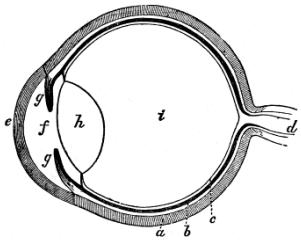
Name: _____

Dissection 101: Cow Eye
Student Checklist

Cow Eye Checklist: Identify the following structures/locations.



- [x] Use lines provided for additional notes
- [ ] External structures
  - [ ] Cornea: Anterior protective covering of the eye; transparent allowing light to enter; appears cloudy due to preservation process
    _____
    _____
  - [ ] Essential Fat: White/grey in color; provides protection/cushion
    _____
    _____
  - [ ] Extrinsic muscles: Muscles used to move the eye _____
    _____
  - [ ] Optic nerve: Chord-like structure protruding from the back of the eye; carries nervous signal from the retina to the posterior (occipital) region of the brain _____
    _____
    _____
- [ ] Internal Structures
  - [ ] Vitreous humor: Jelly-like material, provides shape/support for the eyeball, helps hold retina in place _____
    _____
  - [ ] Retina: Nervous tissue, location of the photo receptors (cones for sharp color vision and rods for night, dark/shaded vision); the retina is continuous with the optic nerve which leaves the back of the eye carrying the nervous impulse to the brain _____
    _____
    _____
  - [ ] Optic disc (blind spot): location on the retina where the retina attaches to the optic nerve, sight does not occur at this location because there are no cones or rods present _____
    _____

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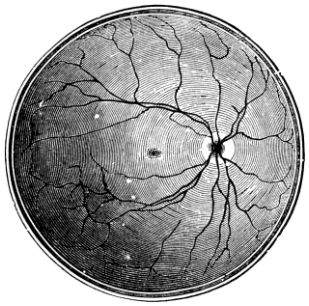
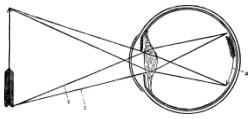
Student Checklist (Continue page 2)

- ☐ Internal Structures



  - ☐ Fovea centralis/macula: Location in eye where the sharpest vision occurs; the fovea centralis/macula is dense with cones and is the location of focus during lighted conditions, like reading (in humans); the fovea centralis/macula appears as a depression in the retina
    (Note: know the function for the quiz, identification is not required)
    _____
    _____
    _____
  - ☐ Choroid: Dark layer of the eye, rich with blood vessels; reduces scattering of light and provides nourishment for the eye _____
    _____
    _____
  - ☐ Tapetum lucidum: Iridescent, reflective layer found on the choroid; the tapetum lucidum aids in the reflection of light, increasing the ability to see at night; the human choroid does not have a tapetum lucidum _____
    _____
  - ☐ Sclera: Tough protective outer layer of the eye which gives the eyeball it's shape; the white part of the human eye; continuous with the transparent cornea; the sclera has blood vessels (may appear bloodshot); the cornea does not have blood vessels _____
    _____
    _____
  - ☐ Suspensory ligaments: Hold the lens in place, attaches lens to ciliary body _____
    _____
  - ☐ Aqueous humor, a transparent fluid produced by the ciliary body is located between the lens and the cornea; the fluid provides shape for and nourishes the cornea and it also provides nourishment for the lens _____
    _____
  - ☐ Lens: Biconvex structure that focuses light on the retina through a process called accommodation _____
    _____

Dissection 101: Cow Eye



Name: _____

Student Checklist (Continue page 3)

- ☐ Ciliary body: Muscles of the ciliary body contract toward the lens, resulting in less pull on the lens; the lens bulges to its natural form resulting in the light rays bending more for closer objects; the muscles of the ciliary body relax pulling away from the lens causing the lens to flatten for distant objects _____
  _____
- ☐ Pupil: Opening of the eye, allows light to enter; the diameter of the opening is controlled by the iris; the pupil is the dark center of the eye; the pupil is black because light enters but it does not leave.
  _____
  _____
- ☐ Iris: Structure of the eye which controls the size of the opening into the eye which is called the pupil; the pupil gets larger when the radial muscles of the iris contract in dim light; the circular/sphincter muscles of the iris contract to reduce the size of the pupil for brighter light; the iris is the colored structure of the human eye _____
  _____
- ☐ Draw and label the cow eye.

Cornea	Optic nerve	Vitreous humor
Retina	Optic disc (blind spot)	Choroid
Tapetum lucidum	Sclera	Aqueous humor
Suspensory ligaments	Lens	Ciliary body
Pupil	Iris	