

# Title: Eagle Eyed – Exploring Raptor Eyesight

Age: 1-Adult

Duration: 45 minutes - hour

## Outcomes:

- Students will become more familiar with raptor hunting adaptations
- Students will experience for themselves why these adaptations work

## Materials and Preparations:

- Have images raptors for the students to refer to
- Pencils or Pens
- Newspaper
- string
- Ruler or tape measure
- Know where 1 and 2 miles away from the school is for reference for one of the experiments (landmark is good, a church or store)



## Procedure:

- Discuss with the students what makes a 'raptor' a raptor. What characteristics do they share? Write these on the board. The list should include sharp curved beaks, they have talons, and excellent eyesight. Explain that all of these adaptations aid the raptors in their hunting for food and survival. Today you are going to focus on the keen eyesight of the raptors. The eyes of a raptor are large, occupying about two thirds of the skull and almost touching each other inside the head.
- One of the raptors excellent sight adaptations is their *telescopic eyesight*. To help demonstrate this have half the class go to the back of the room. In the front of the room, hold up a newspaper. Ask the students to walk towards you and stop when they can read the words. People may stop at different distances. Measure this distance with the string. If this person had the eyesight of an eagle, they would have been able to read this word from 10X this distance!!!
- Ask the students why this is a necessary adaptation for these birds. Good eyesight allows the birds to spot prey from long distances away. Mention that a hawk can see a mouse from two miles away. This is equivalent to humans reading a newspaper a mile away. This is when you would reference the 1 and 2 mile landmark from school!
- Another adaptation of the raptor family is that they have *binocular vision*. An example of this is shown in figure E. You can mention the saying, "Eyes in the front, off to hunt, eyes on the side, run and hide." Have a volunteer student help you with this demonstration and then allow partners to participate.
- Facing the student, hold a pencil or pen vertically at waist-height. Ask the student to cover one eye and then quickly place their other hand's finger directly on the tip of the pencil, without hesitating. The student will probably fail, reassure them that this was meant to be hard. After a couple more tries,



have them repeat with both eyes open. This demonstrates the effect, called binocular vision, of both eyes seeing the same point. The binocular vision of the raptors allows them to pin-point the position of their prey and allows them more accurate hunting/striking.

**Assessment:**

- Have the students come back together and discuss how they felt and what they discovered while participating in the activities.
- Write their comments up on the board
- If you have science journals, have them write about their experiences in their journals.

