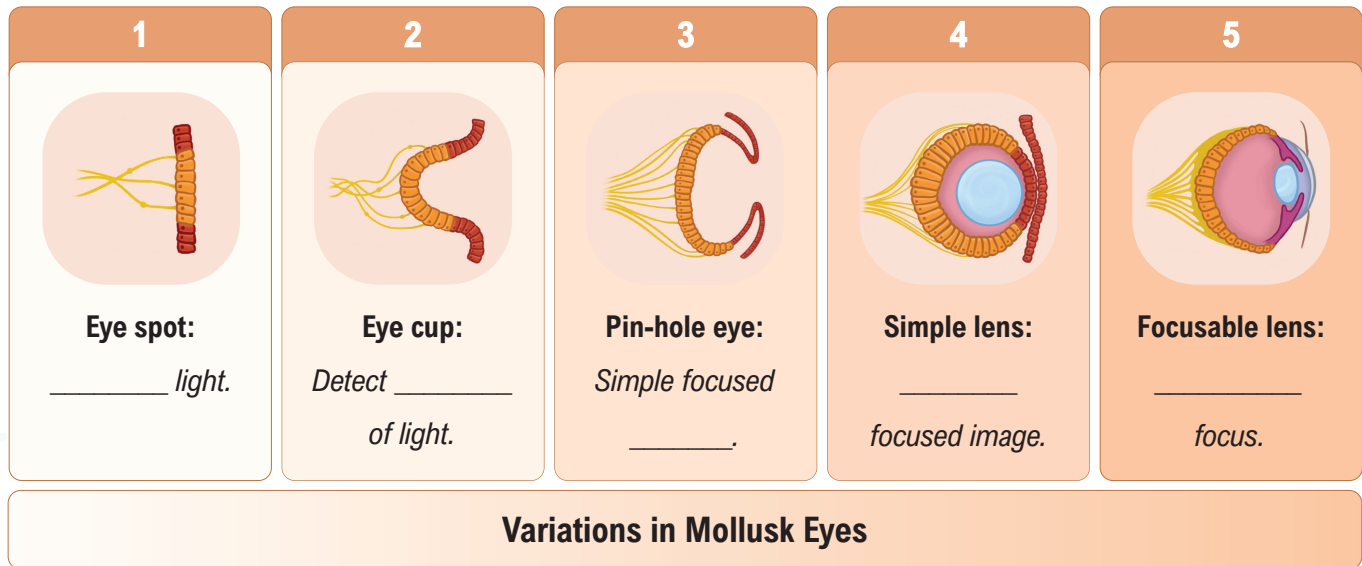


TOPIC: COMPLEXITY IN EVOLUTION

Origin of Complex Traits

- ◆ Complex traits can arise in _____ ways.
 - **Exaptation:** existing traits gain a _____ function.
 - e.g., Feathers are an adaptation for _____; exaptation – used for _____.
 - Complex traits arise from _____ structures.
 - Each intermediate structure has _____ over the previous version.



TOPIC: COMPLEXITY IN EVOLUTION

PRACTICE

When considering the evolution of the eye, of the following features, which was likely the *first* to evolve?

- a) A simple lens.
- b) A cup-like shape.
- c) A flat layer of photoreceptors.
- d) An enclosed spheroid organ.

PRACTICE

Which describes an example of exaptation?

- a) The peppered moth evolved a dark color in response to a change in the environment, but then, as the environment again changed, light color became more common.
- b) Octopus and vertebrate eyes are structured and function very similarly but evolved independently.
- c) Mammals began to diversify rapidly after the end-Cretaceous extinction event as they evolved to fill ecological niches previously occupied by dinosaurs.
- d) Mammary glands (milk-producing glands in mammals) are thought to have evolved from apocrine glands, which are sweat/oil glands typically associated with hair follicles.