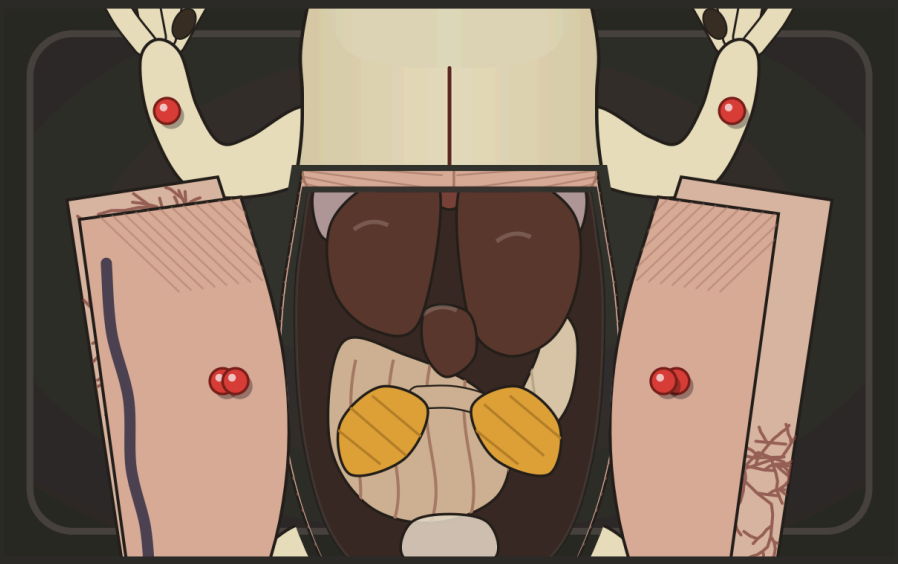
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Frog Dissection: Open the Frog the Right Way

Grades 6-8 · 45 minutes

Life science · Biology



Slides, rubric and answer key | Print and go | No student accounts

Chromebook friendly

What's included

- A one-page overview: objectives, essential question, vocabulary, standards and assessment
- A 45-minute lesson sequence: warm-up, direct instruction, guided practice, independent practice, closure
- Slides for the board: a PowerPoint file that also opens in Google Slides
- A student worksheet with a QR code
- A 3-question exit ticket, two to a page, with an answer key
- A rubric: 3 criteria, 4 levels, scored out of 12
- Differentiation for English learners, students with IEPs or 504 plans, and students who need more support or more challenge
- Cross-curricular extensions, and notes for teaching it in grades 4 to 5 and in high school
- Standards: NGSS and Common Core

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Students start with a preserved leopard frog on a tray and a probe in hand, and name the outside before any cut: the eardrum behind the eye, the cloudy third eyelid, the opening at the back end. They snip the corners of the jaw and find the tongue fixed at the front. Then they cut the skin and the body wall the way the bench does, lifting each layer with the forceps first, and learn what happens to the vein down the middle when they do not. By the end, students can explain why a dissection goes in layers and why the cuts go where they go.

At a glance

ESSENTIAL QUESTION

Why does a dissection go one layer at a time?

OBJECTIVES

Students will be able to:

- name the outside parts of a frog and say what each one does
- explain why the skin and the body wall are cut as two separate layers
- describe where the abdominal vein lies and why the cut goes beside it
- compare a frog's tongue and eardrum with my own

VOCABULARY

Dissection, Ventral, Body wall, Abdominal vein, Nictitating membrane, Tympanic membrane

STANDARDS

MS-LS1-3, RST.6-8.3, RST.6-8.4

TIME AND MATERIALS

45 minutes, grades 6-8.

- One computer or Chromebook per student
- A projector
- The worksheet and exit ticket, one copy each per student
- The rubric, one copy per student if you grade the worksheet

PREP

Make copies of the worksheet and exit ticket. Before class, open mytekdev.com/try/dissectionlab?lesson=open-the-frog&ref=tpt-dissectionlab-1 once on a student computer to check that your school's filter allows it, and do the walkthrough in Before you teach (about fifteen minutes). No account is needed.

ASSESSMENT

- Formative: the questions under What to look for, asked while students work, and the exit ticket (answer key included).
- Summative: the worksheet, scored on the rubric out of 12.

TECHNOLOGY AND PRIVACY

Runs in any browser, Chromebooks included, with nothing to install. The frog is drawn, not 3D, so older machines are fine. Students need no account and no email: the link works signed out, and nothing they make is stored on our server unless they choose to save it to an account. If your school blocks new sites, ask IT to allow mytekdev.com.

Lesson sequence

MINUTES	STAGE	WHAT YOU DO	WHAT STUDENTS DO
0 to 5	**Warm-up** Hook	Show the title, essential question and Today I can slides (about 1 minute). Then ask: why not just cut straight through? Take three answers and write the best one on the board.	Answer the hook question, and write a guess on the worksheet.
5 to 12	**Direct instruction (I do)** Model it	Show the vocabulary slide. Project the app: touch the eardrum with the probe and read its card aloud, turn the frog over, snip the corners of the jaw and show the tongue fixed at the front. Name the two layers: skin, then the body wall.	Watch, and fill in the vocabulary on the worksheet.
12 to 22	**Guided practice (We do)** The outside and the mouth together	Have students open the link or scan the QR code on the worksheet. Walk the class through steps 1 to 3 on the Lab tab: the outside, male or female, the mouth. Check that every screen shows the mouth open before moving on.	Find each outside part with the probe, choose male or female and tick their evidence, and open the mouth.
22 to 38	**Independent practice (You do)** Open the frog	Walk the room and ask the questions under What to look for. Repeat the two rules: lift before you cut, and cut beside the dark line. When a student cuts the vein, do not stop them: ask them to read the message and the log.	Pin the frog, cut the skin, open and pin the flaps, then cut the body wall beside the vein and open it.
38 to 45	**Closure** Showcase and exit ticket	Ask two students to show their log on the projector, one with no cuts undone and one with some. Ask the essential question again, then hand out the exit ticket.	Share a mistake and what it taught them, then complete the exit ticket.

Before you teach: a fifteen-minute walkthrough

Open mytekdev.com/try/dissectionlab?lesson=open-the-frog&ref=tpt-dissectionlab-1. A male leopard frog lies on the tray, back up, and the probe is in hand. The Lab tab shows step 1, Look at the outside.

1. **Name the outside.** Touch the round disc behind an eye with the probe: the card names the tympanic membrane. Find the eye, the cloudy third eyelid, the nostrils and the small opening at the back end. Press `Turn over` for the belly.
2. **Sex it.** Look at the first finger of each hand: a dark pad. On the Lab tab choose male and tick the pads.
3. **Open the mouth.** Press `Close up on the head`, take the `Scissors` and snip each corner of the jaw on its mark. Press `Look in the mouth`: find the tongue, the teeth and the patches on the roof.
4. **Pin and cut the skin.** Back on the tray, put a pin through each limb. With `Forceps` click the skin where a line starts, then drag the `Scissors` along it. Do all five lines, drag each flap outward with the forceps and pin it.
5. **Cut the vein, on purpose.** Now drag the scissors straight down the middle of the muscle without lifting it. The message names the vein and what lay under it, and offers `Undo`. Undo it, and press the cuts undone count under the tray to read the log.
6. **Open the body wall.** Lift the wall, cut beside the dark line, then across at the arms and the legs. Open and pin both flaps: the organs show.

> The moment that lands is the cut vein and the log that keeps it. Let students reach it themselves; do not warn them off.

Background for the teacher

A frog's belly is closed by two layers: the skin, and under it the muscle of the body wall. A dissection opens them one at a time, each lifted with forceps before it is cut so the blade does not reach what lies beneath. Down the middle of the inner face of the body wall runs the ventral abdominal vein, carrying blood from the hind legs forward to the liver, so the handouts send the cut through the wall a little to one side of the middle line. The app follows that order and those lines, and logs every cut, undone or not, for the teacher to read.

The app's frog is a preserved leopard frog drawn from public domain anatomy plates and checked against published lab manuals; every line it says about a part comes with its sources. Many states let a student choose an alternative to dissection; used in full, the app is built to be that alternative, and this lesson is its first period.

What to look for

Ask these while students work. A student who has understood the lesson can answer them without help:

- Where is the frog's eardrum, and where is yours?
- Where is the frog's tongue attached, and how does that help it catch food?
- Why do you lift the skin before you cut it?
- What is the dark line down the middle of the body wall?
- Why does the cut through the body wall go beside the middle line and not on it?

> The last question is the real test: a student who answers it has connected where a part lies with how the lab is done.

Cross-curricular extensions

- English: write the steps for opening the frog as numbered instructions a fifth grader could follow.
- Math: measure the frog snout to vent on the screen against the tray, and estimate the real length in centimeters (about 10).
- Health: compare the frog's layers with your own: skin, the muscles of your belly, and what they hold in.

Saving the work

Nothing is saved unless a student chooses to. To keep the lab for the next lesson, students press the save button on the lesson page, which asks them to sign in or make a free account and carries the work into their own copy.

Vocabulary

Dissection	Opening a body carefully to see and name its parts.
Ventral	The belly side of an animal. Dorsal is the back.
Body wall	The layer of muscle under the skin of the belly. It holds the organs in.
Abdominal vein	A blood vessel down the middle of the inside of the frog's body wall. It carries blood from the legs to the liver.
Nictitating membrane	A clear third eyelid that covers and protects a frog's eye. In a preserved frog it looks cloudy.
Tympanic membrane	The frog's eardrum: a round disc just behind each eye.

Differentiation

ENGLISH LEARNERS

- Show the vocabulary slide with the app's drawing beside each word, and point at the part as you say it.
- Model every cut on the projector before students try it.
- Let students answer the worksheet with labeled drawings.

STUDENTS WITH IEPS OR 504 PLANS

- Pair students so one reads the Lab tab aloud while the other works.
- Turn on name it first from a word bank in Setup, so naming is a choice, not recall.
- Where the IEP allows a modified assignment, finish at step 5, the skin.

STUDENTS WHO NEED MORE SUPPORT

- Give the sentence starter: I cut the skin first because ____.
- Check in at minute 25: every screen should show the skin flaps pinned back.
- Remind students that Undo is always there.

STUDENTS READY FOR MORE

- Open the chest (step 7) and find the heart under the girdle.
- Explain why the two halves of the body wall meet where their own cut ran, not on the middle line.
- Write the order of the cuts as numbered instructions for a younger student.

Adapting for other grades

Younger students: In grades 4 and 5, choose middle school in Setup with name it first from a word bank, stop at step 5, and drop the rubric's third row; the total is out of 8, and 6 meets the objectives.

Older students: In high school, choose high school in Setup: students find the mouth in detail (internal nares, Eustachian tubes, glottis) and the rectus abdominis, and the lesson fits HS-LS1-2 as the first lesson of the whole lab.

Student worksheet

Name: _____ Date: _____

Open the app: scan the QR code, or go to mytekdev.com/try/dissectionlab?lesson=open-the-frog

Essential question: Why does a dissection go one layer at a time?

1. **Look first.** Name four outside parts with the probe. Write two of them and what they do.

2. **Open the mouth.** Snip both corners of the jaw. Where is the tongue fixed?

3. **Cut the skin.** Lift the skin with the `Forceps`, cut along the lines with the `Scissors`, open and pin both flaps.
4. **Cut the body wall.** Cut beside the dark line. What is the dark line?

1. Why do you lift each layer before you cut it?

2. How many cuts did you undo? Which one taught you the most?

Exit ticket

Name: _____

1. Which layer is cut first? (A) the body wall (B) the skin (C) the liver

2. The dark line down the middle of the body wall is (A) a nerve (B) a vein (C) a muscle

3. Where is a frog's tongue fixed, and where is yours?

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Exit ticket

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2. The dark line down the middle of the body wall is (A) a nerve (B) a vein (C) a muscle

3. Where is a frog's tongue fixed, and where is yours?

Answer key: exit ticket

QUESTION	ANSWER	WHY
1	B	The skin is on the outside; the body wall is the muscle under it, and the organs are under that.
2	B	It is the ventral abdominal vein, which carries blood from the hind legs to the liver.
3	A frog's tongue is fixed at the front of the mouth; yours is fixed at the back.	The frog's flips out to catch prey.

Rubric

Score each row from 1 to 4.

Name: _____

CRITERIA	4 EXCEEDS	3 MEETS	2 APPROACHING	1 BEGINNING
Names the parts and their jobs	Names every outside and mouth part asked for, and says what each one does in their own words.	Names every part asked for, and says what most of them do.	Names most of the parts, with few jobs.	Names a few parts, with no jobs.
Opens the frog in layers	Opens the skin and the body wall with no damage left in place, and explains each step.	Opens both layers with any damage undone.	Opens the skin, but not the body wall.	Does not open the skin.
Explains why	Explains why the layers are cut separately and why the cut goes beside the vein, using the log as evidence.	Explains both reasons.	Explains one reason.	Explains neither reason.

Total: ____ / 12. A score of 9 or more meets the objectives.

Standards

These standards describe the body as a system of interacting subsystems, following a multistep procedure precisely, and learning the domain words of a technical task. Students open a frog's body one layer at a time in the lab's order and name each part they meet.

FRAMEWORK	CODE	GRADES	STANDARD	HOW THE LESSON MEETS IT
NGSS	**MS-LS1-3**	6-8	Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.	Students see the body in layers and systems, the skin, the body wall and the organs it holds, the first evidence for an argument about interacting subsystems.
Common Core ELA	**RST.6-8.3**	6-8	Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.	Students follow the lab's procedure in order: pin, lift, cut each line, open and pin each flap, then the same through the body wall.
Common Core ELA	**RST.6-8.4**	6-8	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.	Students learn the lab's words (ventral, body wall, nictitating membrane, tympanic membrane) as they meet each part and read its card.

Checked October 2026 against: Next Generation Science Standards, MS-LS1 From Molecules to Organisms: Structures and Processes, Common Core ELA, Science and Technical Subjects, Grades 6-8.

Dissection Lab and this plan are made by MYTEK Lab. The frog is drawn from public domain anatomy plates: Alexander Ecker, The Anatomy of the Frog (1889), and J. D. F. Gilchrist and C. von Bonde, Dissection of the Platana and the Frog (1919).

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