

Skeletal System Unit

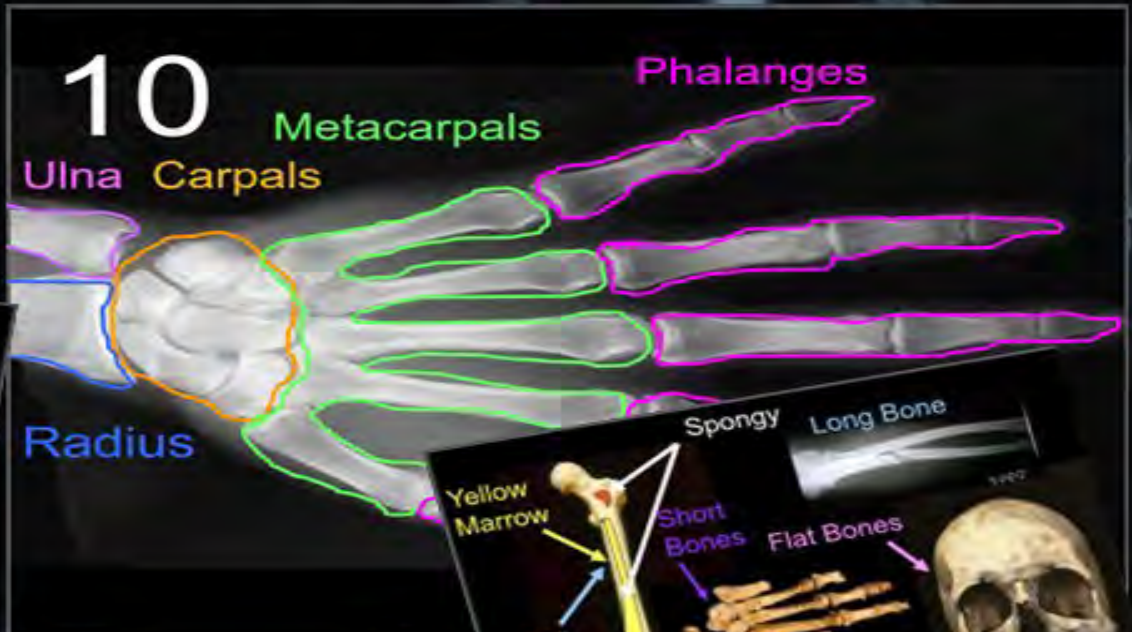
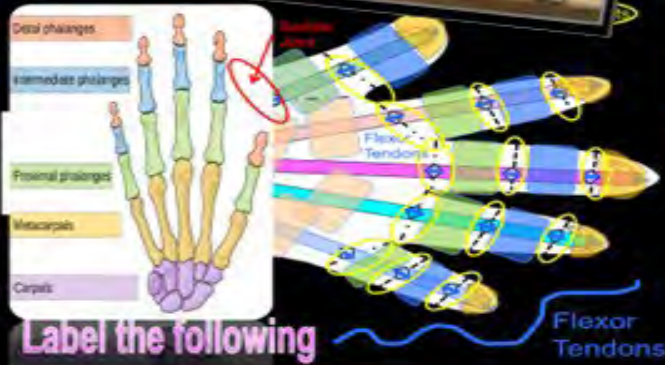
- Please pay attention to the following steps.
 - We will build the joint and then label it upon completion.



- Which joint best describes the pictures below?
 - A.) Fibrous (immovable)
 - B.) Cartilaginous (partially movable)
 - C.) Synovial (freely movable)



Synovial
answer is...



- Your skeletal important inter

Form Follows Function

7 Lessons

Interactive Slideshows



Joints can be...

- A.) Fibrous (immovable)
- B.) Cartilaginous (partially movable)
- C.) Synovial (freely movable)

- Bone contains three types of cells. These three cells...**
- Osteoblasts: Make new bone and help repair damage.
 - Osteocytes: Carry nutrients and waste products to and from blood vessels in the bone.
 - Osteoclasts: Break down bone and rebuild to repair and shape it.



Answer! The picture on the right shows serious bone thinning.



- Ball and Socket
- Ellipsoid
- Hinge
- Pivot
- Saddle
- Gliding



Please name the two types of joints shown below? A = Saddle B = Gliding Joint

14



With Follow Along Work Bundle

[illegible]

13 Pages

- What's the soft fatty substance in the cavities of bones in which blood cells are produced?



List all the items of the inventory	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

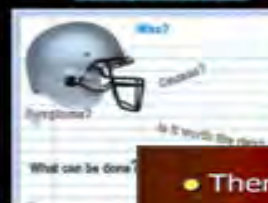
Subtotal inventory (prior to December 31) = _____

☐ Inventory
☐ Prepaid
☐ Cash
☐ Accounts Payable
☐ Accounts Receivable
☐ Inventory
☐ Land
☐ Buildings
☐ Equipment
☐ Accumulated Depreciation

Subtotal inventory (prior to December 31) = _____

☐ Inventory
☐ Prepaid
☐ Cash
☐ Accounts Payable
☐ Accounts Receivable
☐ Inventory
☐ Land
☐ Buildings
☐ Equipment
☐ Accumulated Depreciation

- **Case study. Former NFL Players. NPR**
 - Two page reading and or audio link.
 - <http://www.npr.org/2014/01/31/269422083/sideline-d-by-brain-injury-ex-nfl-player-cope-with-desperation>



- There are two main categories of bones.
 - **Spongy Bone** (Cancellous bone)
 - **Compact Bone**



- Repetitive collisions / concussions can cause serious brain functioning problems later in life.



- Which skeleton is the **axial**, and which is the **appendicular**?



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 Brain 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



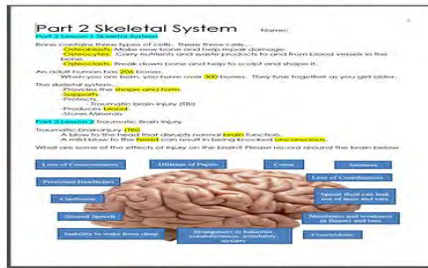
Part 2 Lesson 6 Review Injuries



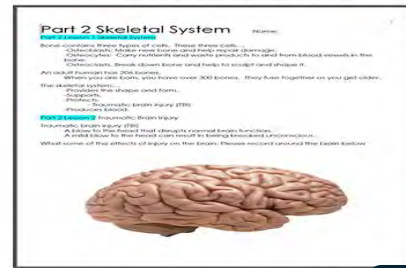
Part 2 Lesson 7 Review Game



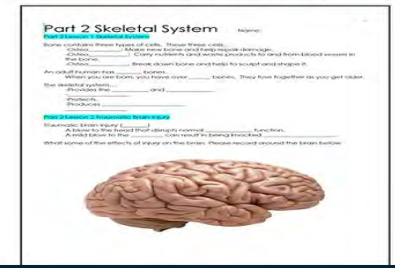
Part 2 Lesson 8 Review Game Answers



Part 2 Work Bundle Answers



Part 2 Work Bundle Print with Notes



Part 2 Work Bundle Print

Part 2: Skeletal System

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.



● Joints can be...

- A.) Fibrous (immovable)
- B.) Cartilaginous (partially movable)
- C.) Synovial (freely movable)



Copyright © 2014 SlideSpark, LLC

Quiz Wkt! 1-10 Bones of the Human Body.

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

Part 2 Lesson 5: Skeletal Joints

The human skeletal system... (FFF)

- Incredibly strong
- Light weight
- Can _____ and _____ itself.

A human joint: A place where two bones

- Joints can be...
- A.) _____ (immovable)
 - B.) _____ (partially movable)
 - C.) _____ (freely movable)

Please place the correct term below the appropriate picture.
Word Bank: Fibrous (immovable), cartilaginous (partially movable), synovial (freely movable)



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.

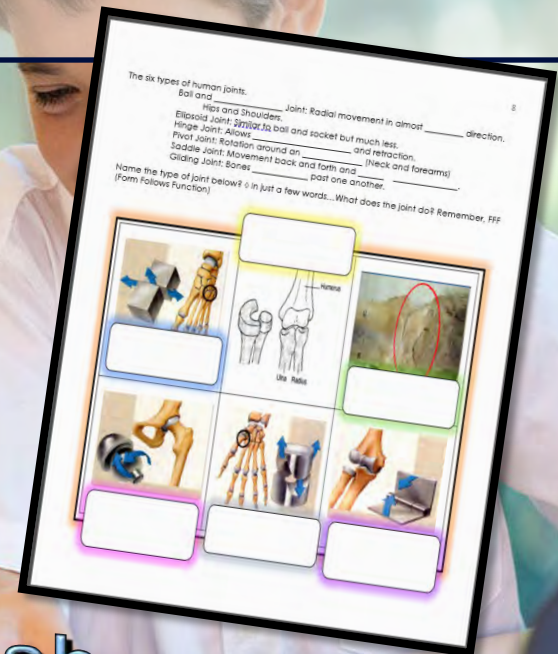
- Which letter is a ball and socket, and which is a hinge joint?



- Which letter is a **ball and socket**, and which is a **hinge** joint?



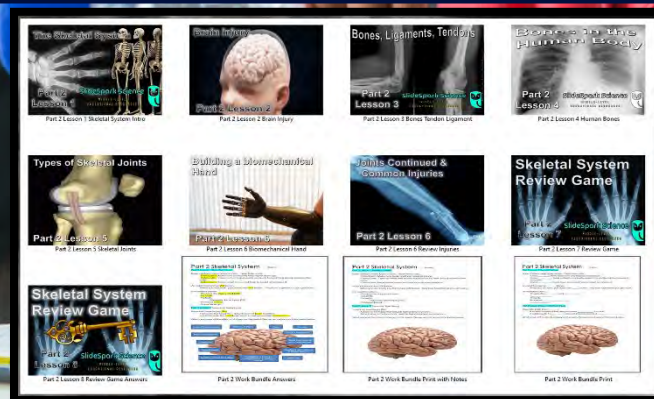
Next Slide

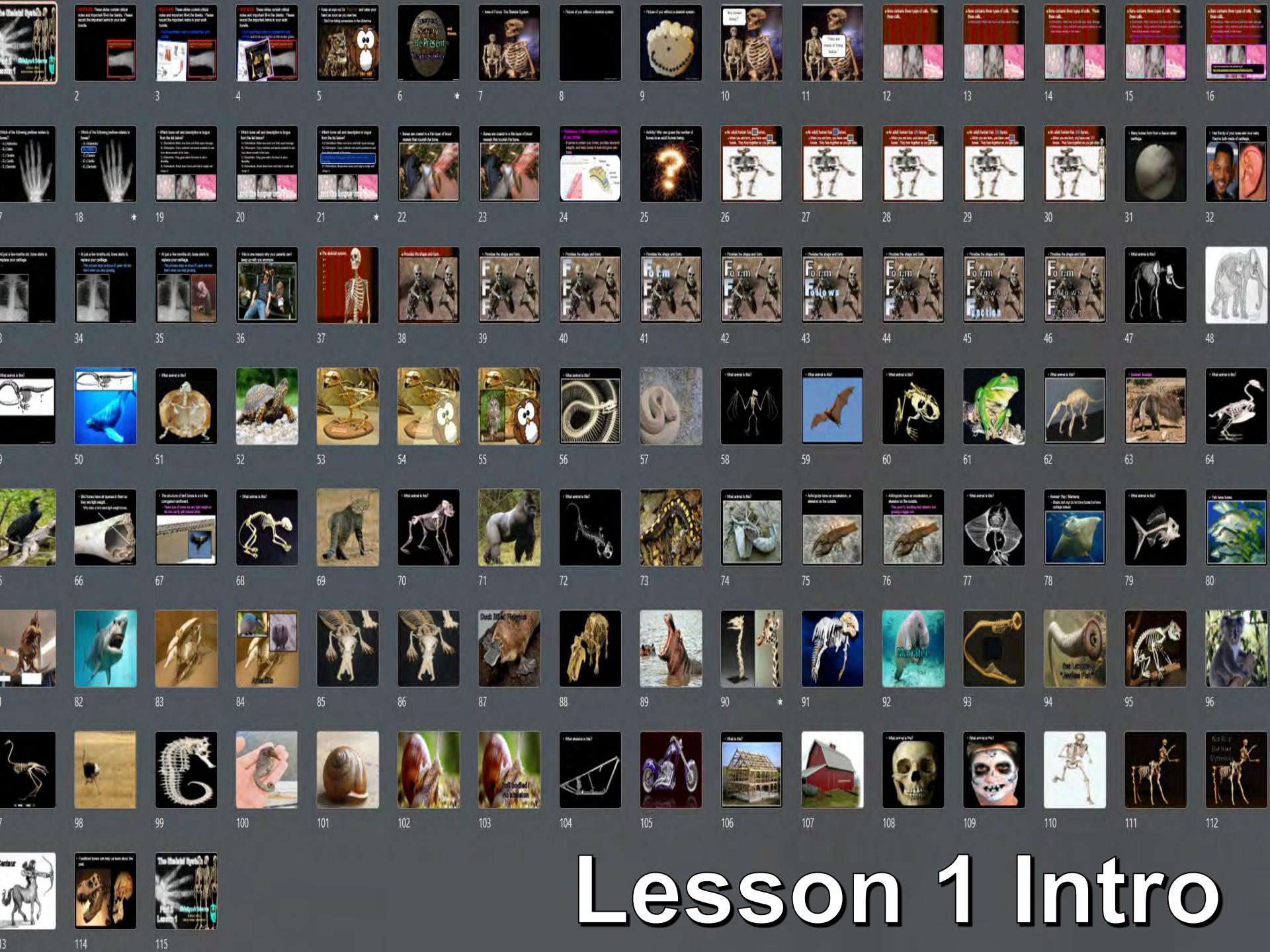


**slideshow supports
Work Bundle**

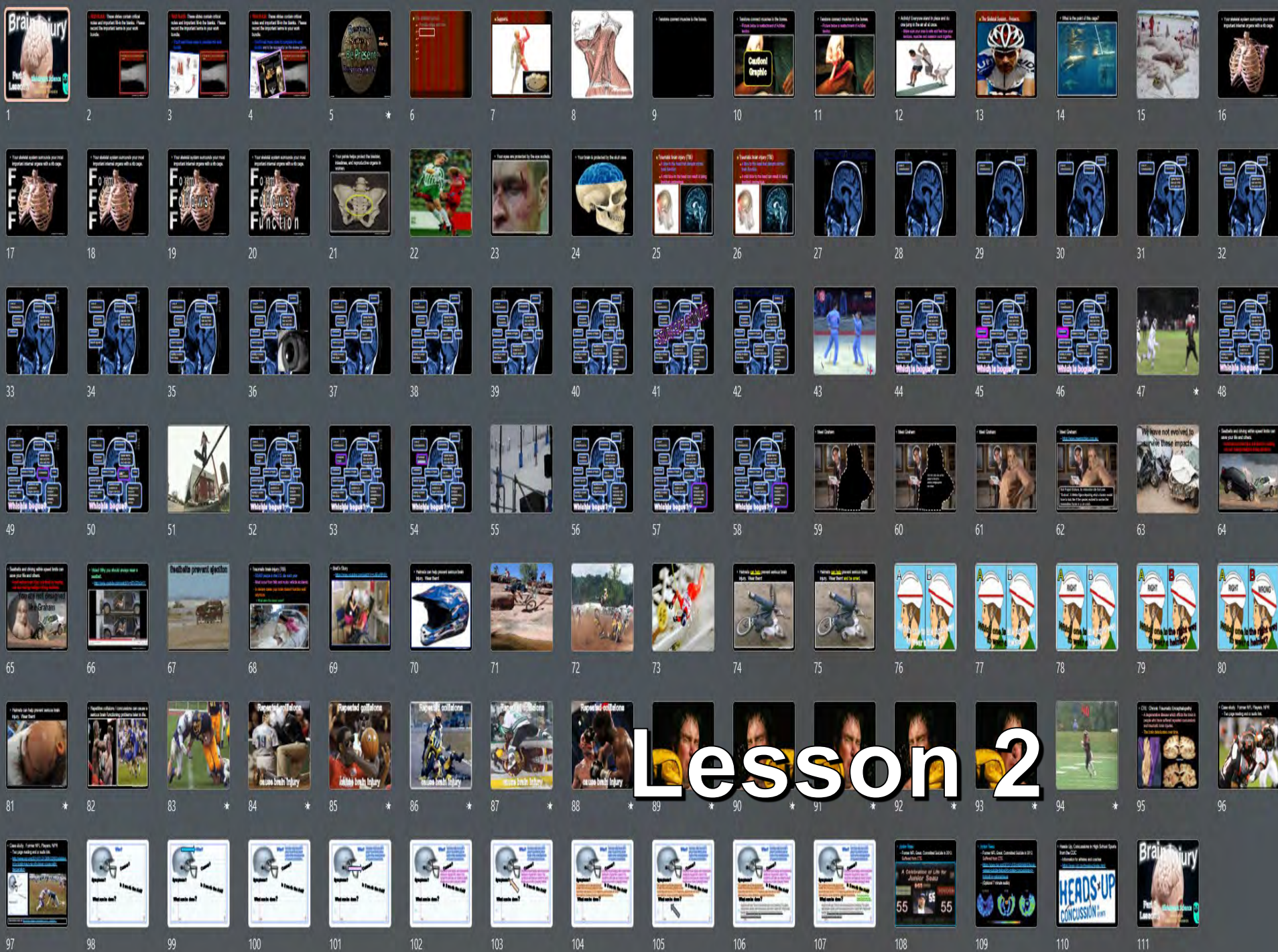
Lesson Planning

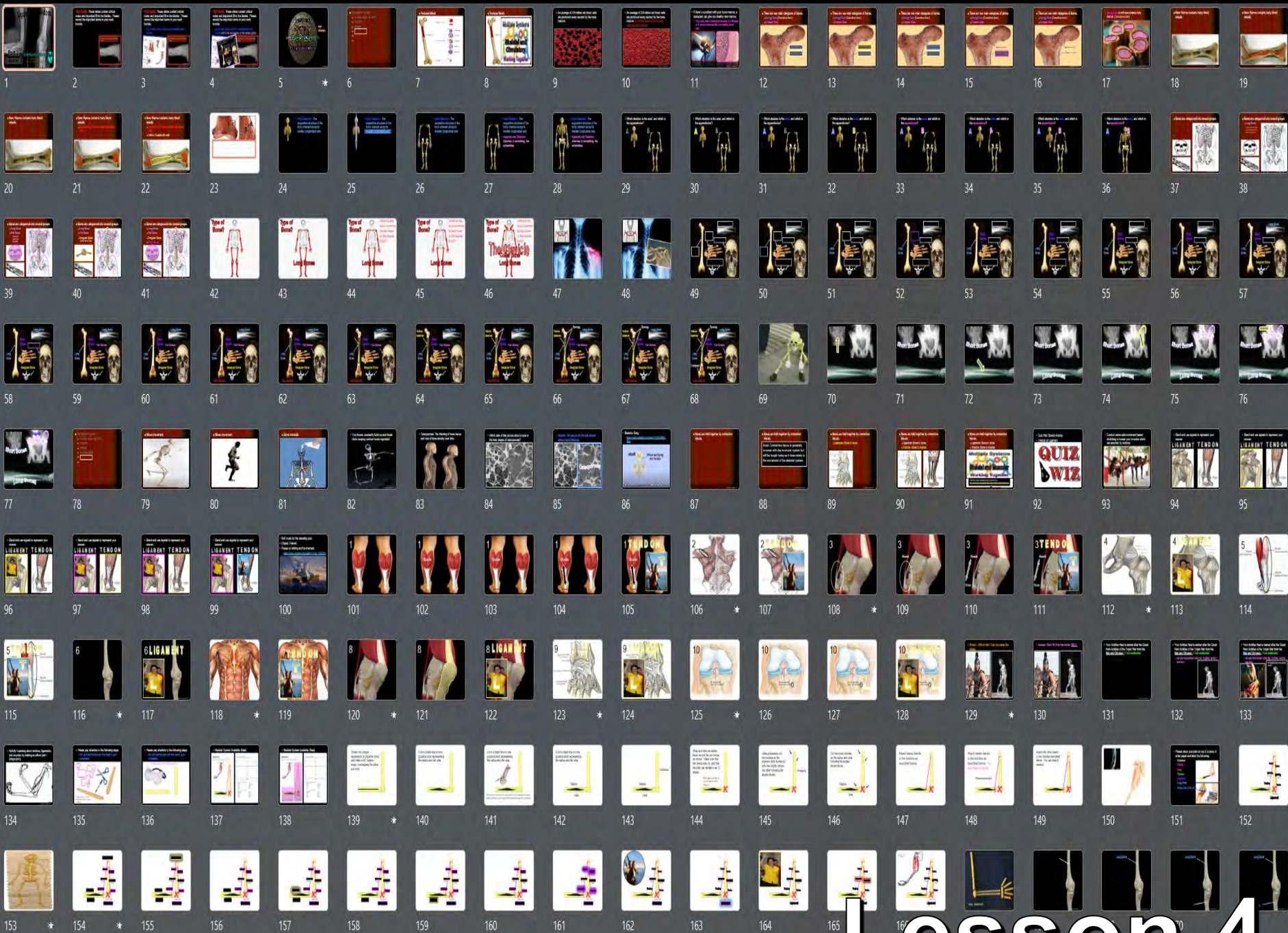
Daily lessons space exciting hands-on activities, red slide notes, video and academic links, projects, simulations, readings, built-in quizzes, and review opportunities throughout the slideshows. A typical day may have many different learning styles being targeted. Daily lesson planning becomes advancing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



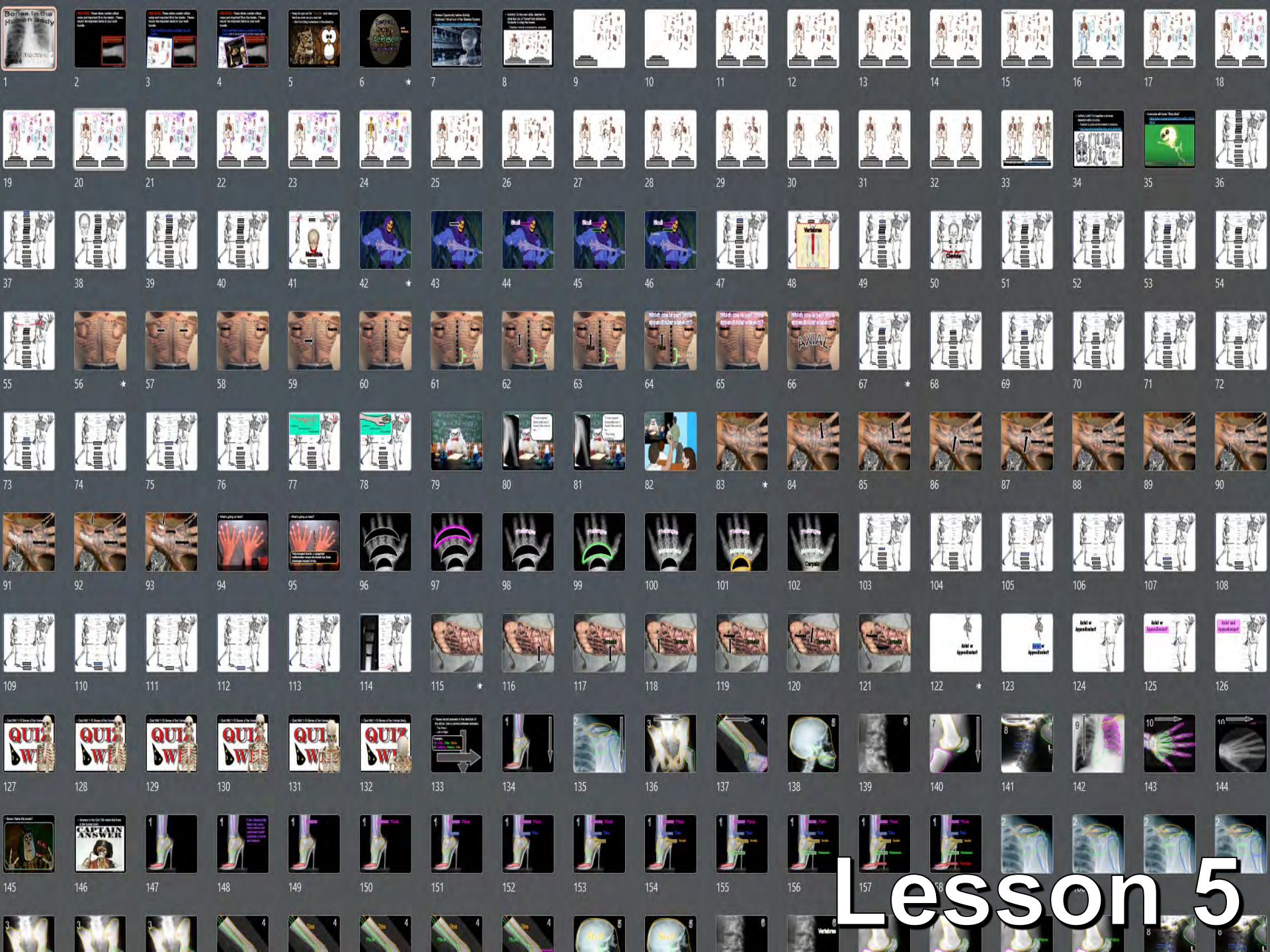


Lesson 1 Intro



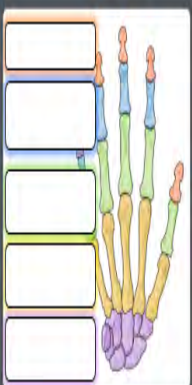
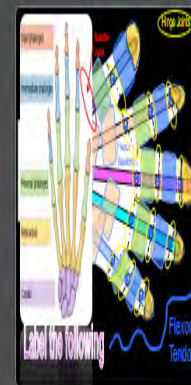
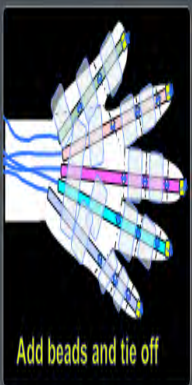
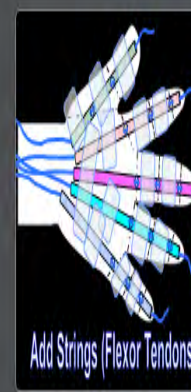
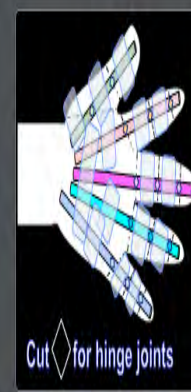
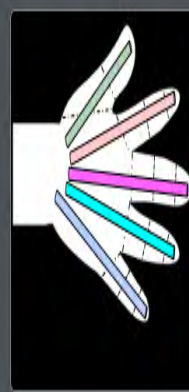
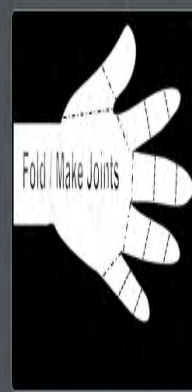


Lesson 4



Lesson 5





Lesson 7

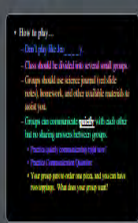




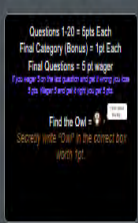
1



2



3



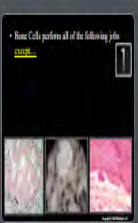
4



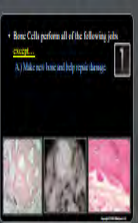
5



6



7



8



9



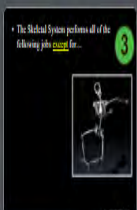
10



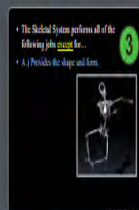
11



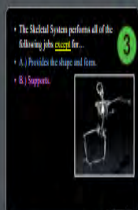
12



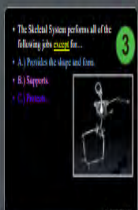
13



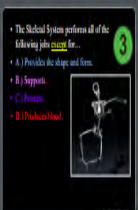
14



15



16



17



18



19



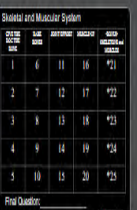
20



21



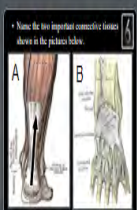
22



23



24



25



26



27



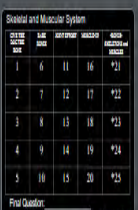
28



29



30



31



32



33



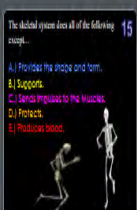
34



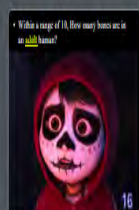
35



36



37



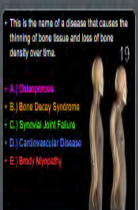
38



39



40



41



42



43



44



45



46



47



48



49



50

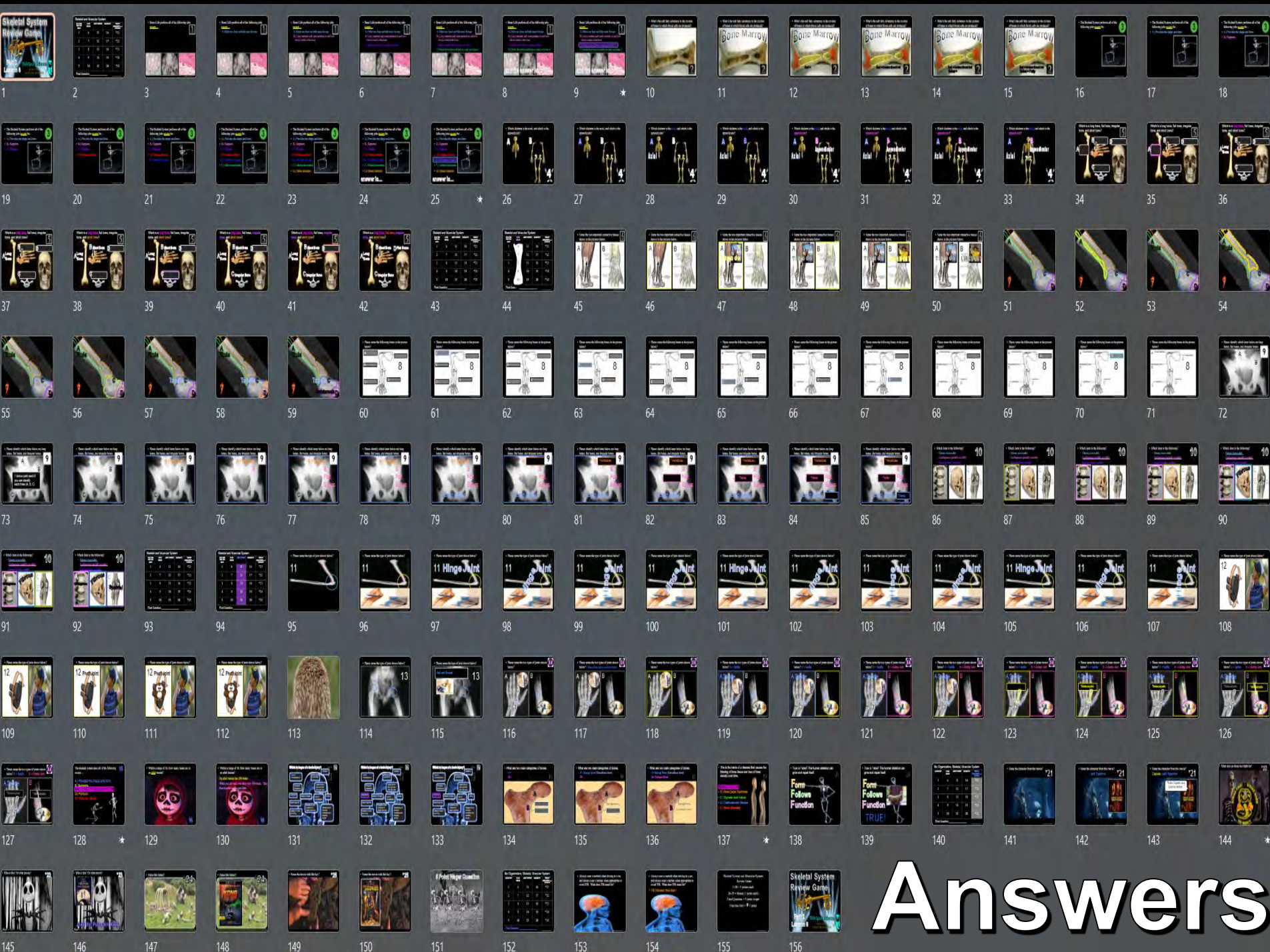


51



52

Lesson 9 Quiz Game



Answers

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 Game / 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 2 Review Game

1-20 = 5 pts
*20*25 = Bonus = 1 pt.
(Secretly write owl in correct space = 1 pt)
Final Question = 5 pt wager

Name: _____
Date: Today
Score ____ / 100

GIVE THE DOG A SONG	BARE BONES	JOINT EFFORT	MUSCLE UP	SKELETONS 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: _____

Copyright © 2024 Skelaport, LLC

- Bone Cells perform all of the following jobs

except...

- A.) Make new bone and help repair damage.
- B.) Carry nutrients and waste products to and from blood vessels in the bone.
- C.) Make muscle fibers contract and relax.
- D.) Break down bone and help to sculpt and shape it.

1



and the answer is...

Copyright © 2024 SlideShare, LLC

- What's the soft fatty substance in the cavities of bones in which blood cells are produced?



2

- The Skeletal System performs all of the following jobs except for...

- A.) Provides the shape and form.
- B.) Supports.
- C.) Protects.
- D.) Produces blood.
- E.) Provides Oxygen
- F.) Allows movement.
- G.) Stores minerals



answer is...

3

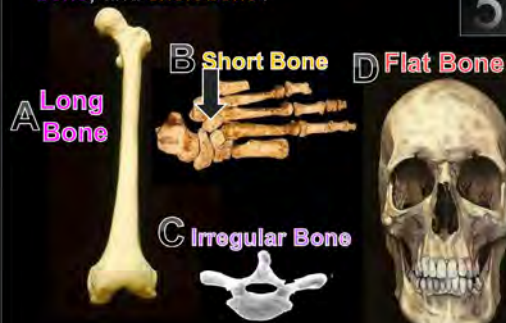
Copyright © 2024 SlideShare, LLC

- Which skeleton is the axial, and which is the appendicular?



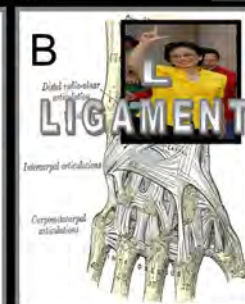
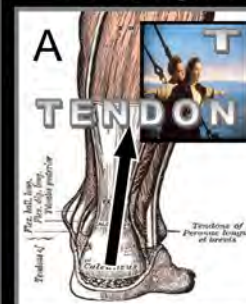
4

- Which is a long bone, flat bone, irregular bone, and short bone?



5

- Name the two important connective tissues shown in the pictures below.

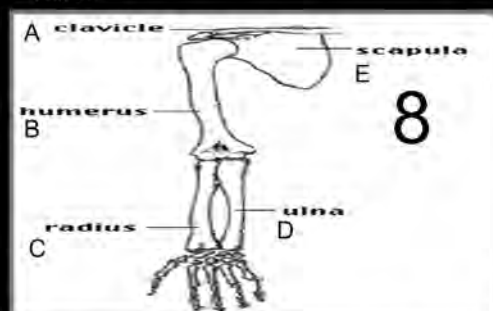


6

Copyright © 2024 SlideShare, LLC



- Please name the following bones in the picture below?



8

Copyright © 2024 SlideShare, LLC

- Please identify which letter below are long bones, flat bones, and irregular bones.



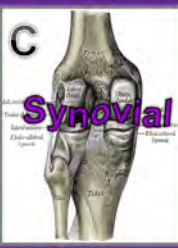
9

Copyright © 2024 SlideShare, LLC

• Which Joint is the following?

- Fibrous (immovable)
- Cartilagenous (partially movable)
- Synovial (freely movable)

10



Copyright © 2024 SlideShare, LLC

• Please name the type of joint shown below?

11



Copyright © 2024 SlideShare, LLC

• Please name the type of joint shown below?

12 Pivot Joint



Copyright © 2024 SlideShare, LLC

• Please name the type of joint shown below?

Ball and Socket

13



Copyright © 2024 SlideShare, LLC

• Please name the two types of joints shown below? A = Saddle B = Gliding Joint

14

A Saddle

*Metacarpals



B

*Metatarsals



Copyright © 2024 SlideShare, LLC

The skeletal system does all of the following except...

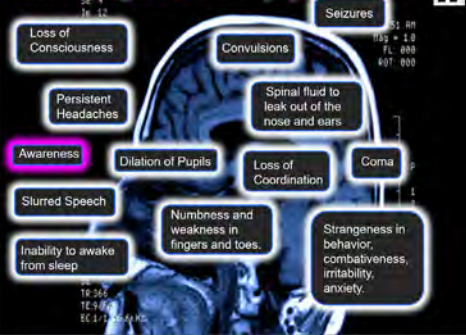
15

- A.) Provides the shape and form.
- B.) Supports.
- C.) Sends impulses to the muscles.
- D.) Protects.
- E.) Produces blood.



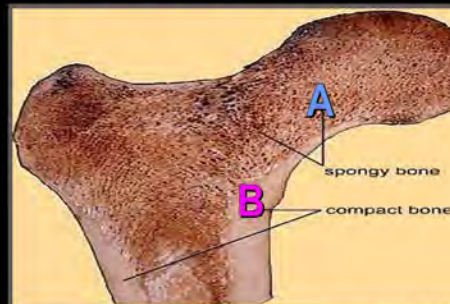
Which is bogus of a brain injury?

17



• What are two main categories of bones.

- A= Spongy Bone (Cancellous bone)
- B= Compact Bone



Copyright © 2024 SlideShare, LLC

• True or False? The human skeleton can grow and repair itself.

Form Follows Function TRUE!



- Always wear a seatbelt when driving in a car, and always wear a helmet when appropriate to avoid TBI. What does TBI stand for?
- TBI Traumatic Brain Injury

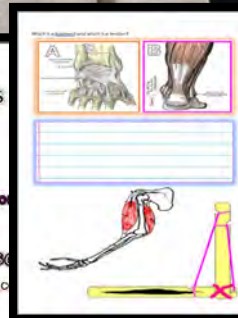
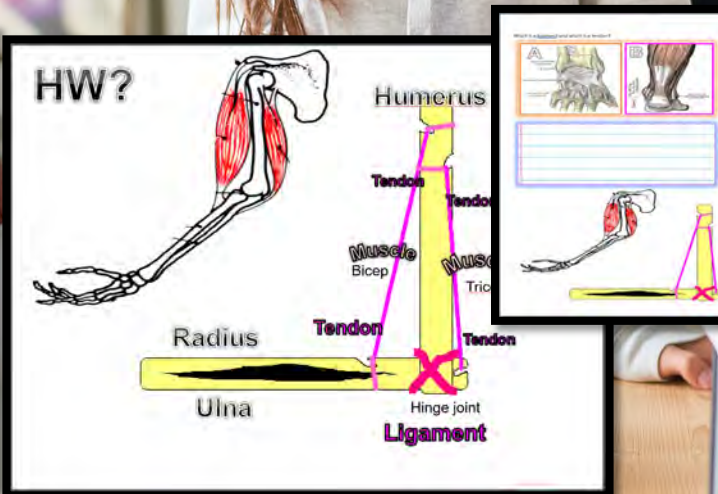


Copyright © 2024 SlideShare, LLC

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.

- Please pay attention to the following steps.
 - We will build the joint and then label it upon completion.



- DIY Biomechanical Hand. (Optional)
 - Watch video and then make.
 - <https://www.youtube.com/watch?v=RzpPBz79XRo>

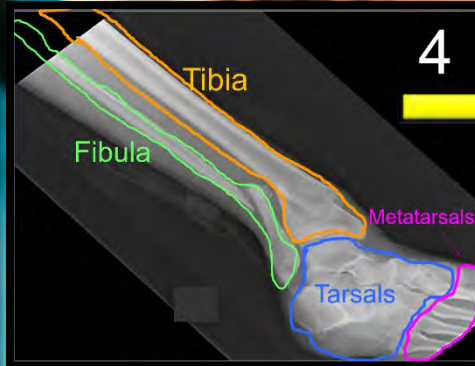
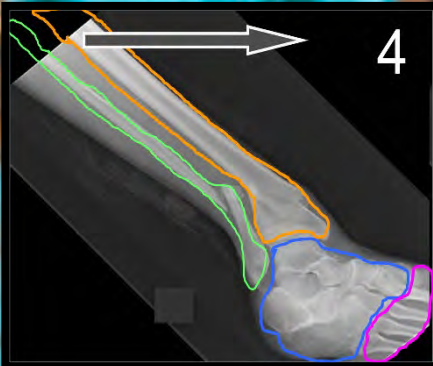
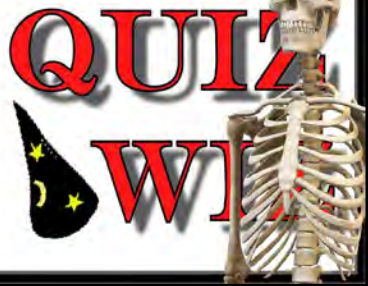
Your fingers (phalanges and carpals) are hinge joints that allow for flexion and extension only.

NOW PULL THE STRINGS!

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 Wiz! 1-10 Bones of the Human



Quiz Wiz! 1-10 Bones of the Human Body.

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

Part 2 (Lesson 2) Review: joints

The human skeletal system... (FF)

- incredibly strong
- light weight
- Can _____ and _____ itself.

A human joint: A place where two bones _____

Joints can be...

- A) _____ (immovable)
- B) _____ (partially movable)
- C) _____ (freely movable)

Please place the correct term below the appropriate picture!

Word Bank: Fibrous (immovable), Cartilaginous (partially movable), Synovial (freely movable)

A

B

C

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.

• Skeleton Song

- <https://www.youtube.com/watch?v=90A0bMlvBSA>



• Video Link! DARPA's Prosthetic Limb

- <http://www.youtube.com/watch?v=GRuizeW-3Hc>



• Meet Graham

- <https://www.meetgraham.com.au/>

Visit Project Graham. An interactive site that uses "Graham". A lifelike figure depicting what a human would have to look like if the species evolved to survive the tremendous forces in a car crash.

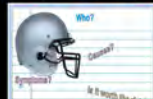
• Brett's Story

- <https://www.youtube.com/watch?v=pJIEwRPrl04>



• Case study. Former NFL Players. NPR

- Two page reading and or audio link.
- <http://www.npr.org/2014/01/31/269422083/sideline-d-by-brain-injury-ex-nfl-player-cope-with-desperation>



• Video Link! PRICE and ankle sprains.

- http://www.youtube.com/watch?v=yRta_3YUyY

R est	helps limit movement that can worsen the injury.
I ce	applied to the area reduces swelling and helps stop any bleeding (that has the opposite effect).
C ompression	means applying pressure to the area (or wrapping with a cloth or bandage) to help stop the bleeding.
E levation	means raising the injured area above the rest of the body as a way to reduce swelling.

- Activity Link! Put together a human skeleton with cut-outs.
- Teacher to print out the sheets in advance.
- <http://www.enchantedlearning.com/crafts/hallo>



• DIY Biomechanical Hand. (Optional)

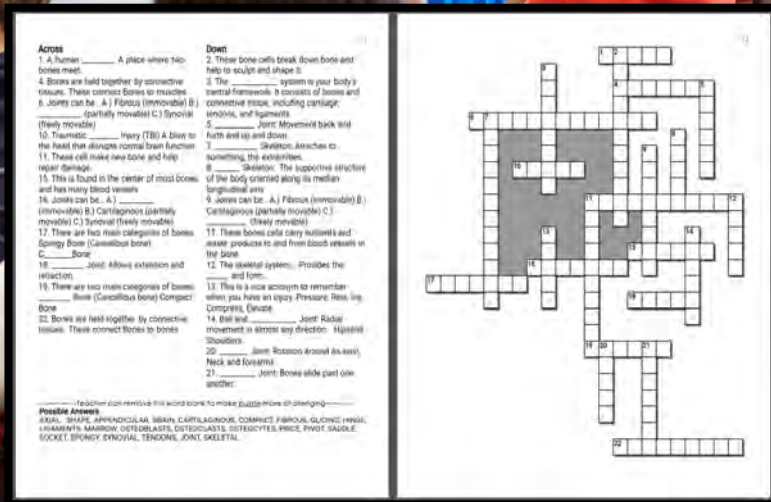
- Watch video and then make.
- <https://www.youtube.com/watch?v=RzpPBz79XR0>

Your fingers (phalanges and carpals) are hinge joints that allow for flexion and extension only.



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 2 Lesson 1 Skeletal Syst...](#)

Google Slides



[Part 2 Lesson 6 Review Injur...](#)

Google Slides



[Part 2 Lesson 6 Biomechani...](#)

Google Slides



[Part 2 Lesson 5 Skeletal Joi...](#)

Google Slides



[Part 2 Lesson 4 Human Bones](#)

Google Slides



[Part 2 Lesson 3 Bones Tend...](#)

Google Slides



[Part 2 Lesson 7 Review Game](#)

Google Slides



[Part 2 Lesson 2 Brain Injury](#)

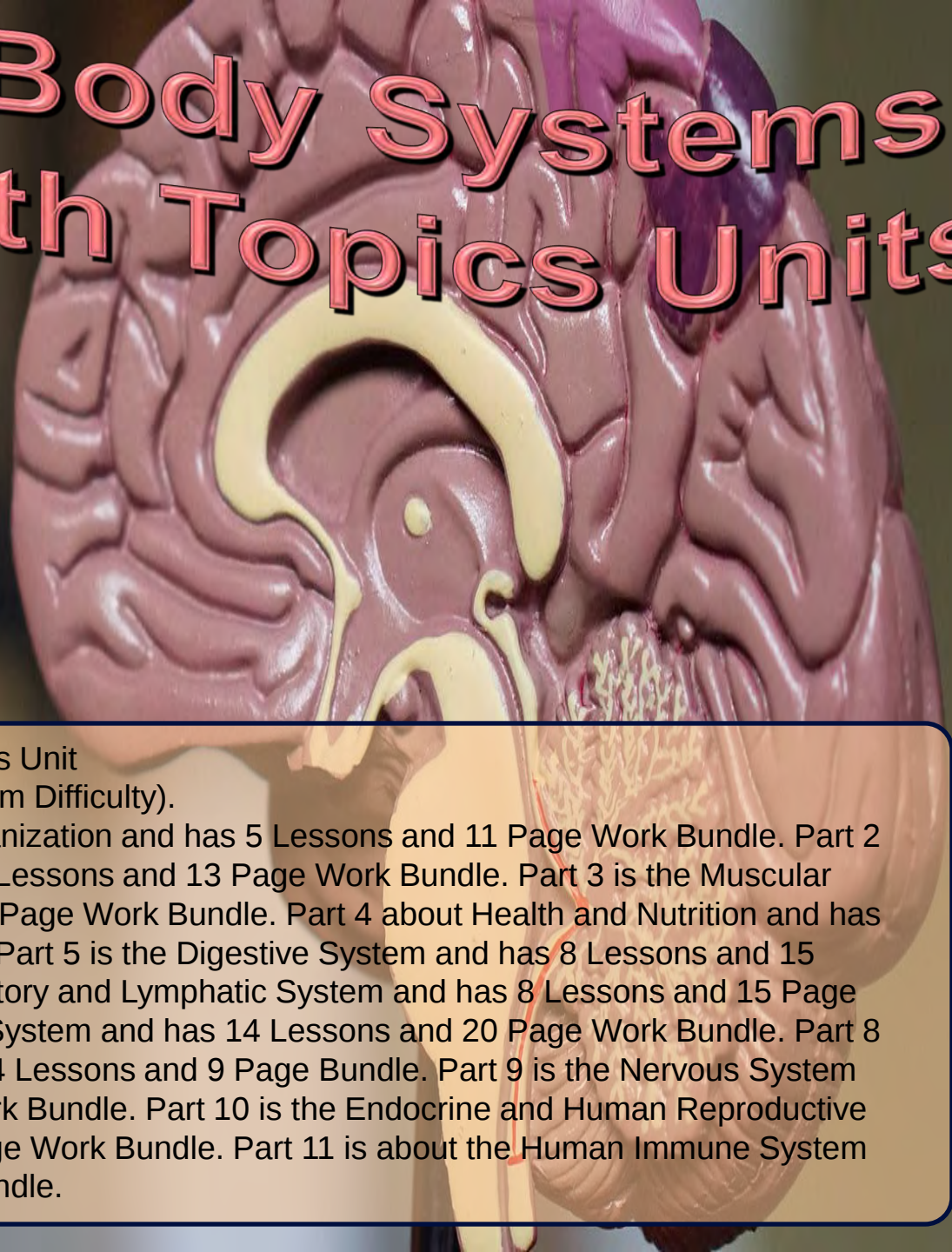
Google Slides

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

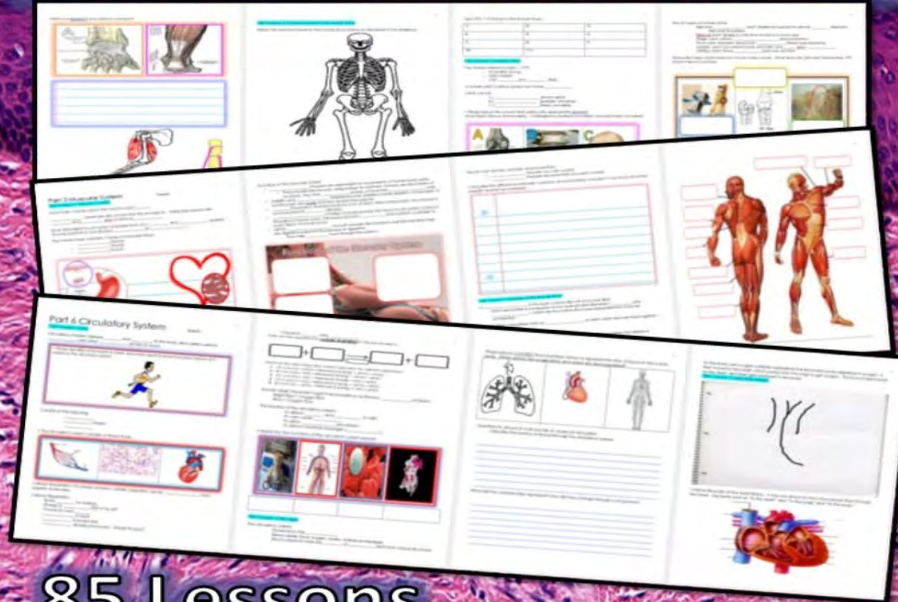


Human Body Systems and Health Topics Unit

Human Body Systems and Health Topics Unit
85 Lessons and 11 Parts. (6th- 8th Medium Difficulty).

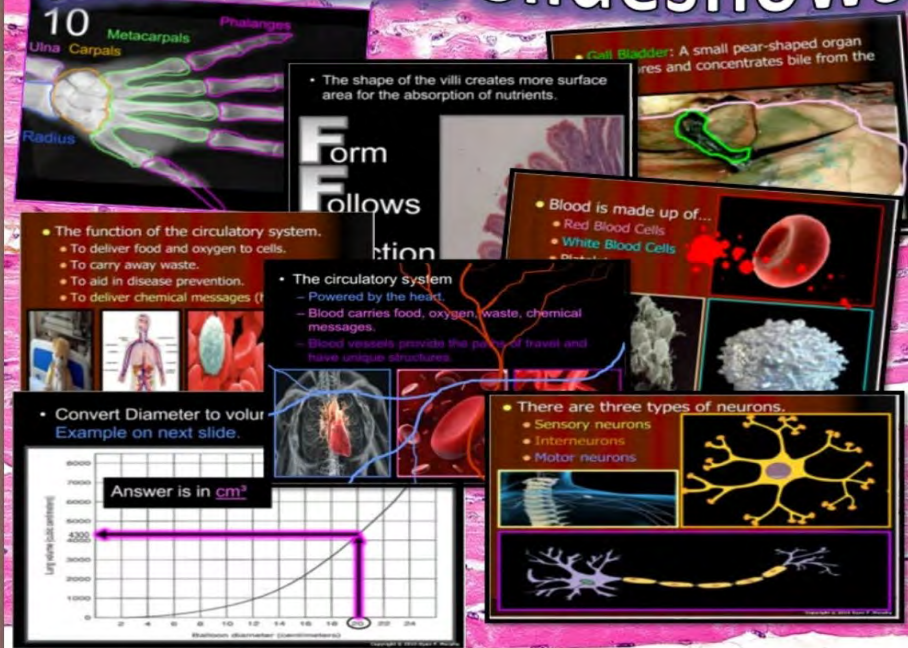
Part 1 is about Levels of Biological Organization and has 5 Lessons and 11 Page Work Bundle. Part 2 is about the Skeletal System and has 7 Lessons and 13 Page Work Bundle. Part 3 is the Muscular System and contains 4 Lessons and 10 Page Work Bundle. Part 4 about Health and Nutrition and has 12 Lessons 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

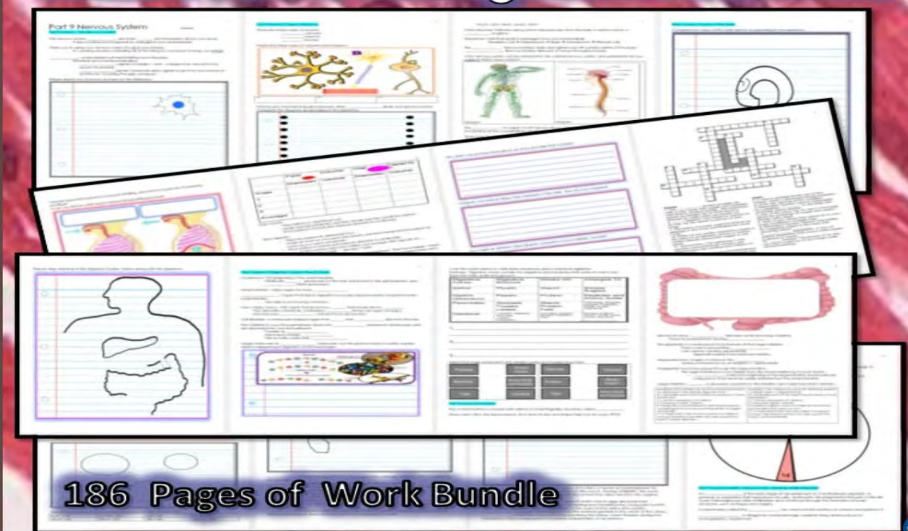
Interactive Slideshows



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

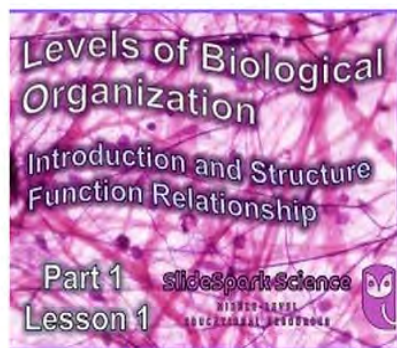


With Follow Along Work Bundles

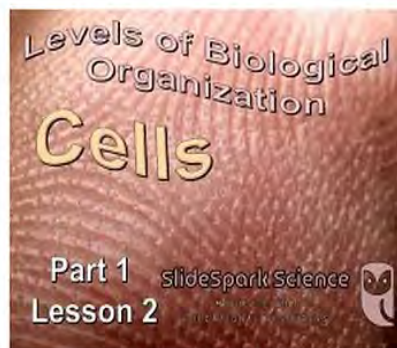


Human Body Systems Unit Part 1 Download : 5 Lessons of 50 Minutes and 11 Page Follow Along Work Bundle, For fun Quiz to see if student can name some Human Organs, Answers to the Quiz, Description of Anatomy, Introduction to Concept Form Follows Function, Describe how a classroom tool demonstrates Form 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

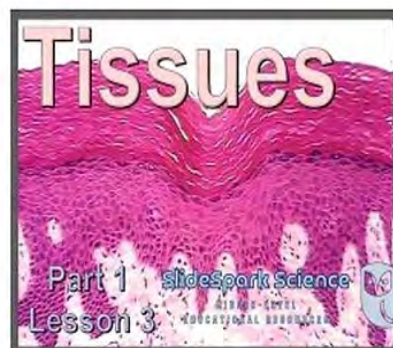
Part 1: Levels of Biological Organization



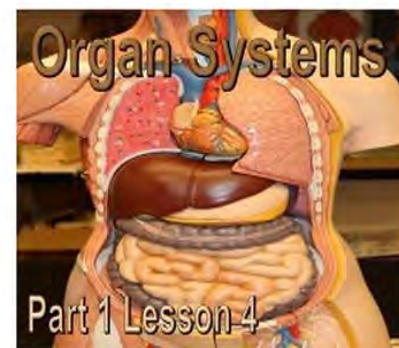
Part 1 Lesson 1 Intro Structure Function



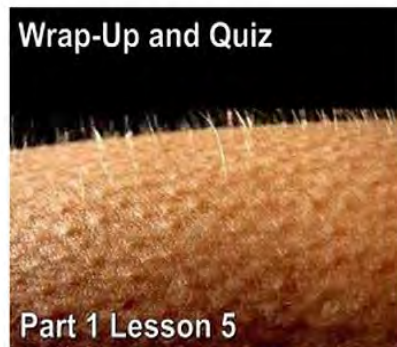
Part 1 Lesson 2 Levels and Cells



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 Levels of Biological Organization Name: _____

Part 1 Review

Working in small groups, Name the Organ of the human body and the system it belongs to if you know it. Let's see what you already know. (For fun)

1) LIVER	2) STOMACH	3) BLOOD VESSELS	4) BRAIN
5) HEART	6) PANCREAS	7) KIDNEY	8) LUNGS
9) BLADDER	10) SPLEEN	11) GALL BLADDER	12) RECTUM
13) NADDERA	14) ESOPHAGUS	15) TESTICLE	16) EAR
17) THYROID	18) UTERUS	19) ADRENAL	20) TONGUE

Source: [KIDS-LEARN.COM](https://www.kids-learn.com)

Anatomy: the science of the **shape** and **structure** of organisms.

(III) **Form Follows Function**: Part of the body are shaped to perform a particular job.

- Students will pick an object with eyes closed.
- Make a quick sketch below.

Form Follows Function

A paper clip hold sheets of paper together, usually made of steel wire bent to a looped shape. The paperclip utilizes torsion and elasticity in the wire, and friction between wire and paper to hold paper together. A simple bending of wire creates a nice place to slide and hold paper. A simple example of Form Follows Function

Part 1 Work Bundle Print Answers

Part 1 Levels of Biological Organization Name: _____

Part 1 Review

Working in small groups, Name the Organ of the human body and the system it belongs to if you know it. Let's see what you already know. (For fun)

1)	2)	3)	4)
5)	6)	7)	8)
9)	10)	11)	12)
13)	14)	15)	16)
17)	18)	19)	20)

Source: _____

Anatomy: the science of the _____ and _____ of organisms.

(III) _____ Part of the body are shaped to perform a particular job.

- Students will pick an object with eyes closed.
- Make a quick sketch below.

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 Brain 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



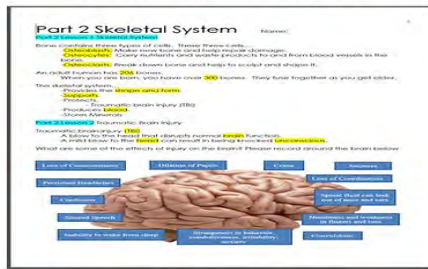
Part 2 Lesson 6 Review Injuries



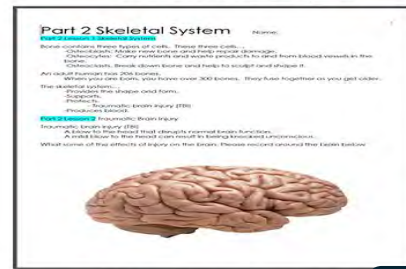
Part 2 Lesson 7 Review Game



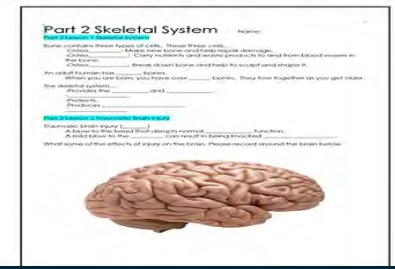
Part 2 Lesson 8 Review Game Answers



Part 2 Work Bundle Answers



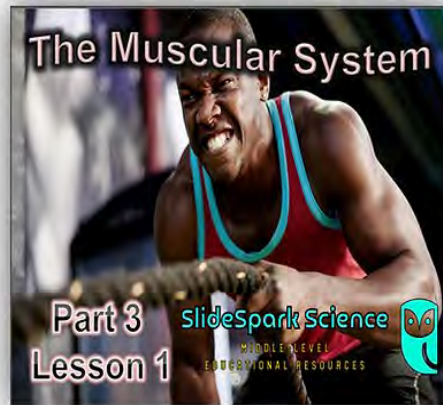
Part 2 Work Bundle Print with Notes



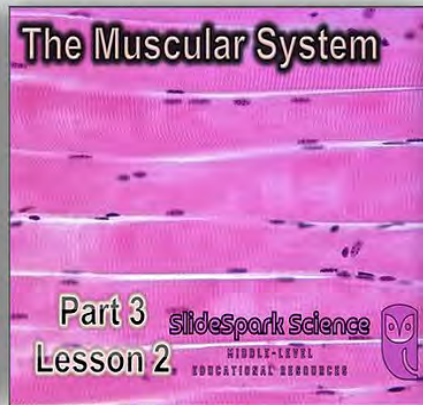
Part 2 Work Bundle Print

Part 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



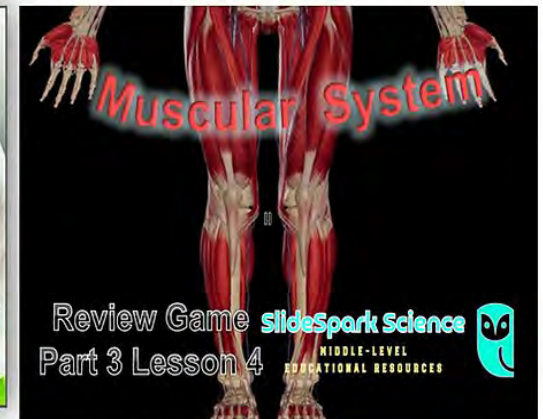
Part 3 Lesson 1 Types of Muscles



Part 3 Lesson 2 Muscles Human Body



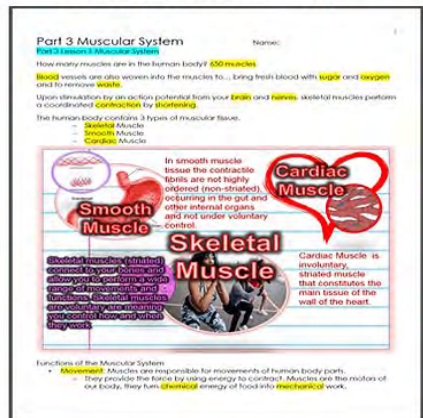
Part 3 Lesson 3 Chicken Leg Dissection



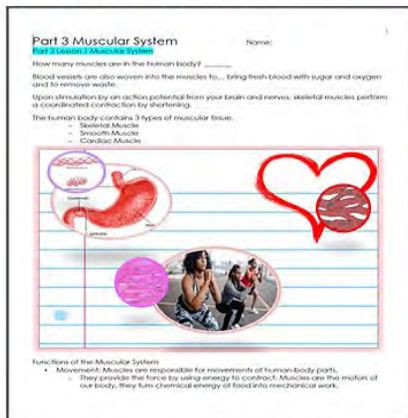
Part 3 Lesson 4 Review Game



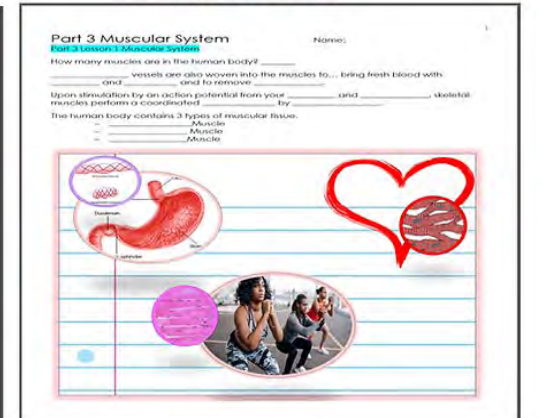
Part 3 Lesson 5 Review Game Answers



Part 3 Work Bundle Answers



Part 3 Work Bundle Print Notes



Part 3 Work Bundle Print

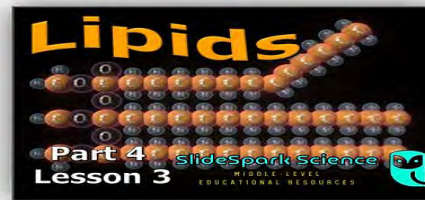
Part 4: Health and Nutrition: 12 Lessons of about 50 minutes and 25 Page Follow Along Work Bundle, CHNOPS/SPONCH biologically important elements, Carbon and Organ Chemistry, % of SPONCH Elements in Living Things, Graphing this %, CaFé, Calcium, Iron, Organic Building Blocks, Carbohydrates, Lipids, Proteins, 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



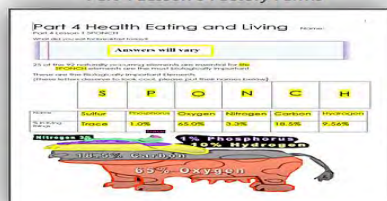
Part 4 Lesson 10 Eating Disorders



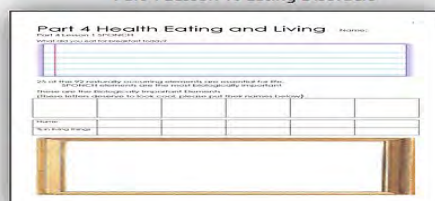
Part 4 Lesson 11 Review Game



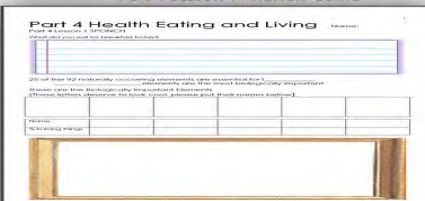
Part 4 Lesson 12 Review Game Answers



Part 4 Work Bundle Answers



Part 4 Work Bundle Print with Notes

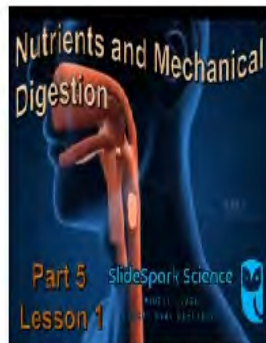


Part 4 Work Bundle Print

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 and 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



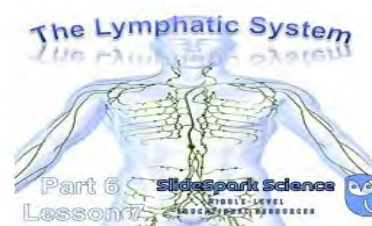
Part 6 Lesson 4 Review Quiz



Part 6 Lesson 5 Blood Cells



Part 6 Lesson 6 Blood Types



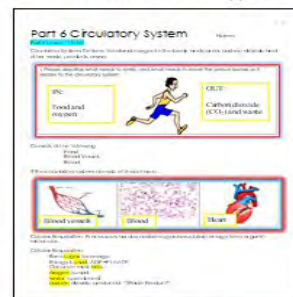
Part 6 Lesson 7 Lymphatic System



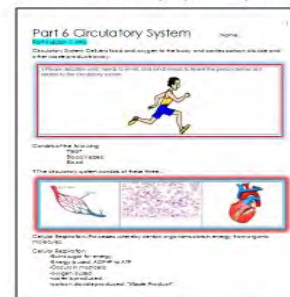
Part 6 Lesson 8 Review Game



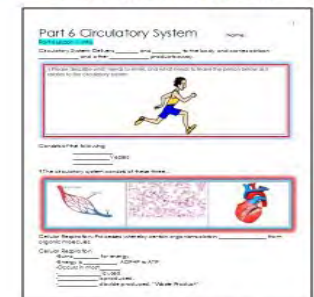
Part 6 Lesson 9 Review Game Answers



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 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



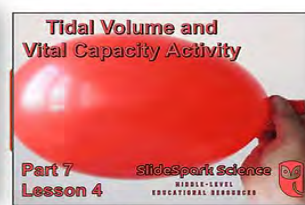
Part 7 Lesson 1 Respiratory System



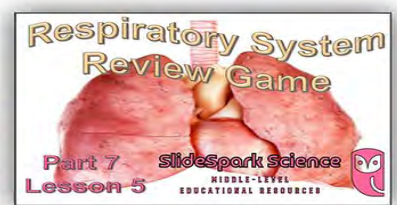
Part 7 Lesson 2 Organs of Respiratory



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

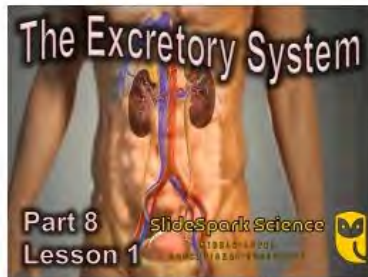


Part 7 Work Bundle Print

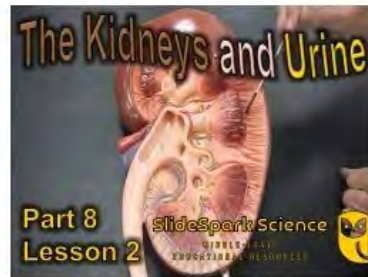
Part 7: Respiratory System

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



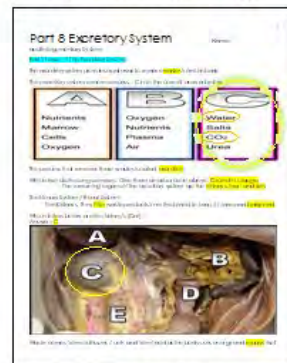
Part 8 Lesson 3 Integumentary Systems



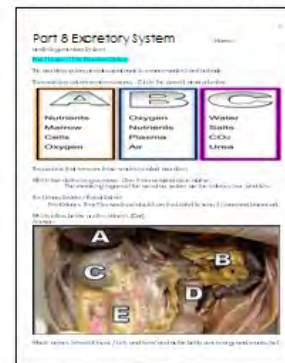
Part 8 Lesson 4 Review Quiz 10Q



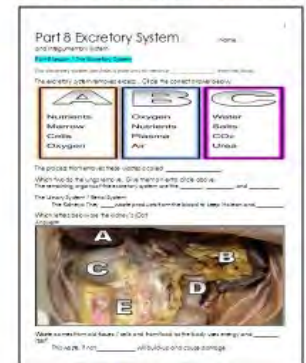
Part 8 Lesson 5 Quiz Answers 10Q



Part 8 Work Bundle Answers



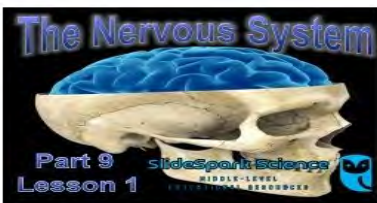
Part 8 Work Bundle Print with notes



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



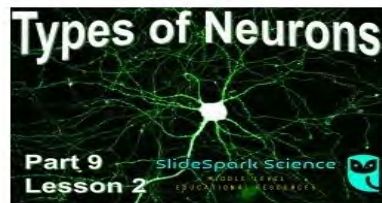
Part 9 Lesson 5 Eye Parts Review



Part 9 Lesson 9 Hearing



Part 9 Lesson 13 Review Game Answers



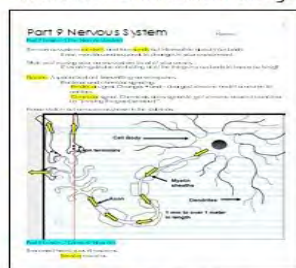
Part 9 Lesson 2 Types of Neurons



Part 9 Lesson 6 Observation Basics



Part 9 Lesson 10 Times Have Changed



Part 9 Work Bundle Answers



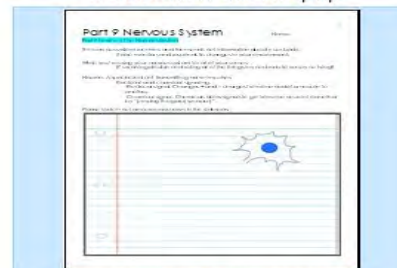
Part 9 Lesson 3 Brain



Part 9 Lesson 7 Observation Cont



Part 9 Lesson 11 Touch Wrap Up



Part 9 Work Bundle Print with Notes



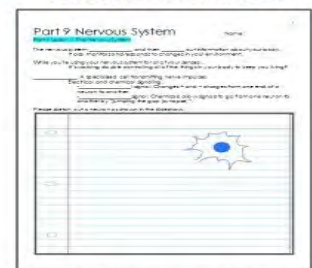
Part 9 Lesson 4 The Eye



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



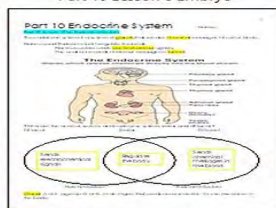
Part 10 Lesson 9 Miracle and Wrap Up



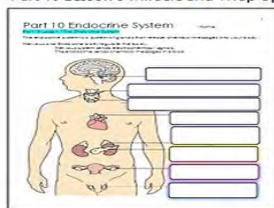
Part 10 Lesson 10 Review Game



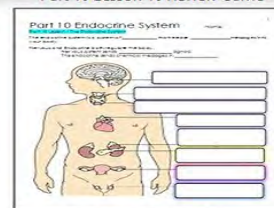
Part 10 Lesson 11 Review Game Answers



Part 10 Work Bundle Answers



Part 10 Work Bundle Print with Notes



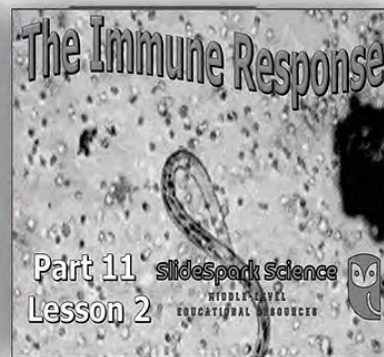
Part 10 Work Bundle Print

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



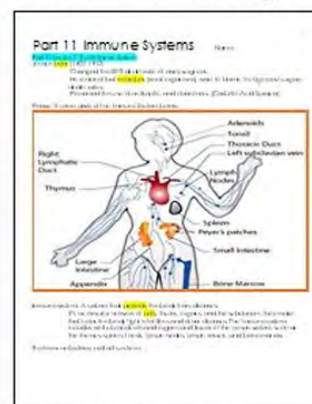
Part 11 Lesson 3 Inside Look Flu Vaccines



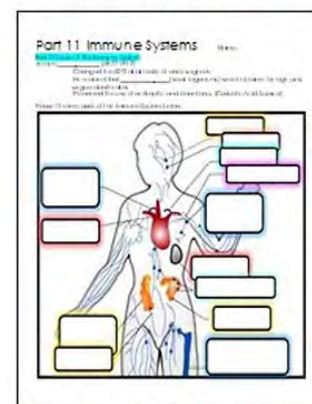
Part 11 Lesson 4 Review Game



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](#)



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](#)