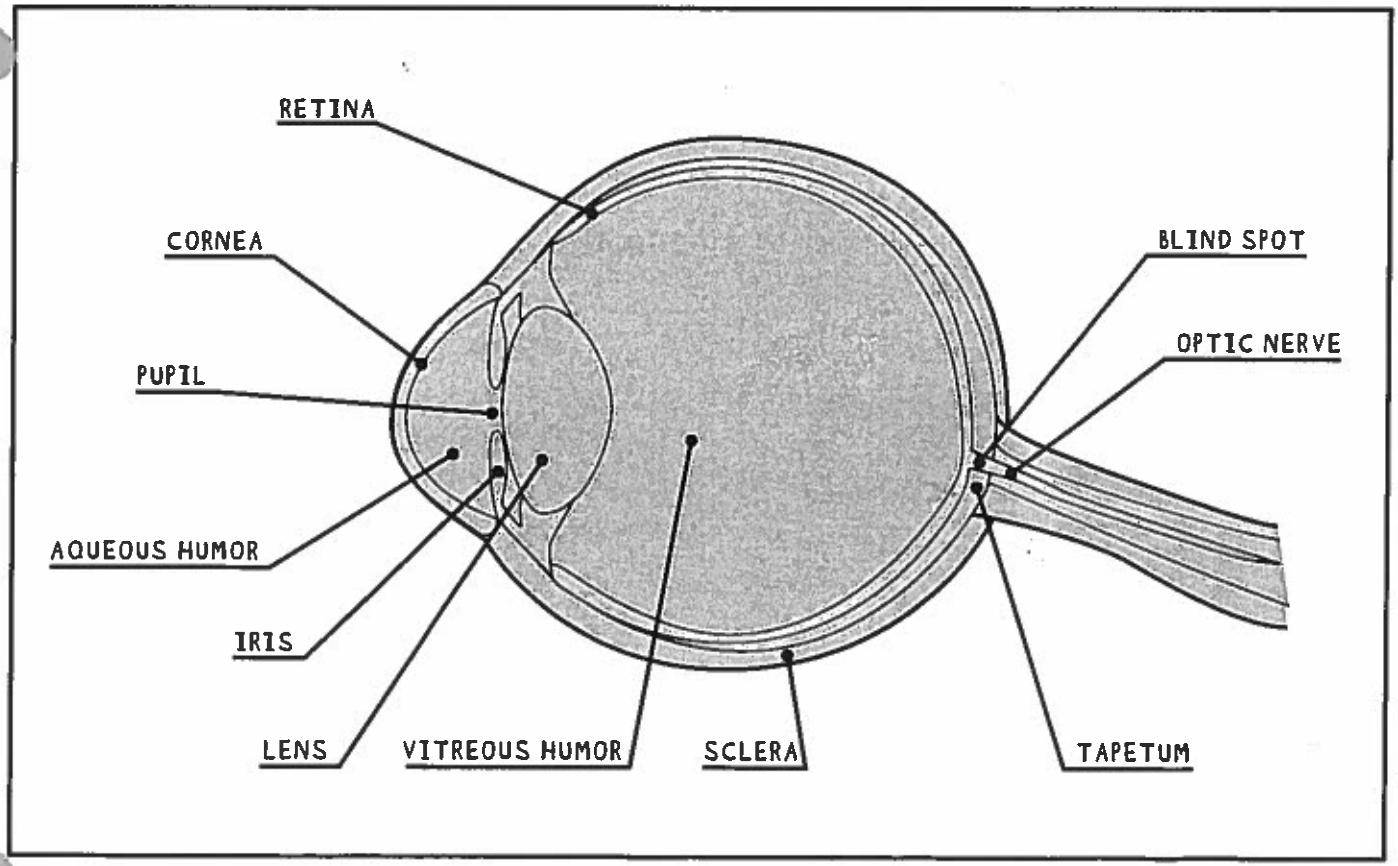
COW'S EYE dissection

Here's what you need:

- One cow's eye for every two participants
- One single-edged razor blade or scalpel for every two participants
- Scissors (optional)
- Wax paper and paper towels
- Plastic garbage bag
- A cutting board or other surface on which you can cut
- A sheet of newspaper
- Soap, water, and paper towels for cleaning up

Here's where to get cows' eyes:

You can order cows' eyes at a butcher shop or purchase them directly from a slaughterhouse. Try to get eyes with the muscles and fat still attached. If possible pick up the cows' eyes the day of the dissection; eyes are easier to cut when they are fresh.



This diagram shows the parts of the eye. Can you find these parts in a cow's eye?

Glossary

aqueous humor
A clear fluid that helps the cornea keep its rounded shape.

blind spot
The place where all nerves from the retina join to form the optic nerve. Each eye has a blind spot where there are no light-sensitive cells.

cones
One kind of light-sensitive cell in the retina. Cones give you color vision in bright light.

cornea
A tough, clear covering over the iris and the pupil that helps protect the eye. Light bends as it passes through the cornea. The cornea begins bending light to make an image; the lens finishes the job.

iris
A muscle that controls how much light enters the eye. It is suspended between the cornea and the lens. A cow's iris is brown. Human irises come in many colors, including brown, blue, green, and gray.

lens
A clear, flexible structure that makes an image on the eye's retina. The lens is flexible so that it can change shape, focusing on objects that are close up and objects that are far away.

myelin
The fatty layer that surrounds each nerve fiber.

optic nerve
The bundle of nerve fibers that carry information from the retina to the brain.

pupil
The pupil is the dark circle in the center of your iris. It's a hole that lets light into the inner eye. Your pupil is round. A cow's pupil is oval.

retina
The layer of light-sensitive cells at the back of the eye. The retina detects images focused by the cornea and the lens. The retina is connected to the brain by the optic nerve.

rods
One kind of light-sensitive cell in the retina. Rods respond in dim light.

sclera
The thick, tough, white outer covering of the eyeball.

tapetum
The colorful, shiny material located behind the retina. Found in animals with good night vision, the tapetum reflects light back through the retina.

vitreous humor
The thick, clear jelly that helps give the eyeball its shape.