Yellow Cedar Activity: Discussion Questions (Answers)

Animal Eyes by Francoise Vulpė

Name: _____

1. How did the development of the camera eye help animals see better?

The development of a camera eye helped animals detect the direction of light and to see more detail.

2. How does the human eye see things?

Light shines through a lens and casts an image on the retina (like a camera casting an image on film). The lens allows us to focus on the image.

3. Why is it that most spiders, in spite of having many eyes, don't have good vision?

Most spiders have only one pair of principal eyes which are little more than patches of photoreceptors.

4. What determines the colours that we see?

Human eyes are tuned to a specific spectrum of electromagnetic radiation. Colour is determined by which wavelengths of light are refracted back to the eye and not absorbed by the object (violet being the shortest wavelength, and red being the longest).

5. What does it mean to have trichromatic vision?

Trichromatic vision means that an animal (such as humans) have three different colour photoreceptors.

6. What differences are there between the fields of vision of predators and prey?

Predators tend to have a narrower field of vision, with eyes on the front of their heads, so they can focus and monitor the movement of their prey, while prey tends to have a

wider field of vision, with eyes on the sides of their heads, so that they can better detect oncoming predators.

7. How do lobsters see in the dark at the bottom of the ocean?

Lobsters use the reflection of light on the surface of 10000 tubes inside of their eyes to magnify the small amount of light at the ocean's bottom.

8. Why are the pupils of cuttlefish often in a "W" shape?

The "W" shape allows them to take in light from different directions. This is helpful in dark environments.

9. Why are eagle eyes so good?

Eagles have large eyes with many cones, allowing them to see more accurately from further away.

10. How do caribou detect predators in the snow?

Caribou are able to detect ultraviolet light, such as the ultraviolet light that gets absorbed in the white fur of wolves, making them look black.