Lesson Plan

Teacher Candidates: Miranda Lauzon, Lauren Mailloux, Joanna Wolinski, Arren Young
Subject: Biology (SBI3U)
Grade/Class: Grade 11
Duration: 75 minutes
Lesson Topic: Frog Dissection

Curriculum Expectations:
E2. Investigate, through laboratory inquiry or computer simulation, the functional responses of the respiratory and circulatory systems of animals, and the relationships between their respiratory, circulatory, and digestive systems

Specific Expectations:
E2.2 Perform a laboratory or computer-simulated dissection of a representative animal, or use a mounted anatomical model, to analyse the relationships between the respiratory, circulatory, and digestive systems [PR, AI]

Learning/Teaching Resources:
- Frog models
- Handouts: Stuffed Animal Dissection Worksheet, Anticipation Guide, Anatomy of the Frog Handout, Word Sort Graphic Organizer

Introductory Activity (10 minutes)

- Start off class with an Anticipation Guide to get students thinking about the different parts of the frog anatomy.
- Take up answers as a class and correct any false statements together.

Developmental Strategies (55 minutes)

- Students will be placed in groups of 4.
- Using the worksheet as a guide, students will find and label all the parts of the frog.

Concluding Activity (10 minutes)

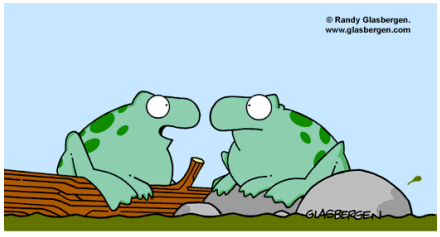
- Hand out Frog Labelling and Word Sort Graphic Organizer
- Students are given a picture of the anatomy of a frog to label the blanks.
- After, they are given a work sheet to organize words into the three systems: circulatory, respiratory, and digestive.
- Students will use the worksheets as study guides for tomorrow's test.

Ongoing Assessment/Evaluation:

FORMATIVE ASSESSMENT:
- Each group will be observed during the dissection to monitor understanding of the frog systems

SUMMATIVE ASSESSMENT
- Students will be administered a Frog Dissection test the next day

Follow-up Activities/Ideas or Next Steps:
- Frog Dissection Labelling Test



"Looks aren't everything. It's what's inside you that really matters. A biology teacher told me that."

Frog Dissection Anticipation Guide

For the following questions answer true or false, and if false predict the correct answer

	True	False
1. The liver is a large, brownish colored organ covering most of the body cavity.		
2. The heart is a small triangular shaped organ between the front legs, just above the liver.		
3. The stomach is the first site of chemical digestion, breaks down food.		
4. The bladder stores bile.		F (gall bladder)
5. Esophagus leads to the lungs.		F (stomach)
6. The pancreas makes insulin and aids in digestion.		
7. The small intestine absorbs water and collects waste.		F (large intestine)
8. The site of oxygen and carbon dioxide exchange are the lungs.		
9. The small intestine absorbs nutrients from food.		
10. The cloaca is where sperm, eggs, urine, and feces exit.		

Stuffed Animal Dissection Worksheet

Step 1) Pin the frog on to the platform.

Step 2) Unpin the frog, and pin the skin to the platform.

Step 3) Follow the digestive system, and locate the following organs using sticky notes or pins:

- esophagus
- stomach
- small intestines
- large intestines
- gall bladder
- liver
- bladder

Step 4) Follow the Respiratory and Cardiac system, and locate the following organs using sticky notes or pins:

- trachea
- lungs
- heart
- kidney

Answer the following questions about your frog:

Which organ is located under the liver (hint: it stores bile): _____

Which is the organ that is the first major site of chemical digestion?: _____

The small intestines lead to the: _____

The esophagus leads to the: _____

What is the first section of the small intestines called? _____

What is the largest organ in the frog's body cavity? _____

Identify which organs are closest to the frog's back: _____

Stuffed Animal Dissection Worksheet

Important Organs to incorporate in your animal:

- Esophagus
- Trachea
- Stomach
- Small Intestines
- Large Intestines
- Bladder
- Gall Bladder
- Liver
- Kidney
- Heart
- Lungs

Think About:

- How do all or some of these organs connect?
- What can we use as materials to represent the organs?

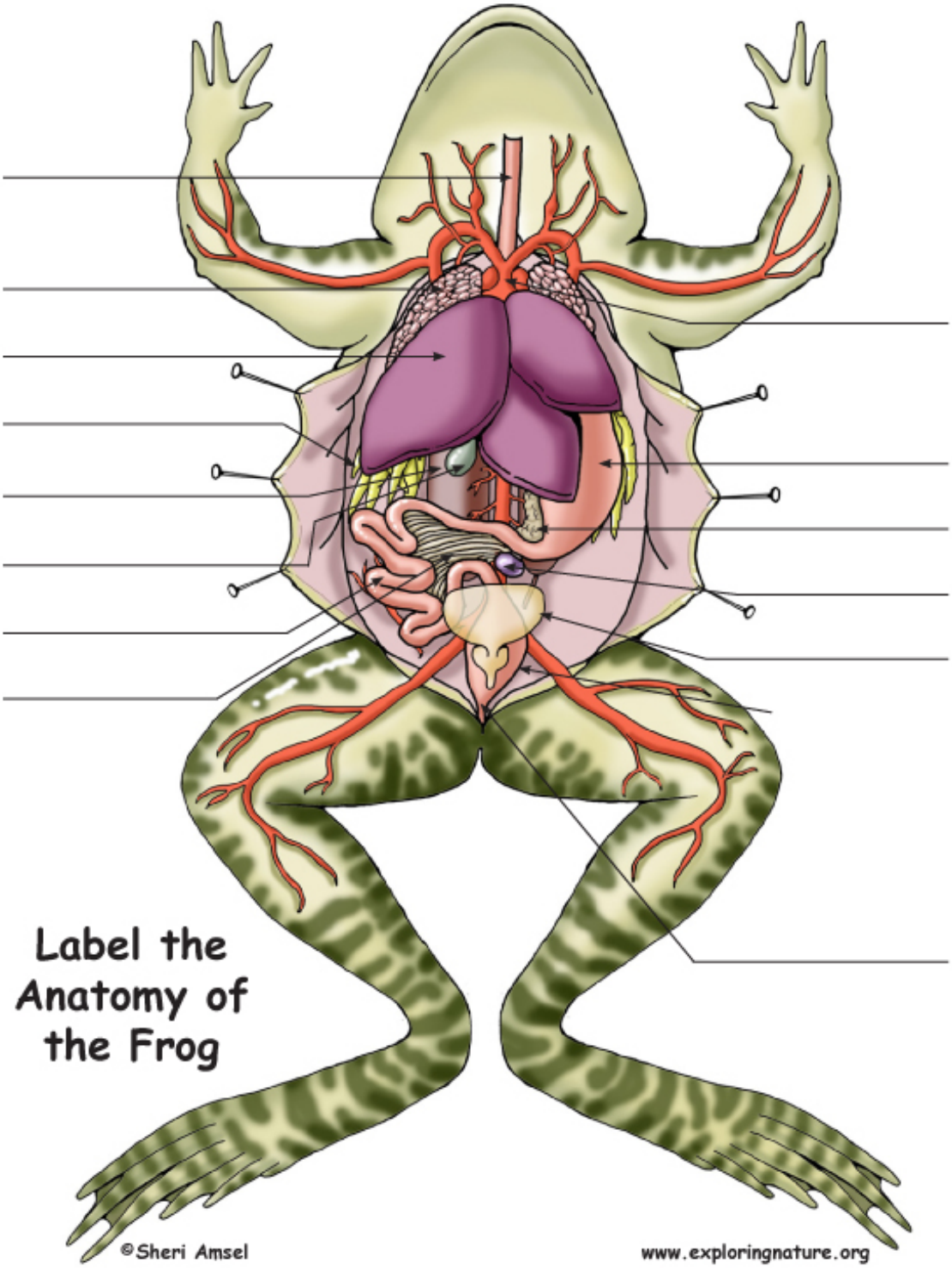
Step 1) Cut open your stuffed animal, as you would for a dissection.

Step 2) Remove any stuffing inside of the animal in the core.

Step 3) Begin to place organ systems where you think they belong. Refer to your textbook to check your work before gluing.

Step 4) Glue the organs in place with a hot glue gun. Be careful! It's hot!

Step 5) Let the glue dry before pinning the dissection cuts back together to close the stuffed animal's cavity.


Label the Anatomy of the Frog
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Frog Dissection Graphic Organizer

- Esophagus
- Trachea
- Stomach
- Small Intestines
- Large Intestines
- Bladder
- Gall Bladder
- Liver
- Kidney
- Heart
- Lungs

Respiratory System	Circulatory System	Digestive System