The Moving Target

Trace how a hawk uses sight from first sighting to final strike.

ZOO.9.5 "Explain how birds of prey use their keen sense of sight to locate and attack prey."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two visual clues that help the hawk locate the vole, circle one limit of its sight, and number three sight-guided actions in order from spotting to striking.

A Hunt in the Meadow

1. At the edge of a meadow, a red-tailed hawk waits on a fence post. Below, a vole runs between clumps of grass. From above, the hawk can scan a wide area without flying after every rustle. Its eyes contain densely packed light-sensitive cells in parts of the retina, helping it resolve fine details at a distance. The hawk notices the vole's small shape and sudden movement against the pale ground. Grass can still hide the animal completely. Keen sight does not let the hawk see through stems, so it keeps watching for another opening.

2. The vole darts into open ground, and the hawk turns its head to keep the animal in view. The bird's fields of vision overlap in front of its head, giving it information from both eyes that helps it judge distance. That matters because a strike aimed at where the vole was, rather than where it is, will miss. The hawk does not dive as soon as it first spots movement. It watches the vole's direction and waits until there is a clear path through the grass. Then it leaves the post, keeping its head oriented toward the moving target.

3. As the hawk closes in, the vole changes direction. The hawk turns its head to keep the vole in view and adjusts its flight instead of following its first line of attack. When it is close enough, it extends its feet and reaches for the vole with its talons. If the vole slips under thick grass before the hawk arrives, the bird may miss and return to a perch. The sequence depends on sight at each stage: detecting a possible target, judging its position during the approach, and correcting the strike as the target moves.

2 ANSWER WITH EVIDENCE

Use the passage

1. How do the vole's shape and movement help the hawk locate it from the fence post?

2. Why does the hawk wait for the vole to enter open ground before diving?

3. How does vision from both eyes help the hawk aim its strike?

4. The vole changes direction while the hawk approaches. How does the hawk use sight to respond, and what could make it miss?

3 YOUR TURN

Your own words

Imagine a hawk hunting a lizard on a rocky slope in daylight. In four to five sentences, explain how the hawk uses two visible clues to find the lizard, aims and adjusts its attack, and responds if the lizard disappears behind a rock.

The Moving Target

PART 1 · READ AND MARK

Underline two visual clues that help the hawk locate the vole, circle one limit of its sight, and number three sight-guided actions in order from spotting to striking. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How do the vole's shape and movement help the hawk locate it from the fence post?	**The hawk can resolve the vole's small shape at a distance and notice its sudden movement against the pale ground.**
2	Why does the hawk wait for the vole to enter open ground before diving?	**Open ground gives the hawk a clear view of the vole and a path through the grass for its attack.**
3	How does vision from both eyes help the hawk aim its strike?	**The overlapping fields of vision help the hawk judge the vole's distance so it can aim where the vole is.**
4	The vole changes direction while the hawk approaches. How does the hawk use sight to respond, and what could make it miss?	**The hawk keeps the vole in view and adjusts its flight toward the vole's new position. It may miss if the vole disappears under thick grass.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

From a perch, the hawk notices a lizard's moving tail and its dark outline against a sunlit rock. It turns its head to keep the lizard in view and uses its overlapping fields of vision to judge how far away it is. As the lizard runs sideways, the hawk changes its flight path and reaches with its talons toward the lizard's new position. If the lizard vanishes behind a rock, the hawk cannot see through it and must wait for the animal to reappear.

Accept other plausible visible clues and approaches if the response explains how sight guides the attack. The hawk must not be described as seeing through the rock.