

# Fetal Pig Dissection Pre-Lab



Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

Read the guide and watch both Mr. E Science fetal pig videos before lab. Give short answers. For each video question, record the player time (min:sec) when the feature or procedure appears. Use the guide for accurate terminology.

## Meet the fetal pig

### Classification and natural history

1. Give the pig's kingdom, phylum, class, genus, and species.

2. What does fetal mean? How does the fetus receive oxygen and nutrients?

3. What does omnivore mean? Name the two continents where wild relatives occur naturally.

### Size and gestational age

4. Define gestation. Use the guide's table to estimate the age of an 11-inch specimen.

## Prepare for the dissection

### Materials and before you begin

5. List four dissecting tools or supplies and two items of protective equipment.

6. What must your group do with the NTK structures before requesting the teacher's initials?

### Work safely and handle instruments carefully

7. Why should you lift tissue before cutting? Describe the scalpel grip demonstrated. [Video Part 1 • time \_\_\_\_:\_\_\_\_]

### Between sessions and at cleanup

8. Describe proper specimen storage between sessions and two cleanup steps.

## 1 • External Examination

### Orient the animal

9. Name the external landmark. State the meanings of dorsal, ventral, cranial, and caudal. [Video Part 1 • time \_\_\_\_:\_\_\_\_]

10. Define medial versus lateral and proximal versus distal.

## 1 • External Examination

### Head region

11. Give the anatomical names for the ear flap and nostrils. Why do nipples not identify sex?

### Mouth cavity observations

12. Distinguish the hard palate from the soft palate. What does the epiglottis help protect?

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## External sex identification

13. Where is the urogenital opening in a male? Where is it in a female?

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## 2 • Open the body cavities

### Opening the abdominal cavity

14. Which surface rests on the tray? How does Mr. E use string to hold the limbs apart? [Video Part 1 • time \_\_\_\_:\_\_\_\_]

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15. Where is the first abdominal cut relative to the umbilical cord? In which direction is it extended? [Video Part 1 • time \_\_\_\_:\_\_\_\_]

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16. What structures must remain with the central umbilical flap? [Video Part 1 • time \_\_\_\_:\_\_\_\_]

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### Your internal landmark

17. Name the internal landmark. Which body cavity is cranial to it? [Video Part 2 • time \_\_\_\_:\_\_\_\_]

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### Opening the thorax and throat region

18. What muscle separates the body cavities? What sac surrounds the heart? [Video Part 1 • time \_\_\_\_:\_\_\_\_]

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## 3 • The Throat Region

19. Identify the voice box and the tube that follows it. What keeps this tube open? [Video Part 2 • time \_\_\_\_:\_\_\_\_]

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### Thymus and thyroid

20. Distinguish the thymus from the thyroid by location and function.

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## 4 • The Thoracic Region

### Respiratory System

21. Where are the lungs relative to the heart? Why are fetal lungs not yet breathing air?

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### Circulatory system • Heart and major blood vessels

22. Name the four heart chambers. How does an auricle differ from an atrium? [Video Part 2 • time \_\_\_\_:\_\_\_\_]

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23. Identify the base and apex of the heart. What do coronary arteries supply? [Video Part 2 • time \_\_\_\_:\_\_\_\_]

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### Follow the blood vessels

24. How does blood-flow direction distinguish arteries from veins? Why is injected color only an aid?

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## 4a • Circulation before and after birth

### The pathway after birth

25. Trace blood from the right atrium, through the lungs, and back to the body. Include chambers and major vessels.

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### The fetal pathway

26. How many umbilical arteries and veins are present? State the direction of flow in each. *[Video Part 2 • time \_\_\_\_:\_\_\_\_]*

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27. Name two fetal shortcuts and explain why fetal circulation largely bypasses the lungs.

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## 5 • The Abdominal Region

### Digestive system • Esophagus and stomach

28. What does the esophagus carry? Where is the stomach relative to the liver?

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### Liver and gallbladder

29. Which organ produces bile, which stores it, and how does bile help digestion?

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30. What makes the gallbladder difficult to see in the video? Where does Mr. E look for it? *[Video Part 2 • time \_\_\_\_:\_\_\_\_]*

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### Intestines and accessory organs

#### Trace the digestive pathway

31. Contrast the appearance of small and large intestines. What tissue supports the intestinal loops? *[Video Part 2 • time \_\_\_\_:\_\_\_\_]*

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32. Name the small intestine's three regions. Give the main role of the small and large intestines.

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### Pancreas and spleen

33. Give one digestive and one hormonal role of the pancreas. Why is the spleen not a digestive organ?

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## 6 • Urinary system

### Kidneys and ureters

34. What does Mr. E move aside to expose the kidneys? Where is the bladder on the reflected flap? *[Video Part 2 • time \_\_\_\_:\_\_\_\_]*

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35. Trace urine from its site of production to its exit: include kidneys, ureters, bladder, and urethra.

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### Fetal function

36. Why does a fetus still depend on the placenta even though its kidneys produce urine?

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## 7 • Additional body systems

### Nervous system

37. What structures form the central nervous system? Name the two cerebral hemispheres in Figure 11, page 18.

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38. Name the labeled parts of the brain in Figure 11, page 18. Be sure to distinguish gyri from sulci

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### Endocrine system and reproductive system

39. Where are the adrenal glands? Give their general role.

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40. Give the adult roles of the ovaries and testes. Why does an adult sow have long uterine horns?

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## Finish and self-check

### Before you finish

41. State two requirements for your drawings and labels. What should you do if an organ is not visible?

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