



Organs & Organ Systems

What I Will Be Learning In This Mastery Badge:

In this master badge you will learn how tissues combine to form organs, and how organs combine to form organ systems.

What This Packet Includes:

It is important that you complete all aspects of this packet so that you gain the knowledge and skills that we are working on.

I. **Discovering Lab**

A discovering lab is a fun, introductory lab, where we discover the knowledge on our own.

II. **Video Instruction**

You will watch a video presented by Mr. Bertoch, and answer questions about it.

III. **Literacy Practice**

Reading and writing are critical life skills, and also very important to science. You will read the assigned article and complete a writing prompt.

IV. **Applying Lab**

An applying lab is how you pass off the Mastery Badge. It serves as the quiz. It is a hands on demonstration that you have mastered the skills and content of this badge.

Key Things We Will Learn In This Mastery Badge

Some of the most important things we will learn in this mastery badge:

- Two or more tissues combine to form an organ.
- Organs do specific jobs to keep the organism alive and healthy.
 - Heart, Lungs, Stomach, Brain, Kidneys, Intestines (large and small), and Liver.
- Organs combine to form organ systems.
 - Nervous System
 - Skeletal
 - Muscular System
 - Circulatory System
 - Respiratory System
 - Digestive System

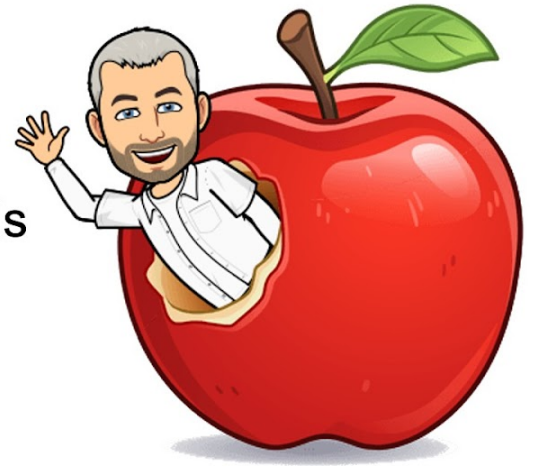
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Discovering Lab

Learning Through Hands
On Activities



Activity: Discovering Organ Systems

Directions: Follow the directions below to discover how tissues combine to form various organs and organ systems.



Video Instructions Available For This Assignment. Watch this video to learn how to do this assignment, and why it is important.

Scan This QR Code To Watch Mr. Bertoch Give You Directions For This Assignment

Goal: To learn as much as you can about how tissues combine to form organs and organ systems.

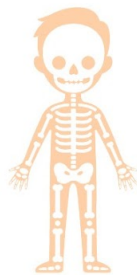
Human Body Systems



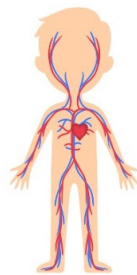
boy



muscular



skeletal



circulatory



nervous



digestive



respiratory



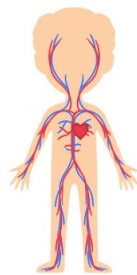
girl



muscular



skeletal



circulatory



nervous



digestive



respiratory

1. What is an organ?

2. Give an example of an organ and explain its function.

3. What kinds of tissues are found in the organ you gave in the last question? What does each type of tissue do?

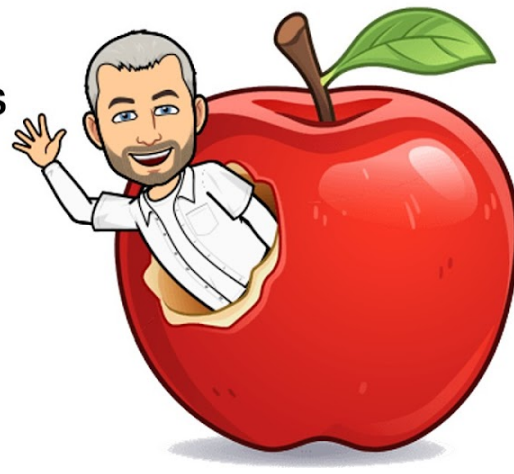
4. What is an organ system?

Complete this chart, explaining the job of each organ system, and the organs that make them up.

Organ System	Function/Job	Organs Found In this Organ System
Nervous System		
Circulatory System		
Respiratory System		
Skeletal System		
Muscular System		
Digestive System		
Urinary System		
Integumentary System		

Video Instruction

Reviewing The Teacher's Instruction At My Own Pace



Handsome Science Teacher One Take Videos

Now that you have completed the Discovering Lab let's watch the video that goes with it. In this video Mr. Bertoch will help connect the discoveries that you made during the lab to the broader concepts covered under this badge, and will also introduce the vocabulary that goes with these concept.

Take Your Time, Pause And Rewind As needed

You are not in a hurry! It is more important that you understand the concepts in this video than that you finish it quickly. Take your time. If you don't understand something, pause the video and use the Internet or other resources to look up the concept that has you confused.

When you finish this video, you should have a good understanding of the concepts that have been taught. If you find yourself confused, rewind, and rewatch.

The Video For This Mastery Badge Can Be Opened Using This QR Code

This Mastery Badge includes one video:



Watch The Assigned Science Video

Scan This QR Code To Open And Watch The Assigned Video For This Mastery Badge

Check Point

Let's make sure that you really did take your time and watch the video carefully! Remember that it is important to hold yourself accountable to a high standard and to take pride in your own success as a learner.

I watched the video carefully, and paused to look up anything I didn't understand.

Recording Your Learning

On the next page, you will record your learning and connect it to things you already know.

Ten Things I Learned From This Video

A powerful tool to help you retain what you learn is to take notes. Notes give you something that you can look back at later, to quickly remind your brain reinforcing the memories for the concepts you have learned. Record ten things that you learned or that you perhaps already knew that were discussed in this video.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

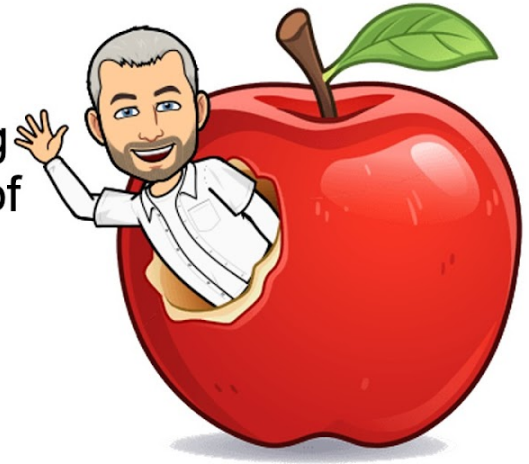
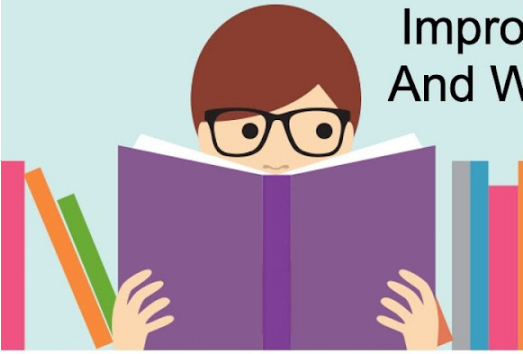
Now, Let's Connect These New Concepts To Things You Already Knew

Another great way to help your brain retain new things is to connect these new concepts to other things that you already know. This gives your mind a place to store the new knowledge. Imagine that you are placing the new knowledge on a shelf in your brain next to facts that are already in there.

Write a paragraph explaining how the concepts taught in this video relate to things you already knew. There are no wrong answers. What are some things that you already knew that this video reminded you of?

Literacy Practice

Improving Our Reading
And Writing In Search of
Knowledge



Activity: Reading And Writing About This Topic

Directions: Reading and writing are very important life skills. Good scientists must be able to learn through reading and communicate their own discoveries through writing.



Video Instructions Available For This Assignment. Watch this video to learn how to do this assignment, and why it is important.

Scan This QR Code To Watch Mr. Bertoch Give You Directions For This Assignment

1. Practice Reading For Understanding

Read the article below **for understanding**. Reading for understanding means that you take your time and monitor your own learning. If you get to the end of a sentence and you do not remember or understand what you read, **re-read it**.

2. Practice Writing To Communicate

Complete the writing prompt below. Do your very best to write clearly so that others will understand what you are saying. This means using correct spelling, grammar, and writing, taking your time to think about the best ways to clearly communicate to others the main ideas that you are trying to get across to them.

Article:



Read The Assigned Article Carefully For Understanding.

<https://handsomescienceteacher.com/Online-science-classes-kids/tissues-organs-organ-systems-organisms/>

Scan This QR Code To Open And Read The Article That Goes With This Mastery Badge

Check Point

Let's make sure that you really did read for understanding! Remember that it is important to hold yourself accountable to a high standard and to take pride in your own success as a learner.

I Read For Understanding. I did not skim the article. I understood the material that the article discussed.

Quiz Time

Complete the quiz at the end of the article and post your score in the box below. Your goal is to get at least 75% on the quiz. Did you accomplish this goal?

%

Now Let's Write To Communicate

Remember that when you write to communicate you are taking your time, and explaining the topic in a detailed and concise way. Don't rush! You are not in a hurry. Think about what you are going to say, and plan how you will say it. So that someone else who reads your paragraphs will understand them easily.

Writing Prompt: Write two paragraphs in your own words discussing the four types of tissues and their functions.

Blank area for writing the response to the writing prompt.

Name: _____

Date: _____



Applying Lab

Proving That We Can Do It Ourselves



Activity: Frog Dissection

Directions: In this lab, you are going to either dissect an actual living frog, or alternatively you can dissect a virtual frog. There are many virtual frog dissection simulations available online.



Video Instructions Available For This Assignment. Watch this video to learn how to do this assignment, and why it is important.

Scan This QR Code To Watch Mr. Bertoch Give You Directions For This Assignment

Goal: To demonstrate your understanding of organs and organ systems



Frog Dissection Video

Mr. Bertoch walks you through the process of dissecting your frog in this video.

Supplies

To complete this lab, at a minimum you will need a frog, a pair of scissors, a paper towel, and a marker. You can purchase a frog online at HandsomeScienceTeacher.com.

Safety Note

Be very careful when working with scissors. Also, wear safety glasses throughout the dissection process.

The Video And Labsheet Are Designed To Work Together

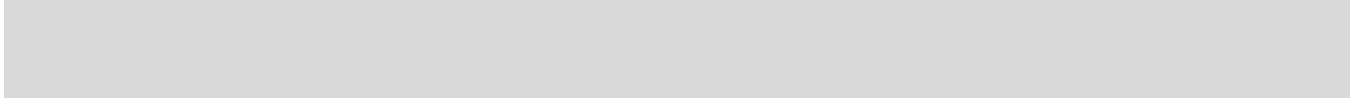
Scan the QR code above to start the video. It goes along with the rest of the labsheet. The video will tell you when to pause so that you can write your observations down here on the labsheet.

Start The Video Now

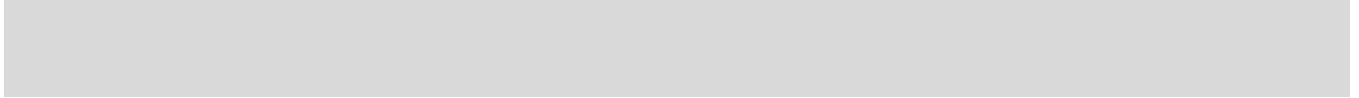
Part I: The Outside of The Frog (The Integumentary System)

When the video instructs you to do so, examine the outside of the frog and answer each of the questions listed below.

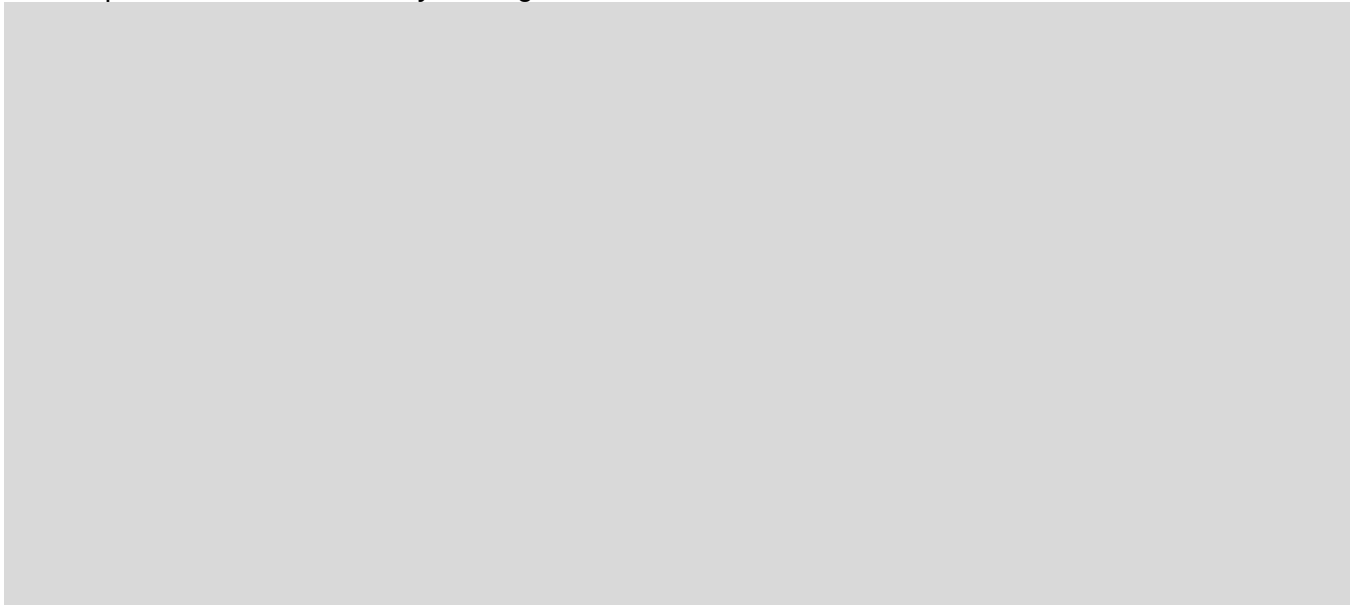
1. What does the skin look and feel like? Be detailed.



2. How do you think the frog's skin might protect it?



3. Draw a picture of the outside of your frog.



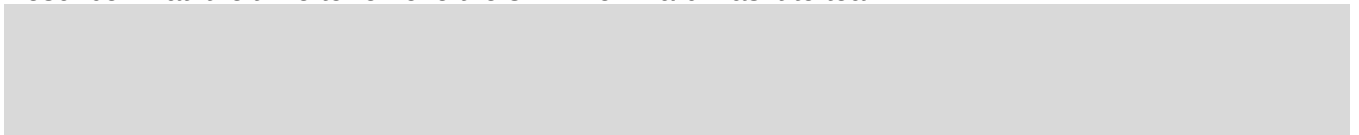
Continue The Video

Return to the video and continue watching it.

Remove The Skin

Remove the skin of the frog following the directions shown in the frog dissection video.

4. Describe what it felt like to remove the skin. How hard was it to tear?



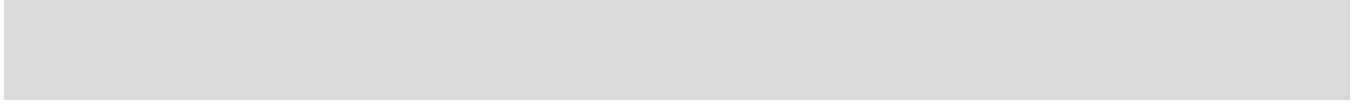
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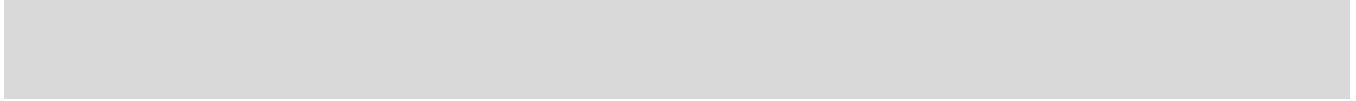
Part II: The Muscular System

When the video instructs you to do so, examine the muscular system of the frog and answer each of the questions listed below.

5. What do the muscles look and feel like? Be detailed.



6. Bend and stretch the frogs arms and legs. Observe and describe how the muscles move.



7. Draw a detailed picture of the muscular system of your frog.



Continue The Video

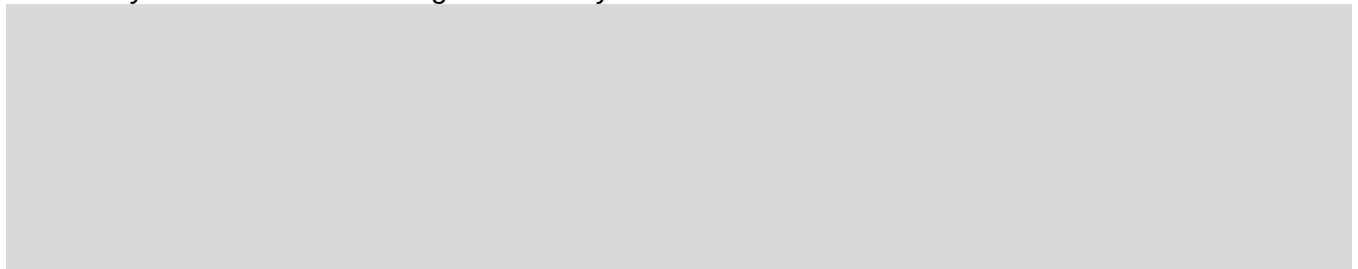
Return to the video and continue watching it.

Part III: Inside Your Frog (Organs And Organ Systems)

When the video instructs you to do so, remove the organs and organ systems from the frog. Place them on a paper towel and label them. Then complete the table below, answering questions about each organ and organ system.

Organ	What it looked like	What does this organ do?
Liver		
Stomach		
Small Intestine		
Large Intestine		
Heart		
Lungs		
Kidneys		
Spleen		
Gall Bladder		

8. What did you find most interesting? What did you learn? Be detailed.



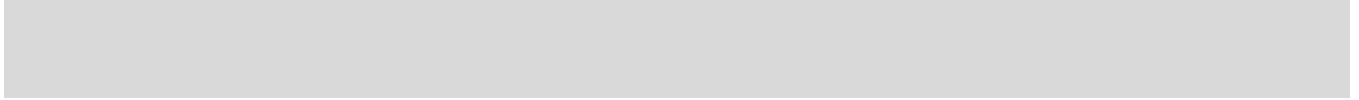
Continue The Video

Return to the video and continue watching it.

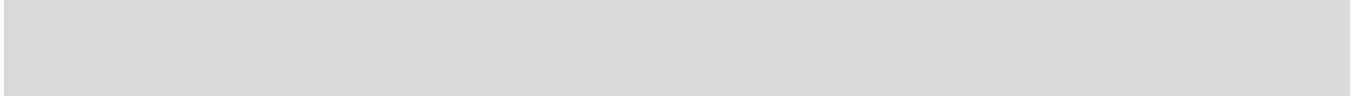
Part IV: The Skeletal System

When instructed to do so by the video, carefully remove all the muscle and remaining organs from your frog. Leaving only the skeletal system. Then answer each of the questions below.

9. What do the bones look and feel like? Be detailed.



10. Bend and stretch the frogs arms and legs. Observe and describe how the bones move.



11. Draw a picture of the skeletal system of your frog.



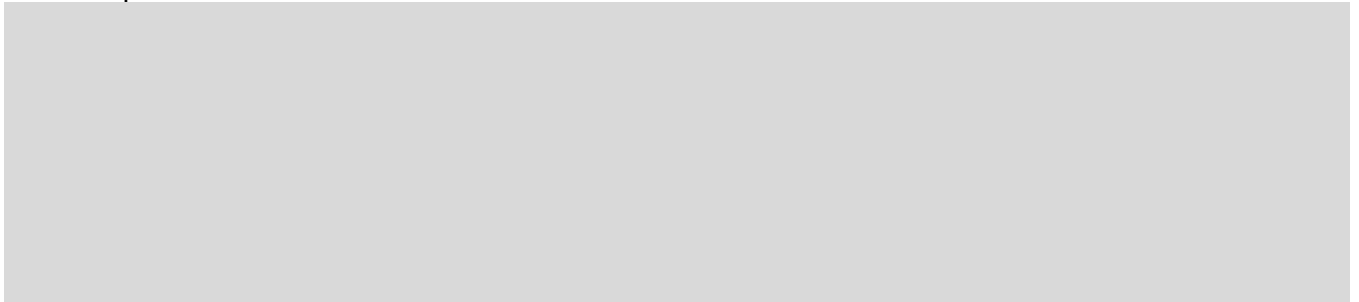
Final Questions:

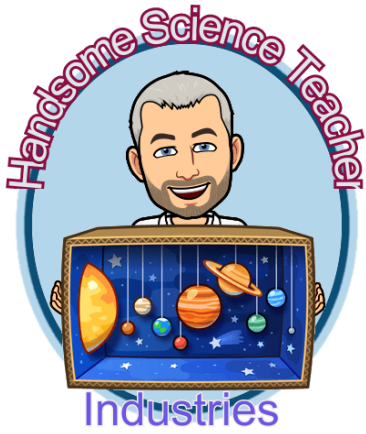
Answer each question using complete sentences.

1. Describe how cells combine to form tissues, organs, and organ systems.



2. Select an organ system of your choice and describe the function that it performs and the organs that make it up.





Congratulations! You Have Completed The Entire Mastery Badge

You have worked really hard to earn this mastery badge. More importantly, you have worked hard to earn your knowledge!

Time To Evaluate Your Work

Check each of the following to evaluate your work:

1. Did you do every assignment?
2. Did you read the assigned article?
3. Did you watch the assigned video?
4. Did you answer all the questions using complete sentences?
5. Are your answers accurate?

My Self-Evaluation:

Based on the criteria listed above, I believe I have passed off this Mastery Badge because...

(Be detailed and specific)

Mastery Badge Counselor Evaluation:

I have reviewed this student's work. Based on the criteria listed above I hereby certify that they have passed off the Mastery Badge because... (Be detailed and specific) Note: Any adult may serve as a Mastery Badge Counselor, so long as they are committed to ensuring the highest standards of excellence.

Student's Signature

Date

Signature of Mastery
Badge Counselor

Date

Certificate For Your Homeschool Records

The following certificate which has been awarded through self-evaluation by the student, and also certified by a mastery badge counselor proves that the student listed thereon has completed all the work and has mastered all the concepts for the specified topic.

Keep this on file as evidence of your successful completion of this topic.

If audited by the State, these certificates stand as evidence that you have worked on and successfully completed a rigorous science curriculum.

