Eye Structure and Seeing Light—Notes Outline

Light ______ your eye through a _______ portion of the _______ (the tough, white, outer covering of the eye), called the _______. The cornea is ________, so it slightly _______ the light as it goes through. Light then passes through the _______________ (a clear fluid used for _______ of the eye) and then through the ________.

The pupil is simply a ____________ in the ________. The iris is a ____________ that controls how ________ the pupil is. It is the ________ part of the eye. In low light, the iris ________ and the pupil gets ________; in bright light, the iris ________ and the pupil gets ________________.

Directly behind the iris is the ________. This is the structure that can change ________ in order to ________ light so that we can see ________. Its shape is ________, meaning it curves ________ on both sides. The ________ muscles above and below the lens control the ________ of the lens.

Behind the lens is a clear gel called the _________________.

Light goes through this, then strikes the _________. This is the ________ on the inside of the ________ of the eye containing ______ types of cells sensitive to ________: ________ and ________. Rods sense ________ and ________ and can work in ______ light. Cones sense ________, and must have a certain amount of light to work.
_______ kinds of cones: One senses _______ wavelengths of light, in the _______ range, and are called L-cones. The second type sense the _______ wavelengths of light, mainly in the _______ range, and are called _______. The third kind _________, and sense the shorter wavelengths of light, mostly in the _______ range.

The rods and cones send messages through the ____________, which carries the information to the _______. The sight center of your brain is located in the ________, basically ___________________. This is why a blow to the back of your head can result in blindness or other vision problems.

**Causes of Color Blindness**

1. _________: You are born with these types. Sometimes a type of cone is _________, or the _________, that a cone recognizes is different than normal. L-cone and M-cone problems result in _________ color blindness (the _________ common type).

2. _________: These types occur after birth. For example, accidents involving the ________________ of the brain, or Parkinson’s Disease can cause _________ problems.