

Title: For your eyes only

Purpose: To demonstrate that eye movement is controlled by nerves; and that each movement is specific to a certain nerve. Provide the children with a mental image on how the nerves work together to move the eye in a direction.

Materials: (2) rubber balls, spray paint (white, brown), black paint, markers, (2) cardboard boxes, duct tape, (12) bungee ropes, clay, newspaper, glue/water mixture, (2) PVC pipes, (2) 8ft. 2X4's, wax paper, printer paper, poster board, suran wrap, (2) 4½ inch straps, screws, (4) washcloths, saw, screwdriver, metal hole puncher, ruler.

Procedure: We will begin by asking them their hypothesis on how they think we move our eyes in a certain direction. We will then explain the importance of nerves and how they are connected to the movement of eyes. The poster board will be used demonstrate the eye and its connection to nerves and muscles. Then we will proceed to the 3 dimensional model of the eye, which was made out of the balls, bungee ropes, cardboard, and paper mache, and supported by a frame constructed of the wood. The model will have two "eyeballs" connected to ropes that will simulate the nerves. The children will control the nerves; therefore, moving a nerve would move the eye in a specific direction. Furthermore, we will also provide the children with the opportunity to relate nerve lesions to associated decreases in eye mobility.

Issues: Eye control and movement is not solely based on the nerves but also extra ocular muscles, and the medial longitudinal fasciculus (MLF). The nerves are not designated specific colors; and we cannot show the impact that nerves have on the pupil and the eye lid. We are also not showing reflexes the nerves facilitate. Damage to the oculomotor nerve can impact the pupil and the blepharo droop.

Lesson Plan: Children will learn that eye movements are controlled by cranial nerves. They will be asked what they think will happen to eye movement if one of the cranial nerves, for example oculomotor, is non-functional.