Vision Unit

Activity 1A: The Human Eye – Parts and Functions

**Aqueous Humor** – a clear, watery fluid that circulates in the anterior chamber (between the cornea and the iris). Produced by the ciliary body, the aqueous humor nourishes the cornea and the lens and gives the eye its shape.

**Choroid** – a thin, highly vascular membrane between the retina and the sclera. Rich blood supply nourishes the posterior chamber (behind the lens).

**Ciliary Body** – located just behind the iris, the ciliary body produces aqueous humor. Assists in changing the shape of the lens as needed to focus.

**Cones** – type of photoreceptor cells in the retina. Respond to bright light/illuminations. Responsible for color vision and fine detail vision. Cones are highly concentrated in fovea (located in the center of the macula region). Respond to red (long), green (medium), and blue (short) wavelengths.

**Conjunctiva** – thin, transparent tissue that covers outer surface of eye and lines the inner surface of each eyelid. The conjunctiva provides a protective cover for the eye.
**Eyelid** – Moveable fold of skin over the eye with lashes and glands along its margin. Eyelids provide protection from the environment, injury, and light.

**Fovea** – the center of the macula, responsible for sharp images and central vision, high concentration of cones.

**Iris** – colored part of the eye. Controls light levels inside the eye. Divides eyeball into anterior and posterior chambers.

**Intraocular Pressure** – the pressure created by the aqueous humor in the anterior chamber of the eye. The pressure is regulated by resistance to flow of aqueous humor through a fine sieve-like drainage system in the eye. Blockage of the drainage system causes an increase in intraocular pressure.

**Lens** – transparent, colorless, firm structure located between the iris and the vitreous humor, focuses light on the retina, lens is enclosed in a capsule.

**Macula Lutea** – a small, yellowish, oval spot at the center of the retina (near the optic nerve) that is responsible for detailed vision, such as needed for reading.
Vision Unit
Activity 1A: The Human Eye – Parts and Functions

Directions: Color in the eye structures. Use the boxes to indicate the color key for the structures.

External Structures:
☐ conjunctiva          ☐ all muscles          ☐ optic nerve

Internal Structures:
☐ cornea        ☐ iris          ☐ pupil          ☐ zonula (ligament)         ☐ vitreous humour         ☐ fovea (macula)
☐ retina        ☐ lens          ☐ sclera          ☐ ciliary body         ☐ aqueous humour         ☐ choroid

Diagram of the human eye showing the structures mentioned.