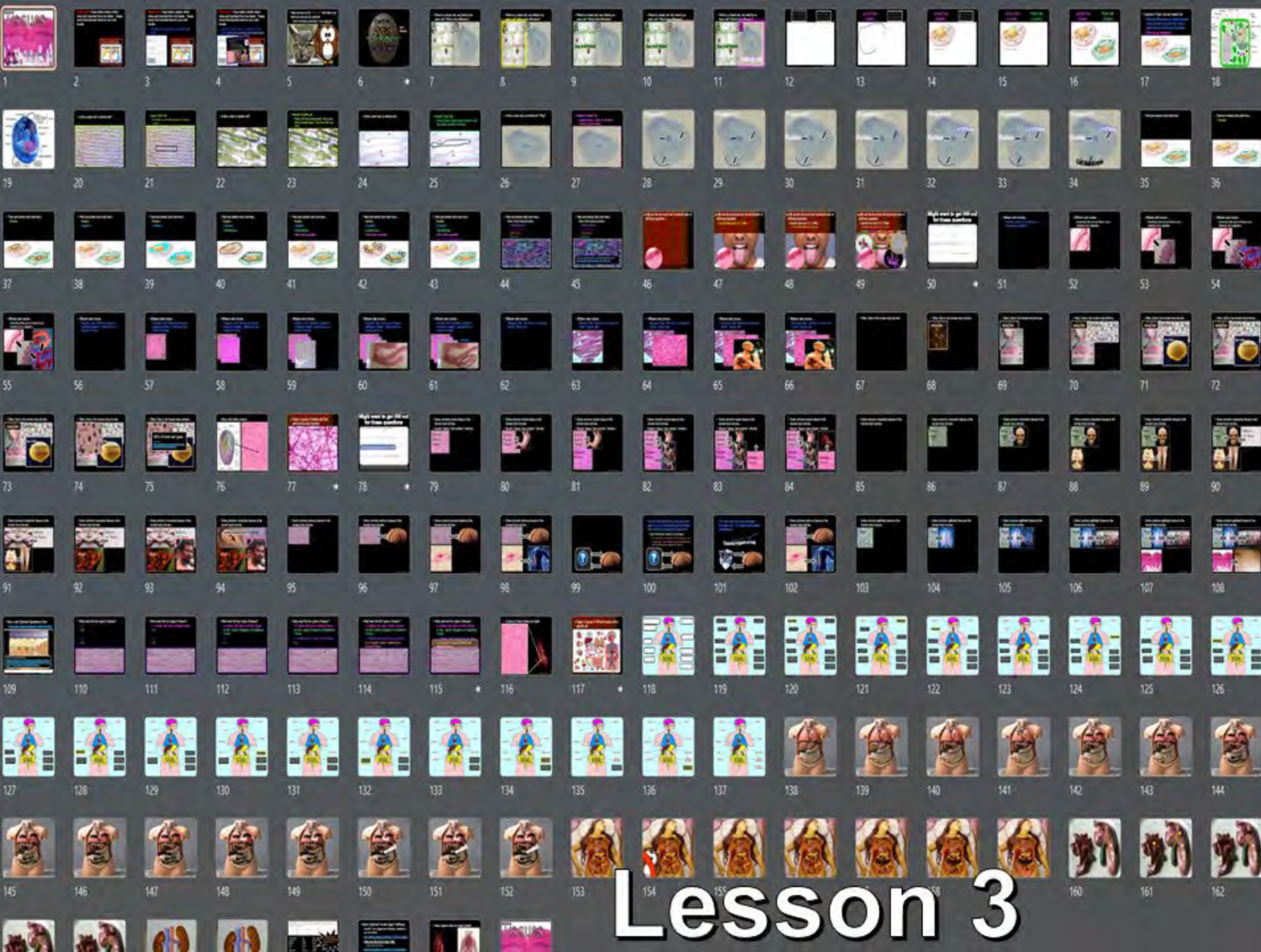




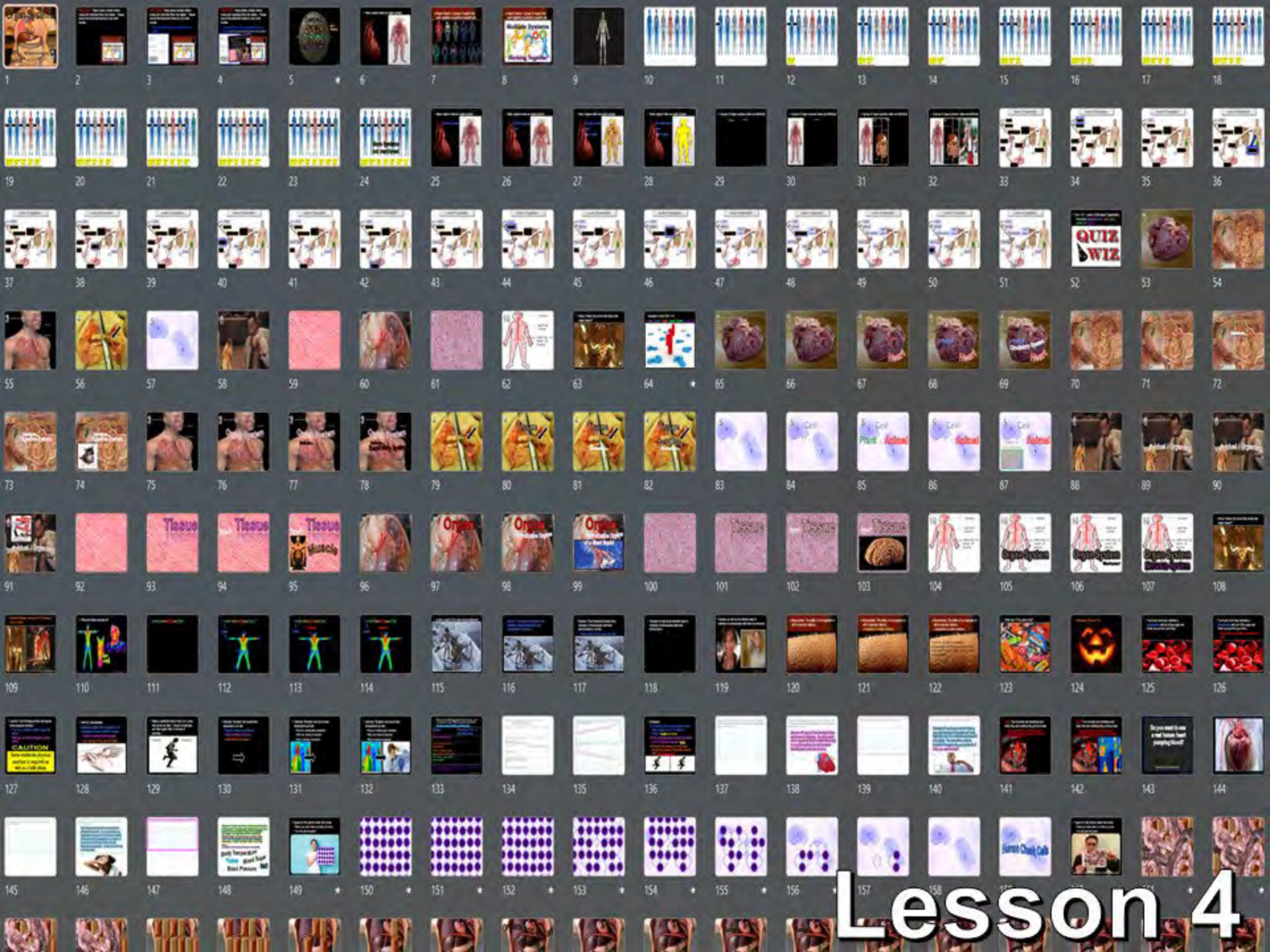


# Lesson 2

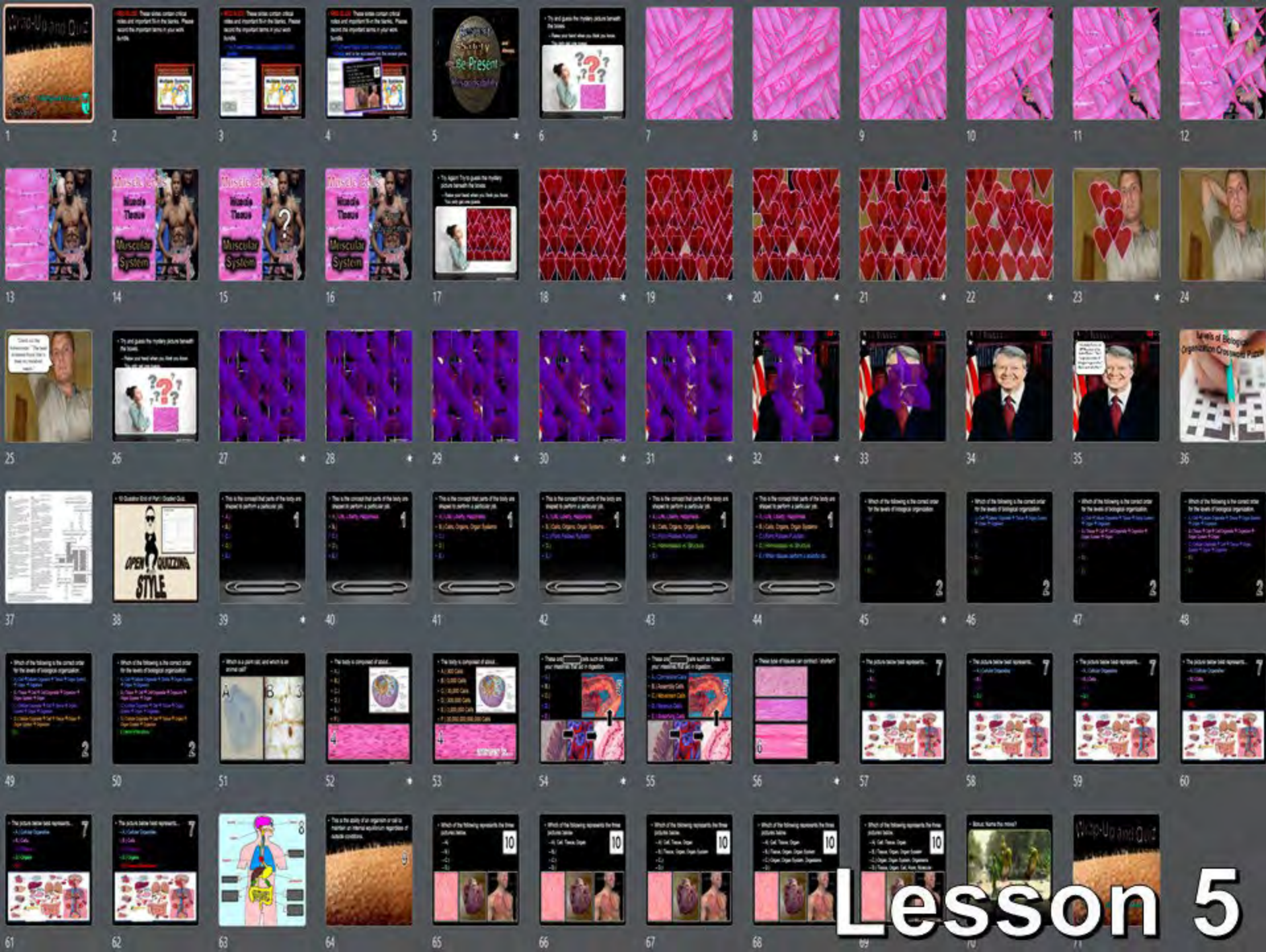






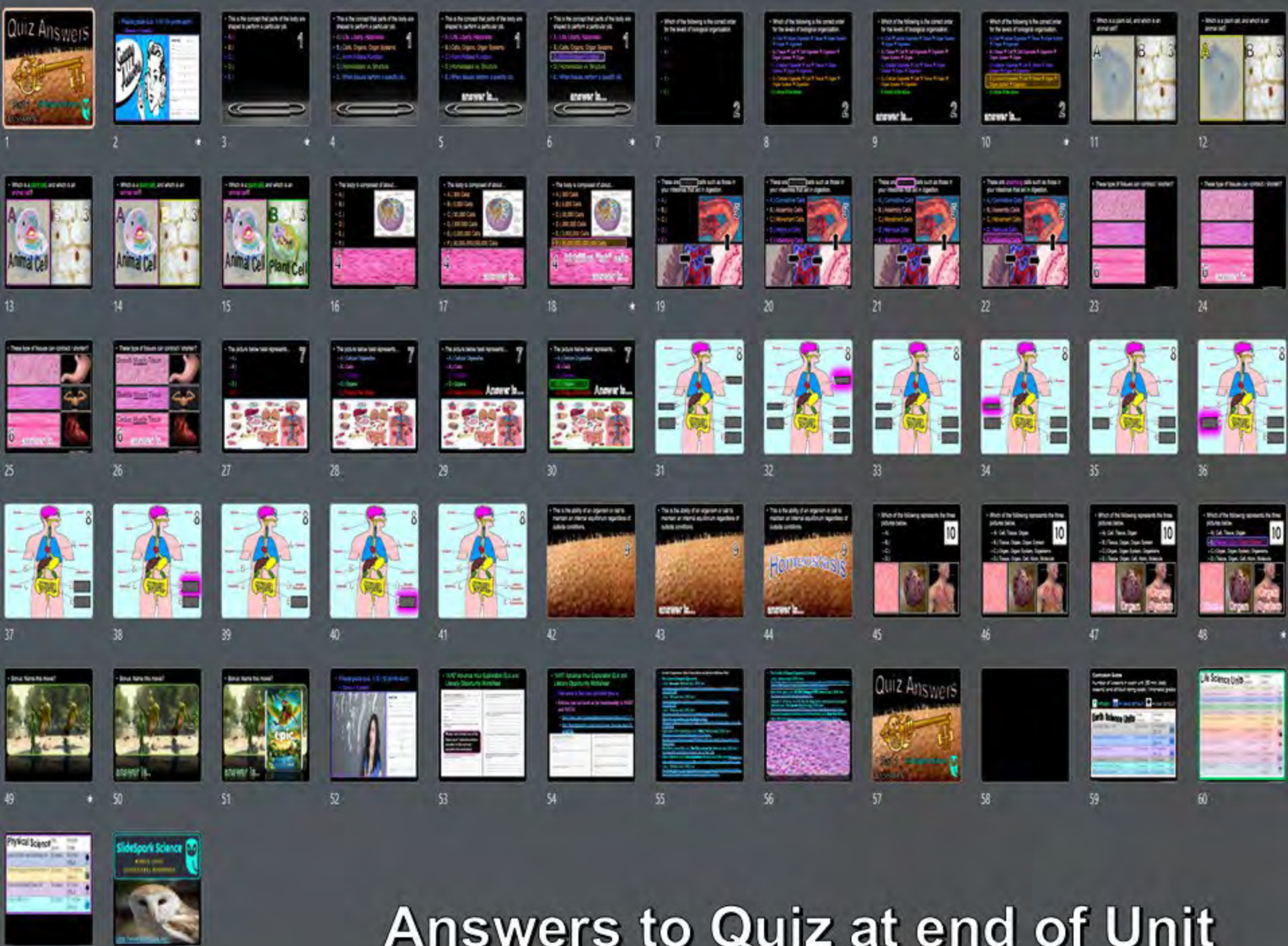






# Lesson 5





## Answers to Quiz at end of Unit



# Follow Along Work Bundle

Each science unit comes with several work bundles. The bundles should be printed before the unit begins and distributed to the students on the first day of the unit. The work bundles will be due shortly after the completion of the unit. The work bundle will become a resource for the review games, crossword puzzles, and will be collected for assessment. The work bundle follows the entire learning experience and will be used every day. They are chronological to the lessons and provide places to record fill-in notes, answer questions, collect data, graph and much more. An answer version is provided that can be distributed to your support professionals. A digital version of the work bundle and some writable .pdf versions are provided if you want to go paperless. These work bundles are perfect for students looking for an easy and organized way to track their progress and stay on top of their studies.







# Review Quiz / 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.

## Part 1 Lesson 5 Wrap-Up and Quiz

Levels of Biological Organization Quiz. 1-10 ten Points each, 5 Point Bonus.

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

Score out of 100% \_\_\_\_\_



- This is the concept that parts of the body are shaped to perform a particular job.
- A.) Life, Liberty, Happiness
- B.) Cells, Organs, Organ Systems
- **C.) Form Follows Function**
- D.) Homeostasis vs. Structure
- E.) When tissues perform a specific job.

1

answer is...



- Which of the following is the correct order for the levels of biological organization.
- A.) Cell → Cellular Organelle → Tissue → Organ System → Organ → Organism
- B.) Tissue → Cell → Cell Organelle → Organism → Organ System → Organ
- C.) Cellular Organelle → Cell → Tissue → Organ System → Organ → Organism
- **D.) Cellular Organelle → Cell → Tissue → Organ → Organ System → Organism**
- E.) None of the above.

2

answer is...

- Which is a **plant cell**, and which is an **animal cell**?



Animal Cell

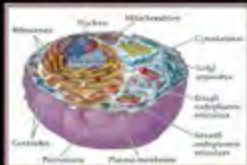


Plant Cell

- The body is composed of about...

- A.) 300 Cells
- B.) 3,000 Cells
- C.) 30,000 Cells
- D.) 300,000 Cells
- E.) 3,000,000 Cells

- **F.) 30,000,000,000,000 Cells**



4 30 trillion "ish" cells

answer is...

- The picture below best represents...

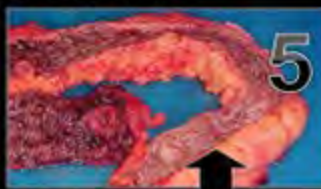
- A.) Cellular Organelles
- B.) Cells
- **C.) Tissues**
- D.) Organs
- E.) None of the Above



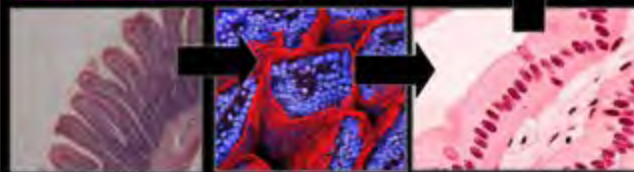
7

- These are **absorbing cells** such as those in your intestines that aid in digestion.

- A.) Connective Cells
- B.) Assembly Cells
- **C.) Movement Cells**
- D.) Nervous Cells
- **E.) Absorbing Cells**



5



- These type of tissues can contract / shorten?

Smooth Muscle Tissue



Skeletal Muscle Tissue



Cardiac Muscle Tissue



6 answer is...

- This is the ability of an organism or cell to maintain an internal equilibrium regardless of outside conditions.

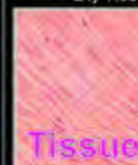
Homeostasis

answer is...

- Which of the following represents the three pictures below.

- A.) Cell, Tissue, Organ
- **B.) Tissue, Organ, Organ System**
- C.) Organ, Organ System, Organisms
- D.) Tissue, Organ, Cell, Atom, Molecule

10



Tissue



Organ



Organ System



# 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.

- Activity! Homeostasis.
- Everyone needs to record pulse for 15 seconds and record number in journal.
  - Practice a few times before we begin.
  - Don't use your thumb, use your fingers.





- 
- A line drawing of a right hand with a splint applied to the wrist and forearm. The splint is a long, rectangular piece of material, secured with straps or ties at the wrist and elbow. The hand is shown in a slightly flexed position.

- 1 minute? 5 minutes?
- 
- A silhouette of a person in a running pose, facing right. The person is wearing a tank top and shorts. The image is positioned in the center of the slide, between the two text elements.

- 

- How long after you finish the movie do you go to bed?

Practice Pairs #1	Practice Pairs #2	Practice Pairs #3	Practice Pairs #4
Prediction for pulse after one minute of exercise: _____ $\pm$ 5 minutes: _____			
Recovery temperature Prediction of temp after 5 minutes of Exercise: _____			
Duration		Pulse Rate (5 sec x 4) and temperature	
Breeding (describing detail)			
1 minute of pop in place / jumping jacks about in laboratory and get pulse rate back to baseline			
2 minutes of pop in place / jumping jacks			

- 

An anatomical diagram of the heart, viewed from the front. The pericardium is shown as a double-layered sac surrounding the heart, with the space between the layers labeled as the pericardial cavity. The diagram is in a reddish-brown color scheme.

[illegible]

Body Temperature  
Toxins Blood Sugar  
Blood Pressure  $H_2O$

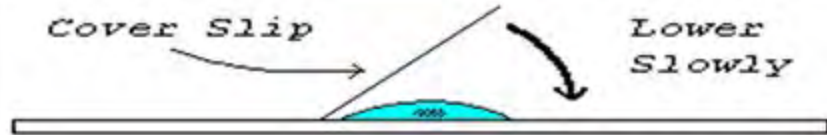


- Activity! Looking at animal cells.



- Procedure

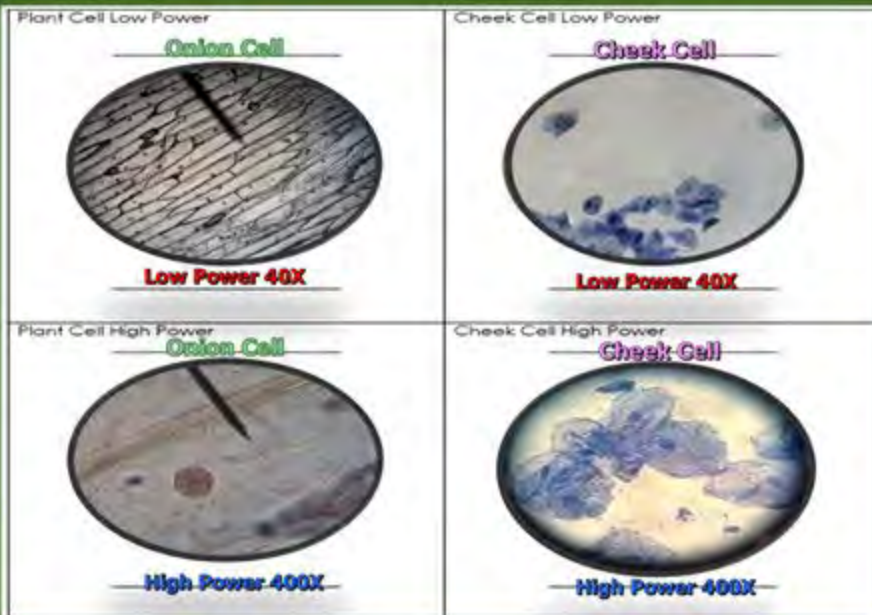
- Use a toothpick to scratch along the inside of your cheek.
- Smear the tip of the toothpick on glass slide.
- Add one drop of water to the smear.
- Gently place cover slip on top of drop.
- Observe and make a sketch of what you see using a Petri dish to make a circle.



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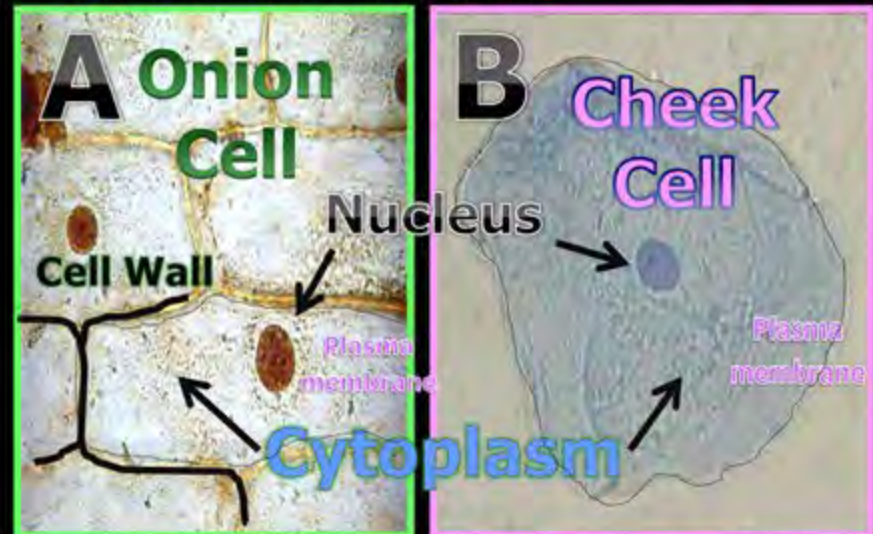


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- Which is a cheek cell, and which is an onion cell? What is the difference?



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# Built-in Quizzes

Each unit contains several built-in quizzes 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 quizzes provide an effective and efficient way for teachers to assess student learning.

- Quiz 1-10. Levels of Biological Organization.  
– Word Bank: Is it a **cell**, **tissue**, **organ**, **organ system**, or **individual**?

**QUIZ WIZ**



Quiz 1-10. Levels of Biological Organization  
– Word Bank: Is it a **cell**, **tissue**, **organ**, **organ system**, or **individual**?

Q1	Q2	Q3
A1	B1	C1
F1	G1	H1
E1	I1	J1

Interpret: the ability of an organism or cell to tolerate  
Regardless of outside conditions.

Everyone needs to record pulse for 15 seconds and record number in journal.  
– Practice a few times before we begin.  
– Don't talk and think, use your logic.

Practice Pulse #1	Practice Pulse #1	Practice Pulse #1	Practice Pulse #1

Prediction for pulse after one minute of exercise \_\_\_\_\_ 5 minutes \_\_\_\_\_

Resting temperature \_\_\_\_\_  
Prediction of temp after 5 minutes of exercise \_\_\_\_\_

Duration \_\_\_\_\_ Pulse rate 15 sec: a 4 and temperature \_\_\_\_\_

Testing (baseline data)

1 minute of pop in place / jumping jacks	Rest in between and get pulse rate back to baseline	5 minutes of pop in place / jumping jacks

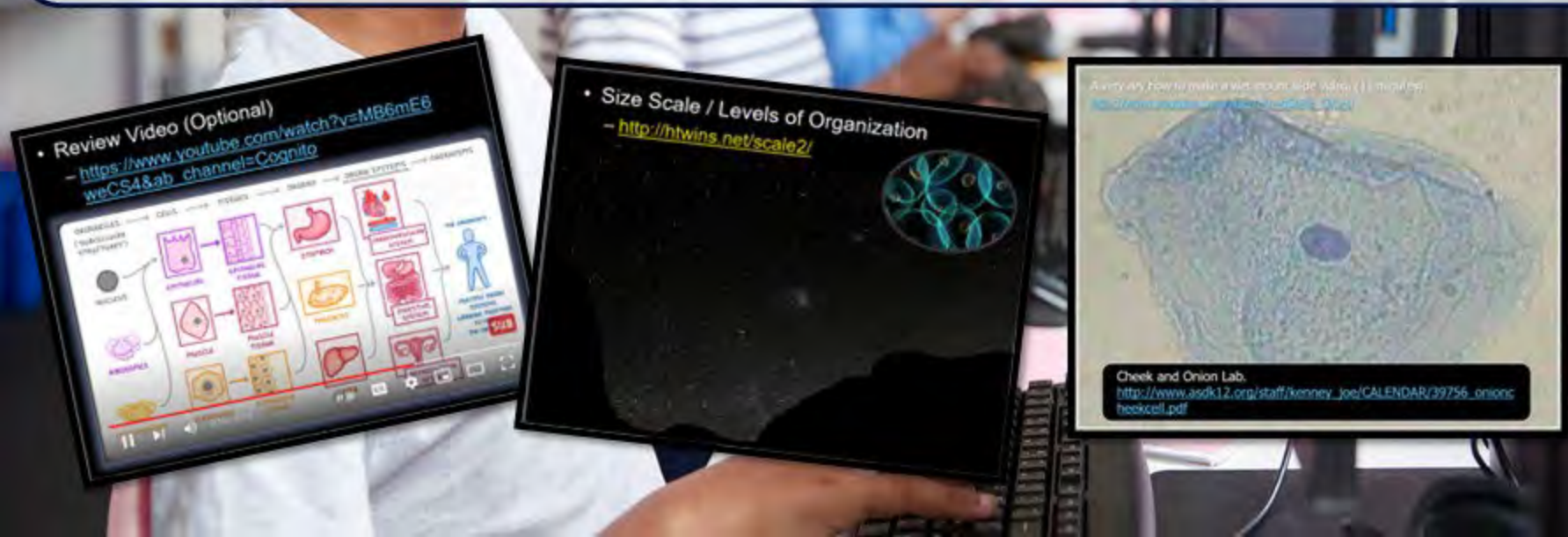
How long after the 5-minute did it take for your pulse to reach its resting / base level?  
#13 What was the increase in pulse rate from resting (baseline) to the 5 minutes of exercise?  
Please use data in your responses.


Quiz in Work Bundle



# Built-in Video Links

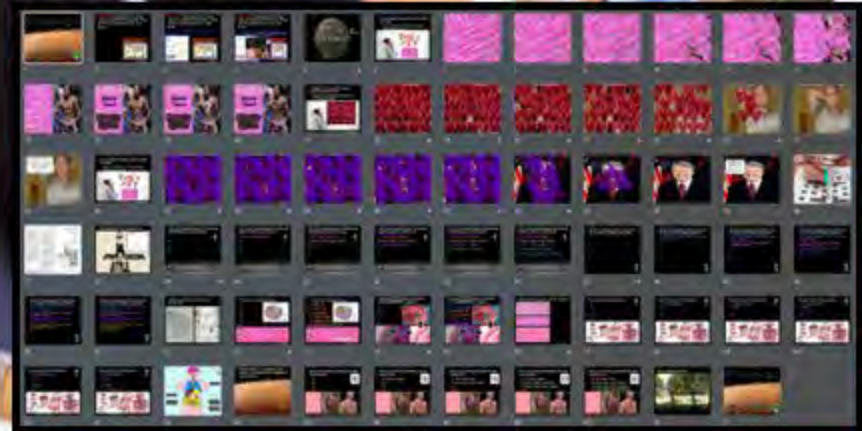
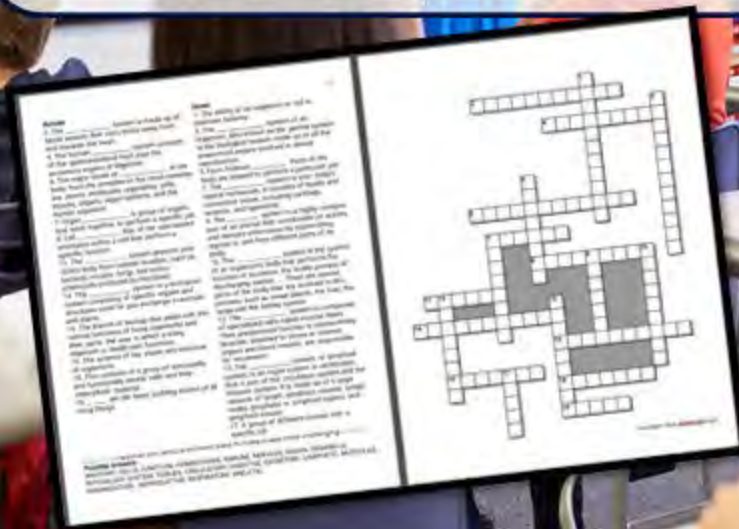
Our science education program is designed with the modern, multimedia learner in mind, and our video links are a perfect complement to our educational materials. These short clips are embedded into the slideshow at just the right places for a fantastic review. Whether you're studying biology, chemistry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



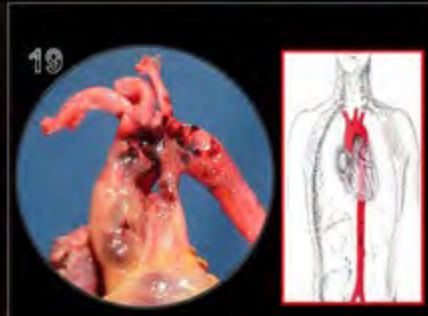


# Games and Review

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.



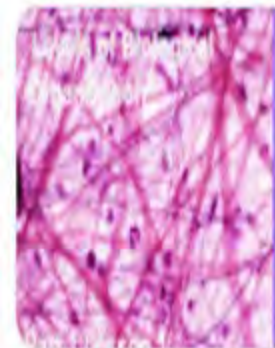
# Google Classroom Compatible

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.





## Lessons Attached



### Part 1 Lesson 1 Intro Structu...

Google Slides



### Part 1 Lesson 5 Wrap Up Quiz

Google Slides



### Part 1 Lesson 4 Organ Home...

Google Slides



### Part 1 Lesson 3 Cells and Tis...

Google Slides



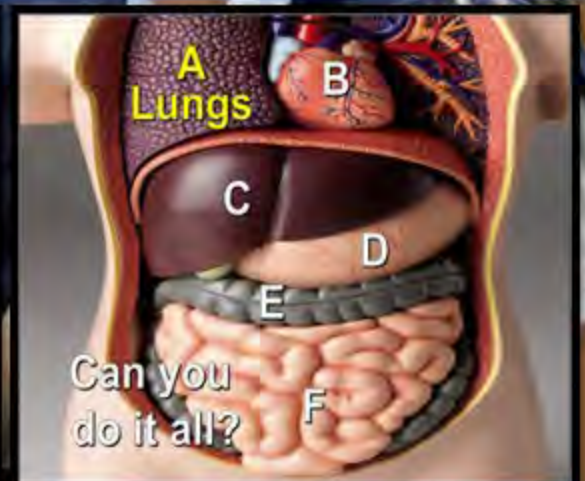
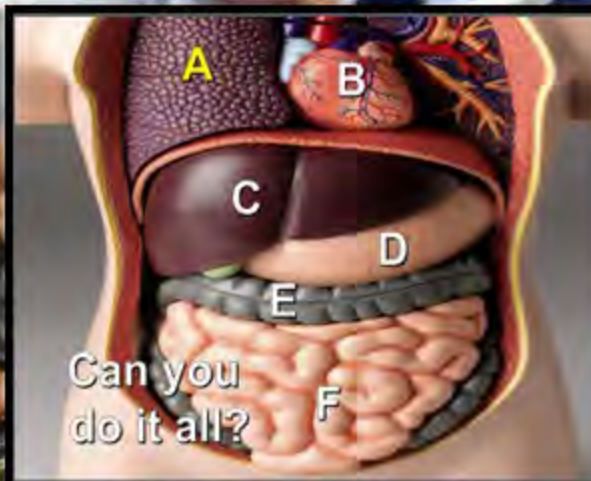
### Part 1 Lesson 2 Levels and C...

Google Slides



# 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.





# Human Body Systems and Health Topics Units



Human Body Systems  
and Health Topics Unit

## Human Body Systems and Health Topics Unit

85 Lessons and 11 Parts. (6<sup>th</sup>- 8<sup>th</sup> Medium Difficulty).

Part 1 is about Levels of Biological Organization and has 5 Lessons and 11 Page Work Bundle. Part 2 is about the Skeletal System and has 7 Lessons and 13 Page Work Bundle. Part 3 is the Muscular System and contains 4 Lessons and 10 Page Work Bundle. Part 4 about Health and Nutrition and has 12 Lessons and 25 Page Work Bundle. Part 5 is the Digestive System and has 8 Lessons and 15 Page Work Bundle. Part 6 is the Circulatory and Lymphatic System and has 8 Lessons and 15 Page Work Bundle. Part 7 is the Respiratory System and has 14 Lessons and 20 Page Work Bundle. Part 8 is about the Excretory System and has 4 Lessons and 9 Page Bundle. Part 9 is the Nervous System and has a 13 Lessons and 21 Page Work Bundle. Part 10 is the Endocrine and Human Reproductive System and has 11 Lessons and 19 Page Work Bundle. Part 11 is about the Human Immune System and is 4 Lessons and 10 Page Work Bundle.

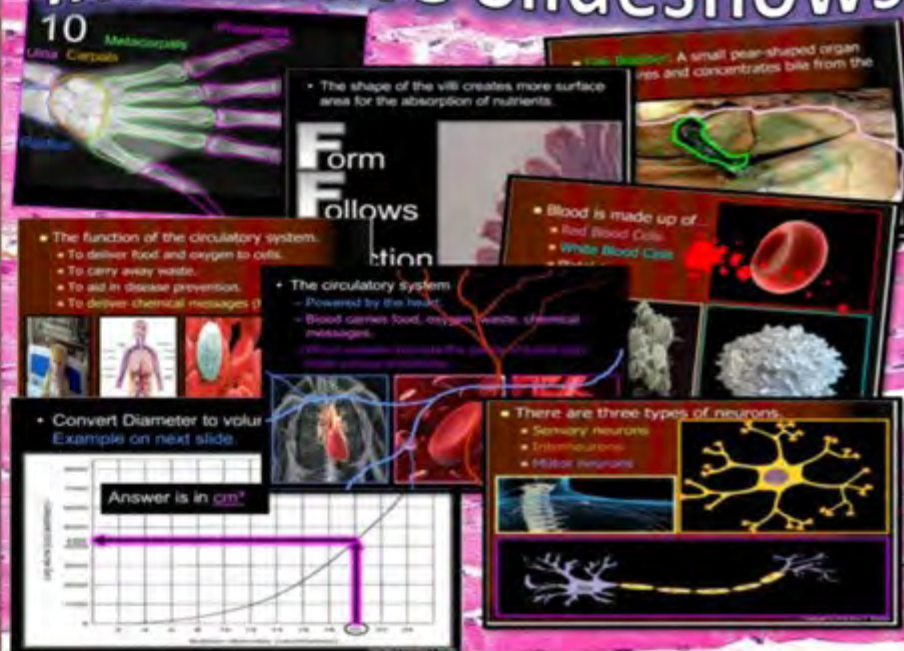


# Human Body Systems Unit



85 Lessons

# Interactive Slideshows



# Assessments, Video Links, Keys, Games, and more all built-in



# With Follow Along Work Bundles





# Human Body Systems and Health Topics Units



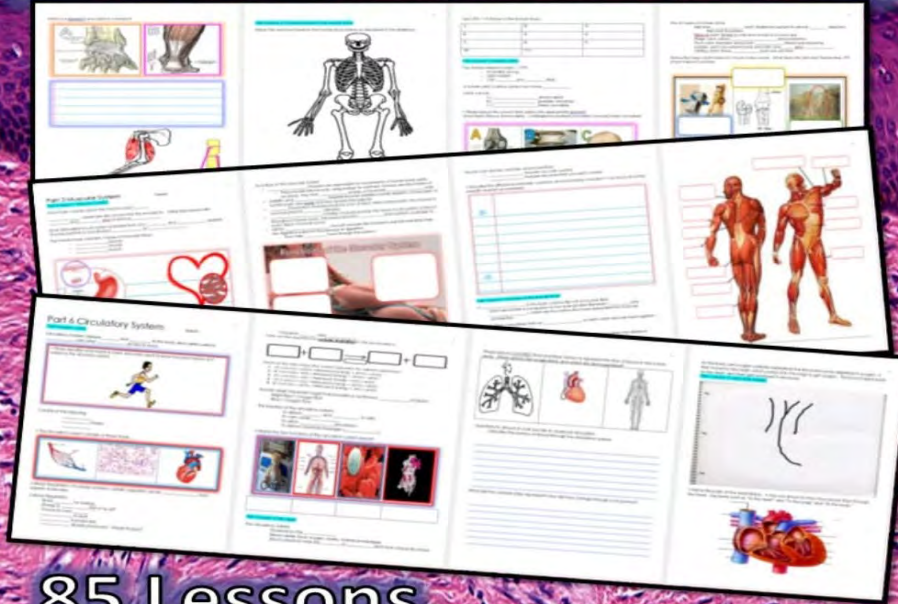
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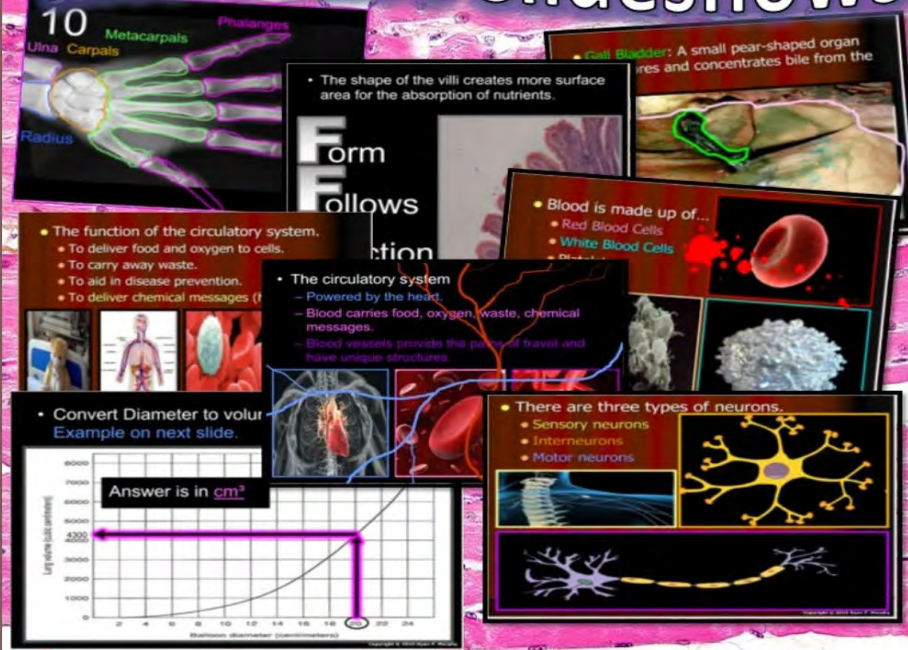


# Human Body Systems Unit



# 85 Lessons

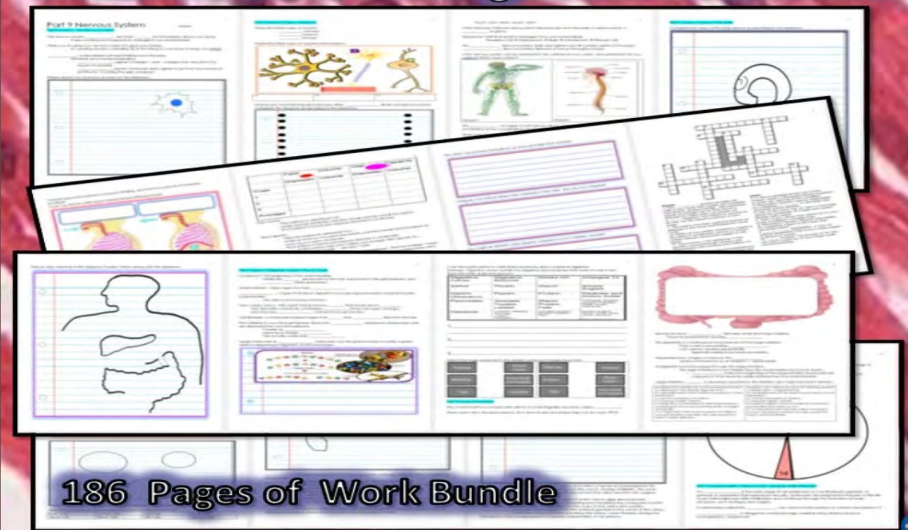
# Interactive Slideshows



**Assessments, Video Links, Keys,  
Games, and more all built-in**



## With Follow Along Work Bundles

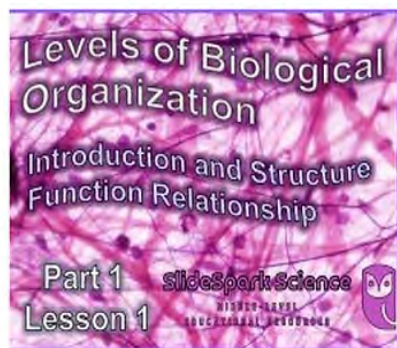


186 Pages of Work Bundle

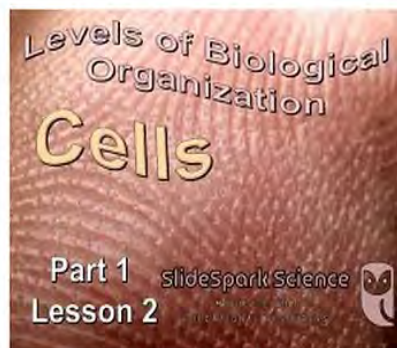


Human Body Systems Unit Part 1 Download : 5 Lessons of 50 Minutes and 11 Page Follow Along Work Bundle, For fun Quiz to see if student can name some Human Organs, Answers to the Quiz, Description of Anatomy, Introduction to Concept Form Follows Function, Describe how a classroom tool demonstrates Form Follow Function Activity, Description of Physiology, History of Anatomy, Body Part Name Game, Levels of Biological Organization, Cellular Organelle, Cell, Tissue, Organ, Organ System, Individual, Looking at Cheek and Onion Cells Under the Microscope, Differences between Plant and Animal Cells, Multi-cellular vs. Unicellular, Cells as the Unit of Structure of Function, Different Types of Cells in the Human Body, Tissues in the Human Body, Identifying Some Common Organs in the Human Body Visual Diagram, Organ Systems in the Human Body, Visual Quiz that Names a Level of Biological Organization, Answers to Quiz, Homeostasis, Homeostasis Activity with Pulse and Stand in Place Exercise, Box Game Review, Crossword Puzzle, End Unit Assessment

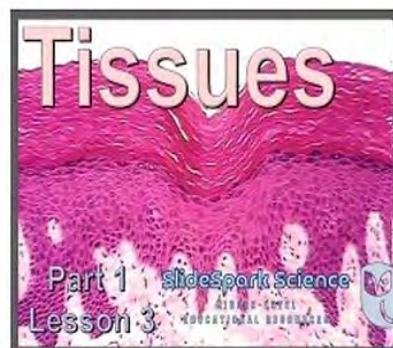
## Part 1: Levels of Biological Organization



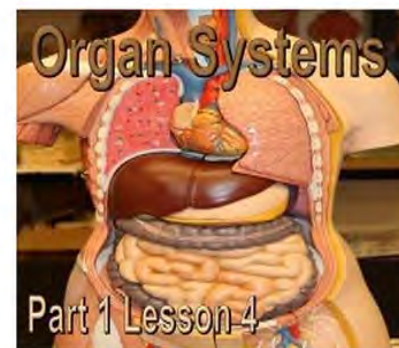
Part 1 Lesson 1 Intro Structure Function



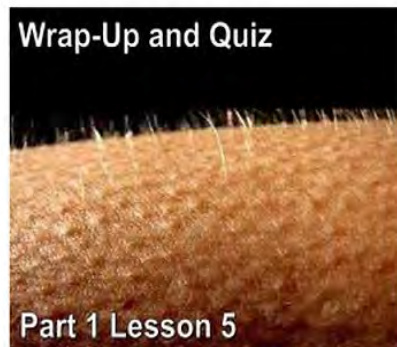
Part 1 Lesson 2 Levels and Cells



Part 1 Lesson 3 Cells and Tissues



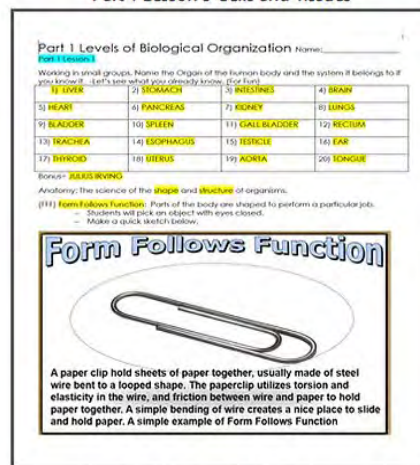
Part 1 Lesson 4 Organ Homeostasis



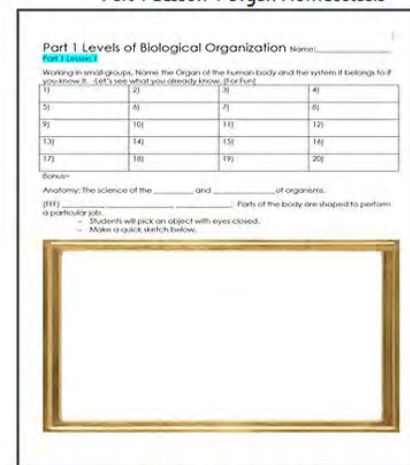
Part 1 Lesson 5 Wrap Up Quiz



Part 1 Lesson 6 Quiz Answers



Part 1 Work Bundle Print Answers



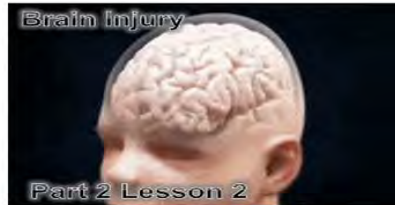
Part 1 Work Bundle Print



**Part 2: Skeletal System :** 7 Lessons 50 Minutes and 13 Page Follow Along Work Bundle, Bones and Living, Types of Bone Cells, Periosteum, # of Bones in the Human Body Guessing, Cartilage, Functions of the Skeletal System, Skeletal System and Form Follows Function, Name that Animal based only on its Skeleton Challenge, Bones Protect Vital Organs, Role of the Skull, Traumatic Brain Injury, The Effects of Traumatic Brian Injury, Importance of Seatbelts Crash Test Video, Danger of Repeated Concussions, Chronic Traumatic Encephalopathy, NPR interview with former NFL Player about the dangers of repeated Head Trauma Worksheet, Bones role in Blood Production, Spongy Marrow, Compact Marrow, Red Marrow, Yellow Marrow, Axial Skeleton, Appendicular Skeleton, Groups of Bones, Long Bones, Flat Bones, Short Bones, Irregular Bones, Name that type of Bone Challenge with Visuals, Osteoporosis, Bones and Connective Tissues, Tendons, Ligaments, Tendon or Ligament Visual Quiz with Answers, Building a Working Arm to learn bones, Ligaments, and Tendons, Build a Human with Pile of Bones Puzzle Challenge, Labeling Some common Bones in the Human Body, Bones of the Human Body Visual Quiz with Answers, How the Skeletal Systems Form Follow Function, Types of Joints, Fibrous Joints, Cartilaginous Joints, Synovial Joints, Six Types of Human Joints, Ball and Socket Joint, Ellipsoid Joint, Pivot Joint, Saddle Joint, Gliding Joint, Hinge Joint, Building a Biomechanical Hand Activity, Bones and Ligaments of the Hand, Matching the Joint Review, Common Injuries, Dislocations, Fractures, Sprains, Matching the Sports Injury Visual Activity, Learning Price, Pressure, Rest, Ice, Compress, Elevate, Box Game Review, Crossword Puzzle, End Unit Assessment



Part 2 Lesson 1 Skeletal System Intro



Part 2 Lesson 2 Brain Injury



Part 2 Lesson 3 Bones Tendon Ligament



Part 2 Lesson 4 Human Bones



Part 2 Lesson 5 Skeletal Joints



Part 2 Lesson 6 Biomechanical Hand



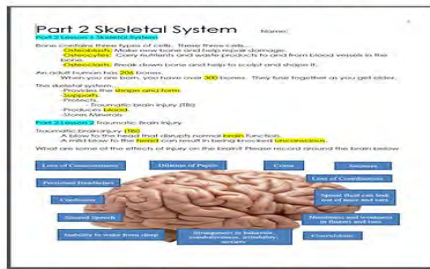
Part 2 Lesson 6 Review Injuries



Part 2 Lesson 7 Review Game



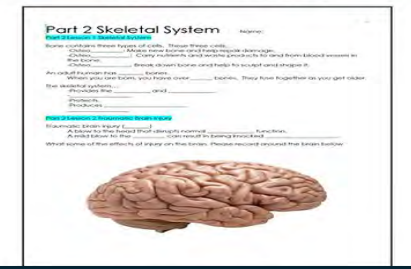
Part 2 Lesson 8 Review Game Answers



Part 2 Work Bundle Answers



Part 2 Work Bundle Print with Notes



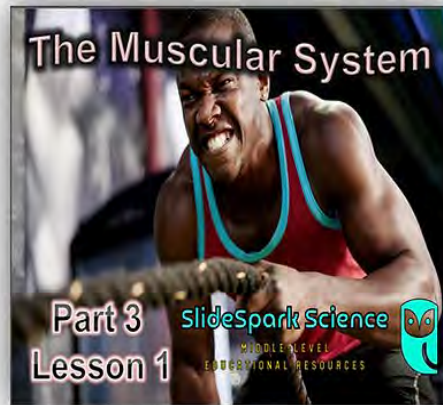
Part 2 Work Bundle Print

**Part 2: Skeletal System**

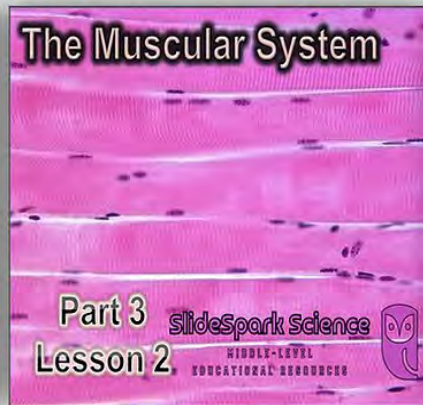


**Part 3: Muscular System:** 4 Lessons of 50 Minutes and 10 Page Work Bundle, # of Muscles in the Human Body, How blood vessels are woven into muscles and why, Stimulation of Action Potential, Coordinated Shortening, Types of Muscles, Smooth Muscle, Cardiac Muscle, Skeletal Muscle, Functions of the Muscular System, Posture, Good and Bad Posture, Phone Use and Posture, Review of the Functions with Visuals, Voluntary and Involuntary Muscles, Pupil Dilation Activity, Sarcomere and How they Work, Muscle Fibers, Examples with bicep and triceps, Smooth Muscles Peristalsis Activity, Common Muscles of the Human Body with Visuals, and animated .gifs, Students stand, sit, and make movements as each common muscle is described, Review of the Common Muscles of the Human Body, Visual Quiz of the Muscles, Box Game Review, Crossword Puzzle, Chicken Leg Dissections with Visuals and Step by Step Instructions, Dissection includes Flexion and Extension, Major Muscles, Alula, Bones, Fascia, Ligaments, Cartilage, of a Chicken Leg, Visual Review Wrap-Up of Chicken Leg, Full Unit Assessment, Answer Version to the Assessment so Student can Self Assess.

## Part 3: Muscular System



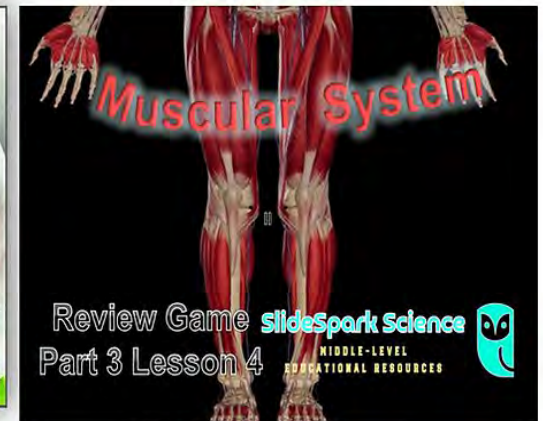
Part 3 Lesson 1 Types of Muscles



Part 3 Lesson 2 Muscles Human Body



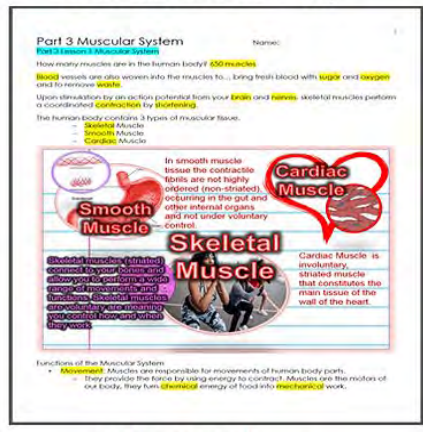
Part 3 Lesson 3 Chicken Leg Dissection



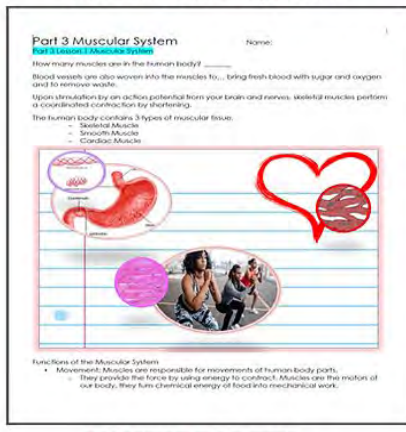
Part 3 Lesson 4 Review Game



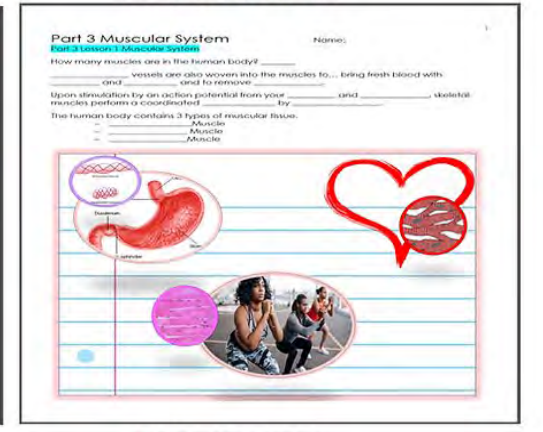
Part 3 Lesson 5 Review Game Answers



Part 3 Work Bundle Answers



Part 3 Work Bundle Print Notes



Part 3 Work Bundle Print



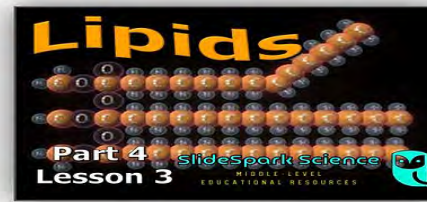
**Part 4: Health and Nutrition:** 12 Lessons of about 50 minutes and 25 Page Follow Along Work Bundle, CHNOPS/SPONCH biologically important elements, Carbon and Organ Chemistry, % of SPONCH Elements in Living Things, Graphing this %, CaFé, Calcium, Iron, Organic Building Blocks, Carbohydrates, Lipids, Proteins, Nucleic Acids, Carbohydrates, Monosaccharide, Disaccharide, Polysaccharide, Sugars associated with each, Activity with Saltines and Iodine, Advantages and Disadvantages of Simple and Complex Sugars, Glycogen, Fiber, Soluble and Insoluble Fiber, Understanding Nutrition Labels, Protein, Amino Acids, Foods High in Protein, Four Important Functions of Proteins, Hormones, Lipids, Structure and Function of Lipids, Coronary Artery Disease Demonstration, Hormones, Some examples of common Hormones, Steroids, Anabolic Steroids, Some Dangers Associated with to use of Anabolic Steroids, Types of Fat, Unsaturated Fat, Saturated Fats, Trans fatty Acid, Structure of these Fats, Healthy and Unhealthy Fats, Nutrition Label and Fats, Visual Quiz of Carbohydrates, Lipids, and Proteins, Answers to Quiz so Students can Self-Assess, Box Game Review, MyPlate, Making a Meal Activity, Examples of Healthy Eating vs. Unhealthy Meal Choices, Processed and Unprocessed Foods, Jell-O and Pineapple Juice Optional Activity, Twinkie Dissection, Students get a Twinkie and then learn about all of the Ingredients inside, Deciding or Not to eat the Twinkie, Obesity, Diabetes, Dangers Associated with Obesity, Factors that can control Obesity, Why Fast Food Sells, Visual Quiz of Famous People in History vs. Food Mascots, Box Game Review, Ways to Get Control of your Weight, Healthy Eating, Factory Farming, Positives and Negatives of Factory Farming, Eating Disorders, Anorexia, Some Dangers Associated with Anorexia, Bulimia nervosa, How to be Supportive, Crossword Puzzle, Full Unit Assessment with Answers so Students can Self-Assess



Part 4 Lesson 1 SPONCH molecules



Part 4 Lesson 2 Carbs Proteins



Part 4 Lesson 3 Lipids Steroids



Part 4 Lesson 4 Types of Fat



Part 4 Lesson 5 Quiz and Review



Part 4 Lesson 6 Twinkie Lesson



Part 4 Lesson 7 Fast Food Obesity



Part 4 Lesson 8 Eating Healthy



Part 4 Lesson 9 Factory Farms



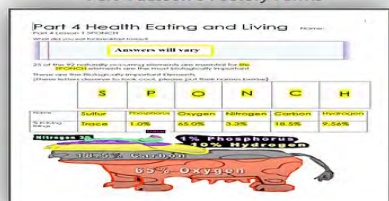
Part 4 Lesson 10 Eating Disorders



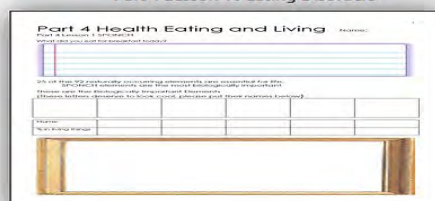
Part 4 Lesson 11 Review Game



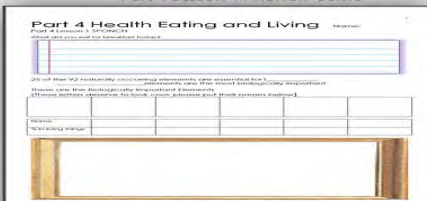
Part 4 Lesson 12 Review Game Answers



Part 4 Work Bundle Answers



Part 4 Work Bundle Print with Notes



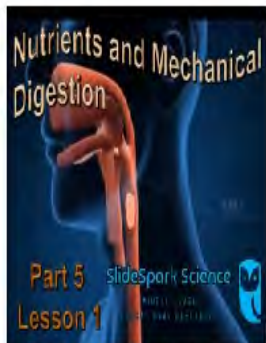
Part 4 Work Bundle Print

**Part 4: Health and Nutrition**



**Part 5: Digestive System:** 8 Lessons of 50 minutes, and 15 Page Follow Along Work Bundle, Review of Nutrients, Digestion, Saliva, Ptyalin, Chemical Digestion, Chewing Bread Activity, Mechanical Digestion, Synergism between Chemical and Mechanical Digestion, Taste Buds, Tasting Activity, Dentition, Dentition Imprint Activity, Swallowing, Bolus, Making a Bolus Activity, Safe Swallowing / Chewing, Pharynx, Epiglottis, Esophagus, Peristalsis, Stomach, Pyloric Valve, Step by Step Drawing of the Digestive System, Gastrointestinal Tract, Garden Hose Demo, Duodenum, Small Intestine, Surface Area and Digestion Demo, Pancreas, Pancreatic Juices, Enzymes, Liver, Gall Bladder, Vital Roles of the Liver, How Food gets Broken Down, Foods Macronutrients, Digestion Tic Tac Toe Review, Small Intestine, Villi, Villi and Surface Area, Ileocecal valve / sphincter, Appendix, Appendectomy, Cecum, Large Intestine, Visual Review of Organs, Digestive System Simulation, Students become an organ along the Digestive System and Digest Food (cereal in bags) by mechanical and chemical means, Visual Review, Box Games Review, Full Unit Assessment with Answer Version for Self-Assessment

## Part 5: Digestive System



Part 5 Lesson 1 Nutrients Chew



Part 5 Lesson 2 Digestion



Part 5 Lesson 3 Digestive Organs



Part 5 Lesson 4 Intestines



Part 5 Lesson 5 Simulation Wrap Up



Part 5 Lesson 6 Review Game



Part 5 Lesson 7 Review Game Answers



Part 5 Work Bundle Answers



Part 5 Work Bundle Print with Notes



Part 5 Work Bundle Print



**Part 6: Circulatory System:** 8 Lessons of 50 minutes and 15 Page Follow Along Work Bundle, Circulatory System, What Goes In, What Goes Out, What System is Comprised Of, Heart, Blood, Blood Vessels, Cellular Respiration, Respiration Equation, Parts of Cellular Respiration, Functions of the Circulatory System, Movement of Blood through the System, Circulatory System Simulation – The class is turned into a basic heart and students move through the system collecting oxygen in lungs and exchanging them for carbon dioxide in the body, Step by Step Drawing of the Heart, Naming the Parts of the Heart, Parts of a Heart Visual Quiz, Answers to the Visual Quiz, Blood Pressure, Hypertension, CPR, An automated external defibrillator (AED), Varicose veins, Alveoli, Gas Exchange, Smoking and Gas Exchange, Blood, Types of Blood Cells with Info, Blood Soup Activity where students make edible Soup with fun ingredients to represent the components of Blood, Red Blood Cells, White Blood Cells, Platelets, Plasma, % of Each, Blood Transfusions, Antigens, Antibodies, Blood Groups, Rh Factors, Safe and Unsafe Transfusions, Lymphatic System, Organs of the Lymphatic System, Lymph, Lymph Nodes, Lymph Vessels, Box Game Review, Crossword Puzzle, Full Unit Assessment with Answers so Students can Self-Assess

## Part 6: Circulatory System



Part 6 Lesson 1 Circulatory Intro



Part 6 Lesson 2 Heart



Part 6 Lesson 3 Arteries Veins



Part 6 Lesson 4 Review Quiz



Part 6 Lesson 5 Blood Cells



Part 6 Lesson 6 Blood Types



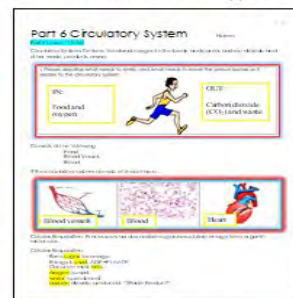
Part 6 Lesson 7 Lymphatic System



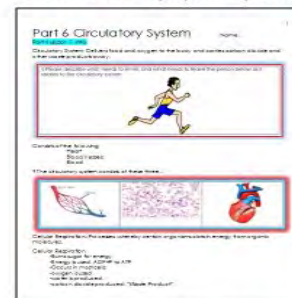
Part 6 Lesson 8 Review Game



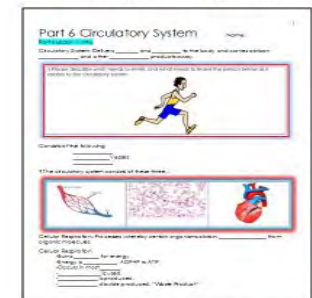
Part 6 Lesson 9 Review Game Answers



Part 6 Work Bundle Answers



Part 6 Work Bundle Print with notes



Part 6 Work Bundle Print



**Respiratory System Part 7:** 14 Lessons of 50 minutes and 20 Page Follow Along Work Bundle, Respiratory System Basics, Oxygen, Aerobic and Anaerobic Respiration, Functions of the Nose, Step by Step Drawing of the Respiratory System, Exhale, Inhale, Epiglottis, Larynx, Vocal Chords, Sound Production, Trachea, Structure Function, Bronchus, Lungs, Alveoli, Asthma, Diaphragm, Build a Diaphragm Activity, Visual Quiz of the Respiratory System, Answers so Students can Self Assess, Tidal Volume, Vital Capacity, Lab Activity with Breathing and Balloons, Box Game Review, Crossword Puzzle, End Unit Assessment, Answer Version of Assessment so Students can Self Assess, Part 2 of the Unit examines the Dangers Associated with Tobacco Use, What is Cancer?, Lifestyle Choices to help aid in the prevention of Cancer, Skin Cancer, Dangers of Skin Cancer, Ways to avoid UV Exposure, Dangers of Tanning, Abcde's of Understanding Skin Moles and Cancer, Dangers of Smoking, Starting Anti-Tobacco Campaign Project, Dissection of a Typical US Blended Cigarette, Case Study on the Filter and how they don't work, Facts about Smoking, Start of Ad Campaign Portion of Unit, Students watch Anti-tobacco ads and reflect on their usefulness, Visual Tour of some harmful chemical in cigarettes, Full Ingredient List, Nitrosamines, How Chemicals Impact DNA, Visual Tour of the Negative Health Impacts Smoking Can Cause, Stroke, Heart Disease, Smokers Lung vs Non-Smoker, Coating of Alveoli in Tar, Neck Breathers, laryngectomy Laryngectomy, tracheostomy, Emphysema, Chronic Bronchitis, Danger of Second Hand Smoke, Berger's Disease, Hairy Tongue / lingua villosa, Tour of the the nastiest hairy tongues out there, Dangers of Smokeless Tobacco, Mouth and Throat Cancer, Dangers of Smoking while Pregnant, Comparing Twins Study, Vaping, Dangers of Vaping, Popcorn Lung, Wet Lung, A lot Still Unknown, Case Study on JUUL, Nicotine Levels in Vaping / e-juices, Nicotine and the Adolescent Brain, Anti-Tobacco Campaign Projects, Box Game Review, Crossword Puzzle, End Unit Assessment



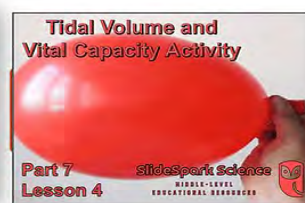
Part 7 Lesson 1 Respiratory System



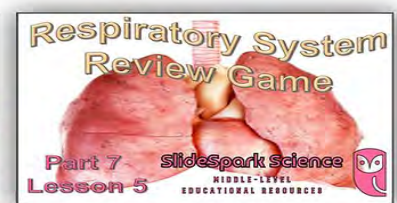
Part 7 Lesson 2 Organs of Respiratory



Part 7 Lesson 3 Lungs Diaphragm



Part 7 Lesson 4 Lung Capacity Activity



Part 7 Lesson 5 Review Game



Part 7 Lesson 6 Review Game Answers



Part 7 Lesson 7 Cancer and Skin Cancer



Part 7 Lesson 8 Smoking and Cancer



Part 7 Lesson 9 Smoking Cont I



Part 7 Lesson 10 Smoking Cont II



Part 7 Lesson 11 Smoking Cont III (1)



Part 7 Lesson 12 Vaping Dangers



Part 7 Lesson 13 Campaign and Wrap Up



Part 7 Lesson 14 Review Game



Part 7 Lesson 15 Review Game Answers



Part 7 Work Bundle Answers



Part 7 Work Bundle Print with Notes

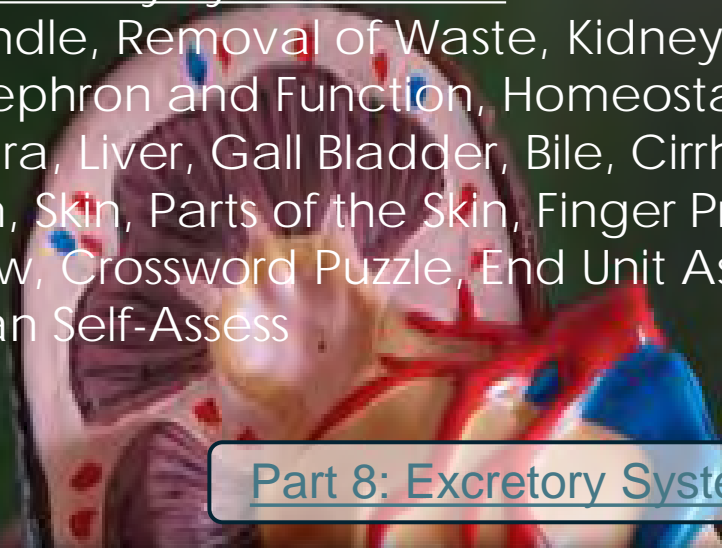


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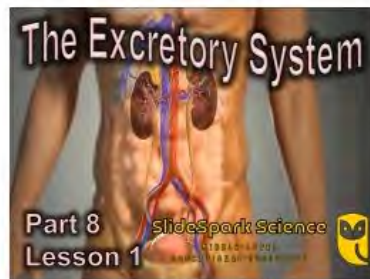
## Part 7: Respiratory System



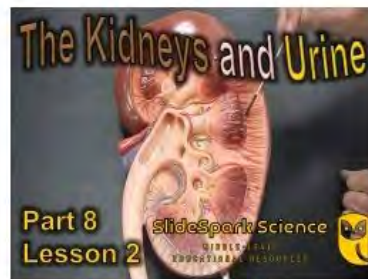
# Excretory and Integumentary Systems Part 8 4 Lessons of 50 Minutes and 9 Page Follow Along Work Bundle, Removal of Waste, Kidneys, Nephron, Diagram of Nephron, Parts of a Nephron and Function, Homeostasis, Urine, Urine Color, Ureters, Bladder, Urethra, Liver, Gall Bladder, Bile, Cirrhosis of the Liver, Integumentary System, Skin, Parts of the Skin, Finger Prints, Finger Print Activity, Hair, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so Students can Self-Assess



## Part 8: Excretory System, Integumentary System



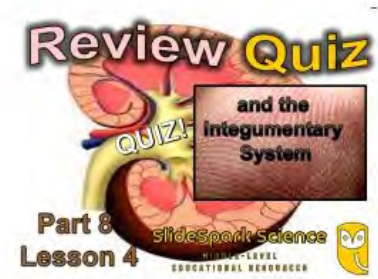
Part 8 Lesson 1 Excretory System



Part 8 Lesson 2 Urine Kidneys



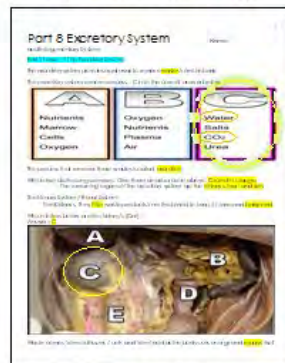
Part 8 Lesson 3 Integumentary Systems



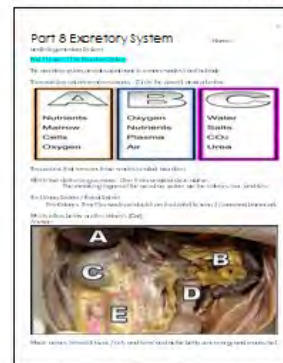
Part 8 Lesson 4 Review Quiz 10Q



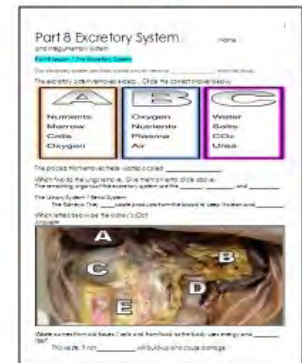
Part 8 Lesson 5 Quiz Answers 10Q



Part 8 Work Bundle Answers



Part 8 Work Bundle Print with notes

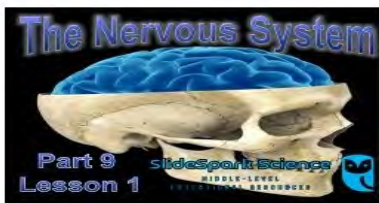


Part 8 Work Bundle Print



**Nervous System Part 9** Nervous System, Stimulus Activity, Neuron, Electrical and Chemical Signals, Step by Step Drawing of a Neuron, Build a Neuron Activity, Neuron Class Simulation / Sending a Signal from Neuron to Neuron, Types of Neurons, Interneuron, Sensory Neurons, Motor Neurons, Action Potential, Receptors, Central Nervous System, Peripheral Nervous System, The Brain, Cerebrospinal fluid (CSF), CSF and Egg Demo, Build a Brain Activity, Step by Step Drawing of a Brain, Spinal Column, Spinal Cord Injury, Parts of a Brain, Lobes of the Brain, Functions of the Brain, Step by Step Drawing of an Eye, Parts of the Eye, Lens, Near and Far Sightedness, Cataracts, Glaucoma, Rod and Cones, Night Vision Activity, Parts of the Eye Visual Review, Observation, Inferences, Optical Illusions, Smell, Smell Activity, Dangers of Inhalant Abuse, The Science of Hearing, Step by Step Drawing of the Ear, Parts of the Ear, Noise Induced Hearing Loss, Listening Trial Study Activity, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so Students can Self-Assess

## Part 9: The Nervous System



Part 9 Lesson 1 Nervous System



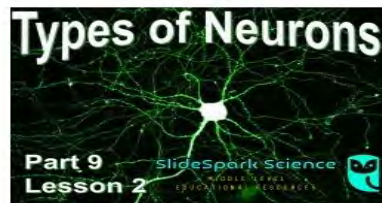
Part 9 Lesson 5 Eye Parts Review



Part 9 Lesson 9 Hearing



Part 9 Lesson 13 Review Game Answers



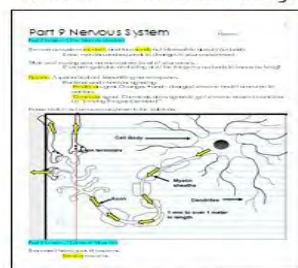
Part 9 Lesson 2 Types of Neurons



Part 9 Lesson 6 Observation Basics



Part 9 Lesson 10 Times Have Changed



Part 9 Work Bundle Answers



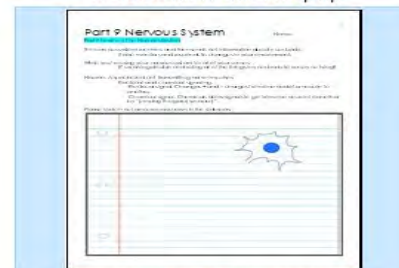
Part 9 Lesson 3 Brain



Part 9 Lesson 7 Observation Cont



Part 9 Lesson 11 Touch Wrap Up



Part 9 Work Bundle Print with Notes



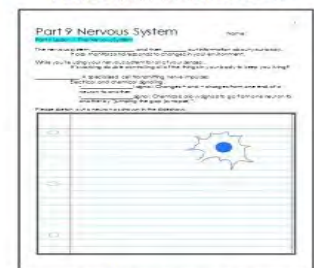
Part 9 Lesson 4 The Eye



Part 9 Lesson 8 Smell



Part 9 Lesson 12 Review Game



Part 9 Work Bundle Print



Endocrine and Reproductive Systems Part 10 11 Lessons of 50 minutes and 19 Page Follow Along Work Bundle, The Endocrine System, Endocrine and Nervous System Working Together, Venn Diagram of Each, Glands of the Endocrine System, Location of Glands of the Endocrine System, Hormones, Exocrine Glands, Endocrine Glands, Activities in the Body, Adrenaline, Adrenaline Roller Coaster Activity, Dopamine, Dangers of Methamphetamine, Important Hormones, Exocrine Glands, Hypothalamus, Pituitary Gland, Metabolism, Thymus, Thyroid, Adrenals, Pancreas, Diabetes, Ovaries, Testes, Reading Article about Puberty, Body Stability and Counterbalance Hormone, Testosterone, Estrogen, Box Game Review, The Reproductive System, Sugar Baby Project, Functions of the Reproductive System, Male and Female Gametes, Step by Step Drawing of the Gametes, Fertilization, Haploid, Diploid, Step by Step Drawing of the Male and Female Reproductive Systems with Important Vocabulary, Review with Visuals, Puzzle Activity, Menstrual Cycle, Ovarian Cycle, Events of the Menstrual Cycle, Embryo, Embryonic Development, Amniotic Sac, Sonogram, Placenta, Caesarean Section, Dangers of Smoking and Drinking while Pregnant, Fetal Alcohol Syndrome, Box Game Review, Crossword Puzzle, Life's Greatest Miracle Movie Sheet, End Unit Assessment with Answer Version for Self Assessment



Additional and Printables



Part 10 Lesson 1 Endocrine System



Part 10 Lesson 2 Puberty



Part 10 Lesson 3 Endocrine Wrap Up



Part 10 Lesson 4 Reproductive System



Part 10 Lesson 5 Male Reproductive



Part 10 Lesson 6 Female Reproductive



Part 10 Lesson 7 Menstrual Cycle



Part 10 Lesson 8 Embryo



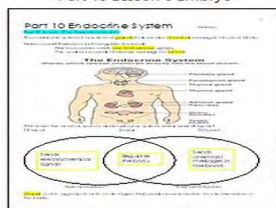
Part 10 Lesson 9 Miracle and Wrap Up



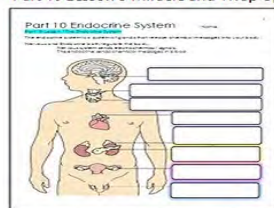
Part 10 Lesson 10 Review Game



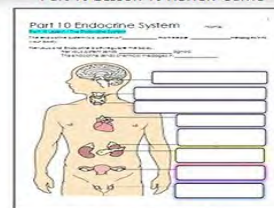
Part 10 Lesson 11 Review Game Answers



Part 10 Work Bundle Answers



Part 10 Work Bundle Print with Notes



Part 10 Work Bundle Print

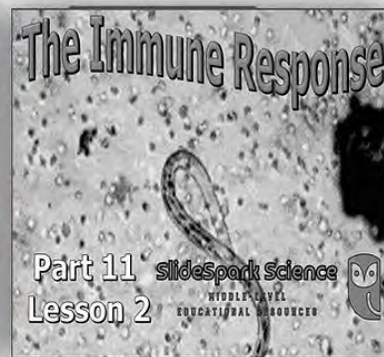
## Part 10: Endocrine and Human Reproductive Systems



[Immune System Part 11](#) 4 Lessons of 50 minutes, 10 Page Follow Along Work Bundle, Joesph Lister, Parts of the Immune System and their Locations, Agents that the Immune System Defends Against, Importance of the Skin as a Barrier, The Nose and Mucous, Saliva, Friend from Foe Achievement, Inflammatory Response, Bee Stings, Step by Step Drawing of the Immune System, Leukocytes, Phagocytes, Lymphocytes, B Cells, T Cells, Dendritic Cells, Antibodies, Immunity, Influenza Case Study, Active and Passive Immunity, Vaccines, Virus Prevention, Box Game Review, Crossword Puzzle, Full Unit Assessment with Answer Versions for Self Assessment



Part 11 Lesson 1 Immune System



Part 11 Lesson 2 Immune Response



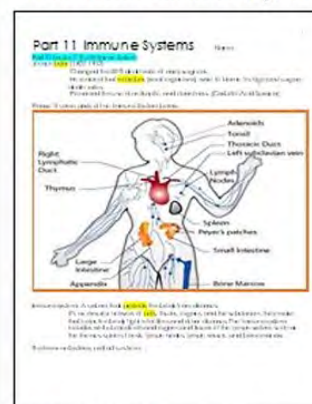
Part 11 Lesson 3 Inside Look Flu Vaccines



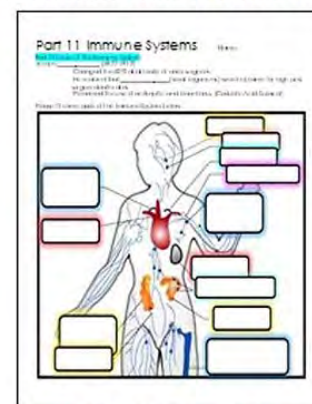
Part 11 Lesson 4 Review Game



Part 11 Lesson 5 Review Game Answers



Part 11 Work Bundle Answers



Part 11 Work Bundle Print

## Part 11: The Immune System









# 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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# SlideSpark Science

MIDDLE-LEVEL  
EDUCATIONAL RESOURCES



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