



# LP8 TEACHING PLAN

Legal and Regulatory Guidance  
on the Use of Animals in Scientific Research



## LEARNING PLAN OVERVIEW

This learning plan will introduce students to the laws, regulations and ethical considerations guiding the use of animals in scientific research. Students will explore what laws at the state and federal level have been implemented to protect animals in science and evaluate how the laws work well, or don't, regarding the practical use of animals in laboratories.

## ESTIMATED TOTAL TIME

100 minutes plus an additional 30 minutes to 1 hour assessment for outside of class

## WHAT STUDENTS WILL LEARN

**Competency:** Analyze the laws and regulations that guide the use of animals in science in the United States

### Learning Objectives:

- Explore the history of the Animal Welfare Act, including how it came to be in its present form, what it does, who it covers and who it exempts
- Identify the purpose and composition of Institutional Animal Care and Use Committees and how their task is regulated
- Explore what state laws are passing to address the use of animals in research
- Evaluate how well current laws and regulations protect research animals

### Assessment:

Debate outline

- Establish a position on how well current laws and regulations protect research animals in the U.S.
- Include a historical perspective to support your position
- Include evidence from research legislation from other countries, or the EU as a group, to support your position
- Identify at least one intended outcome of the public policies supporting your position
- Identify at least one unintended outcome or consequence for the public policies supporting your position
- Utilize your outline as reference to prepare for participation in a class debate (optional)

### Linked External Standards:

C3 Framework for Social Studies State Standards

- D2.Civ.1.9-12 Distinguish the powers and responsibilities of local, state, tribal, national, and international civic and political institutions
- D2.Civ.5.9-12 Evaluate citizens' and institutions' effectiveness in addressing social and political problems at the local, state, tribal, national, and/or international level
- D2.Civ.13.9-12 Evaluate public policies in terms of intended and unintended outcomes, and related consequences
- D2.Civ.14.9-12 Analyze historical, contemporary, and emerging means of changing societies, promoting the common good, and protecting rights

CCSS- ELA

- RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem
- W.9-10.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence
- W.9-10.9 Draw evidence from literary or informational texts to support analysis, reflection, and research

## TEACHING PLAN

#	Learning Activities	Teaching Notes	Materials and Supplies
1	<p><b>LEARNING PLAN OVERVIEW</b> Review information detailed in the Student Learning Plan.</p>	<p>TIME: 3 minutes</p> <p>ACTIVITY NOTES: Provide a brief introduction to the learning plan.</p>	<p>Student Learning Plan Key words: AWA, USDA, APHIS, IACUC</p>
2	<p><b>MOTIVATION ACTIVITY</b> Vote if you think animals in the following scenarios are provided protections under federal law.</p>	<p>TIME: 5 minutes</p> <p>ACTIVITY NOTES: Students can be polled online or live in class. Keep a tally and review answers and suggested questions after reviewing the following AWA presentation.</p>	<p>LP8_2_ProtectedOrNotScenarios</p>
3	<p><b>COMPREHENSION ACTIVITY</b> Listen to a presentation on the Animal Welfare Act: what it does, who it covers, how it is enforced.</p> <p>Then, review the interactive information.</p>	<p>TIME: 15 minutes</p> <p>ACTIVITY NOTES: Provide the information to the students.</p>	<p>LP8_3_AWA_Presentation</p>
4	<p><b>PRACTICE ACTIVITY</b> Consider your vote for the protected or not protected activity. Review the answers and discuss questions provided by the teacher.</p>	<p>TIME: 10 minutes</p> <p>ACTIVITY NOTES: Review the answers for the protected or not scenario worksheet. Pose the following questions to the class:</p> <ol style="list-style-type: none"> <li>1) Do you think the U.S. government should play a role in animal protection by way of passing laws like the AWA, or should people be able to use animals as they see fit to advance their own interests or societal interests?</li> <li>2) Why do you think pigs in one scenario (research) are protected, but pigs in another scenario (on a farm) have no federal protections?</li> <li>3) Same for dogs and cats used in research vs. dogs and cats housed in pet stores. Think of the ethical considerations.</li> </ol>	<p>LP8_4_ProtectedOrNotScenarios_AnswerKey</p>

#	Learning Activities	Teaching Notes	Materials and Supplies
5	<p><b>PRACTICE ACTIVITY:</b> Using information from the presentation, address questions on the Past vs. Present worksheet.</p>	<p>TIME: 10 minutes</p> <p>ACTIVITY NOTES: This activity can be done on the worksheet but would work better as a discussion.</p> <p>There is no answer sheet for this activity as the answers are subjective and will vary by student.</p>	LP8_5_PastVsPresent
6	<p><b>COMPREHENSION ACTIVITY:</b> Listen to a presentation on IACUCs and their role in protecting animals used in laboratories.</p>	<p>TIME: 10 minutes</p> <p>ACTIVITY NOTES: Present information on IACUCs to the class.</p>	LP8_6_IACUC_Presentation
7	<p><b>PRACTICE ACTIVITY</b> Read article, "Animal Care Committee Sues Own University."</p> <p>Participate in a discussion related to the intended and unintended consequences if either side were to prevail.</p>	<p>Time: 20 min</p> <p>ACTIVITY NOTES: Have students independently read "Animal Care Committee Sues Own University."</p> <p>Discuss the intended and unintended consequences if either side were to prevail. Use suggested questions to guide conversation.</p> <p>Suggested questions: 1) Can someone summarize why PETA filed the lawsuit to gain access to the names of IACUC members? 2) Why is the IACUC committee concerned with releasing the names of its members? 3) If PETA prevails and gets the IACUC members' names, what are possible intended or unintended outcomes? 4) If the IACUC members' names remain confidential, what are the possible intended or unintended outcomes? 5) Who has the stronger argument in this case? 6) Can you think of a solution that protects the privacy of the IACUC members but also ensures that the makeup of the committee follows federal regulations?</p>	LP8_7_IACUC_SuesOwnUni

#	Learning Activities	Teaching Notes	Materials and Supplies
8	<p><b>PRACTICE ACTIVITY:</b> Review the Welfare Standards for Laboratory Dogs worksheet. Discuss whether these recommendations from the IACUC's Guide for the Care and Use of Laboratory Animals adequately meet the welfare needs of dogs living in laboratories.</p>	<p>TIME: 10 mins</p> <p><b>ACTIVITY NOTES:</b> Encourage open discussion on whether the recommendations on how to keep dogs in laboratories meet the welfare needs of dogs. Consider varying breeds, sizes, energy levels, and that these are recommendations and not requirements for housing dogs in research. There are no right or wrong answers.</p> <p>Consider having the students do the math to measure out 8 square feet (ex. 2'x4'), 12 square feet (ex. 3' x 4') and 24 square feet (ex. 4' x 6') in the classroom to inspire discussion.</p> <p>Answers will be subjective.</p>	<p>LP8_8_WelfareStandardsForLaboratoryDogs</p>
9	<p><b>COMPREHENSION ACTIVITY:</b> Watch a presentation to learn about state laws that have been passed to protect lab animals.</p>	<p>TIME: 10 mins</p> <p><b>ACTIVITY NOTES:</b> Present information on state laws to the class. The last slide includes the discussion questions for the next activity.</p>	<p>LP8_9_StateLaw_Presentation</p>
10	<p><b>PRACTICE ACTIVITY</b> Participate in a discussion on ways that citizens and institutions can help get laws passed or blocked at the state level. Apply those suggestions to the examples from the presentation.</p>	<p>TIME: 10 minutes</p> <p><b>ACTIVITY NOTES:</b></p> <p>Discuss questions on the last slide of the state law presentation: What are some ways that citizens and lawmakers can promote or help pass legislation at the state level?</p> <p>What ideas would you have for helping get bills, such as the recently failed bills, passed at the state level?</p>	<p>LP8_9_StateLaw_Presentation</p>

#	Learning Activities	Teaching Notes	Materials and Supplies
11	<p><b>APPLICATION ACTIVITY</b> Establish a position, research, then create a debate outline on how well current laws and regulations protect research animals in the US. Use the Debate Outline Rubric to guide your work.</p>	<p>TIME: 30-45 minutes</p> <p><b>ACTIVITY NOTES:</b> In this assessment activity, students will research and prepare to defend a position on how well current laws and regulations protect research animals in the US.</p> <p>The debate outline can be the assessment on its own, or students can prepare the outline for use in a live debate. Add additional debate participation criteria to the rubric as needed.</p>	<p>LP8_10_DebateRubric</p>

# Protected or Not Protected?

**Read the following animal use scenarios set in the United States. Do you think the animals included in each scenario are afforded protections under the Federal Animal Welfare Act? Vote “yes” or “no.”**

**Scenario 1:**

Genetically modified pigs bred in a laboratory so that their organs may one day be given to humans in need of organ transplant.

**Scenario 2:**

Pigs bred and raised on a commercial farm to be sold for meat production.

**Scenario 3:**

The approximately 111 million mice and rats that are housed and used in research in the United States every year.

**Scenario 4:**

Crows, robins, and sparrows used in a research experiment in which they are infected with West Nile Virus to study the effects of the virus.

**Scenario 5:**

Dogs used in research activities that involve inducing heart attacks to test the efficacy of heart monitors.

**Scenario 6:**

Dogs and cats housed in a pet store for sale as pets.



# Protected or Not Protected?

## Answer Key

### Scenario 1:

Genetically modified pigs bred in a laboratory so that their organs may one day be given to humans in need of organ transplant. **YES. Pigs used in research are afforded some protections by the Animal Welfare Act.**

### Scenario 2:

Pigs bred and raised on a commercial farm to be sold for meat production. **NO. Pigs bred for meat consumption are excluded from Animal Welfare Act protections.**

### Scenario 3:

The approximately 111 million mice and rats that are housed and used in research in the United States every year. **NO. Mice and rats, which make up approximately 95% of animals used in research, are exempt from Animal Welfare Act protections.**

### Scenario 4:

Crows, robins, and sparrows used in a research experiment in which they are infected with West Nile Virus to study the effects of the virus. **NO. Birds used in research are exempt from Animal Welfare Act protections.**

### Scenario 5:

Dogs used in research activities that involve inducing heart attacks to test the efficacy of heart monitors. **YES. Dogs and cats used in research are afforded some protections by the Animal Welfare Act.**

### Scenario 6:

Dogs and cats housed in a pet store for sale as pets. **NO. While dogs and cats in breeding facilities are provided some Animal Welfare Act protections, once they reach the pet store, they lose all Animal Welfare Act protections.**





# Past versus Present

Name(s): \_\_\_\_\_

Date: \_\_\_\_\_

**Examine the revisions made to the Animal Welfare Act throughout history and answer the following questions:**

The 2002 amendment to the AWA changed the definition of “Animal” to exclude birds, mice and rats bred for research, thereby excluding those animals from federal protections. What do you think led to this definition change, and how do you think it affected the welfare of these animals in laboratories?

If the public were trying to get the Animal Welfare Act passed today, how do you think social media would play a role in the effort?



# Welfare Standards for Laboratory Dogs

Name(s): \_\_\_\_\_

Date: \_\_\_\_\_

IACUCs rely heavily on the *Guide for the Care and Use of Laboratory Animals* to determine how to care for animals in laboratories.

Below are some regulations from the *Guide* regarding the care of dogs used in research\*:

- Recommended minimum housing space for dogs housed in pairs or groups:

Animal	Weight (lbs)	Floor Area/Animal	Comments
Dogs	<33 Up to 66 >66	8.0 ft <sup>2</sup> (0.74 m <sup>2</sup> ) 12.0 ft <sup>2</sup> (1.2 m <sup>2</sup> ) ≥24.0 ft <sup>2</sup> (≥2.4 m <sup>2</sup> )	Cage height should be sufficient for the animals to comfortably stand erect with their feet on the floor.

- Recommended housing temperature range for dogs used in research: 64-84°F.
- Regarding exercise: "Dogs can be given additional opportunities for activity by being walked on a leash, having access to a run, or being moved into areas for social contact, play, or exploration."

Discuss whether the above recommendations adequately meet the welfare needs of dogs living in laboratories. Consider varying breeds, sizes, energy levels, and that these are recommendations and not requirements for housing dogs in research.

\*These recommendations don't touch on other guidelines included in the *Guide*, such as lighting, air circulation, sanitization, cleaning etc.



# Debate Outline

## Directions

In this assessment, you will establish a position and create a debate outline on how well current laws and regulations protect research animals in the US.

- Include information from both state and federal legislation
- Include a historical perspective to support your position
- Include evidence from research legislation from other countries, or the EU as a group, to support your position
- Identify at least one intended outcome of the public policies supporting your position
- Identify at least one unintended outcome/consequence for the public policies supporting your position
- Utilize your outline as reference to prepare for participation in a class debate (optional)

## Target Course Competencies

Analyze the laws and regulations that guide the use of animals in science in the United States

## Rating Scale

Value	Description
3	Work fully meets or exceeds criterion; shows depth in insight and grasp of the learning, critical thinking skills, or attention to detail
2	Work meets criterion adequately
1	Work is incorrect or incomplete
0	Work is missing or does not meet criterion

## Scoring Standard

You must achieve a rating of at least "2" on each criterion to demonstrate competence.



## Scoring Guide

Criteria	Ratings
You establish a position on how well current laws and regulations protect research animals in the US.	3 2 1 0
You include a historical perspective to support your position.	3 2 1 0
You include evidence from research of legislation from other countries, or the EU as a group, to support your position.	3 2 1 0
You identify at least one intended outcome of the public policies supporting your position.	3 2 1 0
You identify at least one unintended outcome/consequence for the public policies supporting your position.	3 2 1 0
You outline addresses each of the four key elements above, with key details in bullet points, and sources referenced.	3 2 1 0
You utilize your outline as reference to prepare for participation in a class debate (if applicable per instructor direction).	3 2 1 0

