



## Sheep Eye Dissection Pre-Lab

Read the Mr. E Science Sheep Eye Dissection Guide and watch the sheep eye video before answering. Use complete, concise answers in your own words. These questions prepare you for the dissection; record actual specimen observations and labeled drawings on the lab write-up.

Video: <https://www.youtube.com/watch?v=ALitsUWAXo4>

### Prepare and orient the eye

#### Materials and safe handling

1. What must you read and watch before beginning? List two precautions for opening the eye safely.

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2. Which tools will you use to lift and trim tissue? Who should make or supervise the initial opening?

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#### External landmarks and examination before trimming

3. Which landmark identifies the anterior surface? Which identifies the posterior surface?

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4. Describe the cornea in life and after preservation. Why might the iris and pupil be hard to see?

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5. How can you distinguish external eye muscle from fat? State the function of each.

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### Prepare and orient the eye

#### Examine before trimming

6. How would you recognize the sclera, and what does it do?

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## Open the eye

### Trim the outside

7. What excess tissue is removed? What should you identify before trimming, and which structure must you preserve?

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### Separate anterior and posterior sections

8. Where does the guide place the initial opening in the sclera? Which two landmarks help you locate it?

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9. Describe how you will continue the cut around the eye. How will you avoid damaging the internal structures?

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10. After separating the eye, how should both sections rest in the tray? Which section is examined first, and how can you identify it?

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## Inside the posterior section

### Vitreous humor and retina

11. Where is the vitreous humor, and what is its usual consistency? How should you move it to examine the retina?

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12. Describe the retina's expected appearance in a preserved eye. What is its role in vision?

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## Inside the posterior section

### Vitreous humor and retina

13. Compare the functions of rods and cones. Can you identify individual rods and cones without a microscope?

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### Optic disc and wall layers

14. Where should you look for the optic disc? Why is this region a blind spot?

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15. Name the three posterior wall layers from inside outward. What does the choroid do?

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16. How would you recognize the tapetum lucidum? Explain its function and whether humans have one.

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### Inside the anterior section

#### Lens and attachments

17. What should you examine before removing the lens? Describe the lens's function and how preservation may change it.

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18. Describe the ciliary body's appearance and location. How do its muscle and the suspensory ligaments help change lens shape?

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### Inside the anterior section

#### Iris and pupil

19. How do the iris and pupil differ? Compare the sheep's pupil shape with the human pupil shape.

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20. After lens removal, which structure lies beyond the pupil toward the front of the eye?

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### Trace the light pathway

#### Name the spaces correctly

Use the guide's precise chamber names even if the video uses a broader term.

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



21. Give the location and contents of each space: anterior chamber, posterior chamber, and vitreous chamber.

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22. Which part of the ciliary body produces aqueous humor?

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### From light to nerve signals

23. Trace the path of light from the cornea to the retina. Then name the structure that carries signals to the brain.

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### Complete the investigation

24. For the lab write-up, how should you handle a required structure you cannot see? State two cleanup steps.

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