

27.2 Gettin' yo breath on

Gas Exchange

For Questions 1–5, write *True* if the statement is true. If the statement is false, change the underlined word or words to make the statement true.

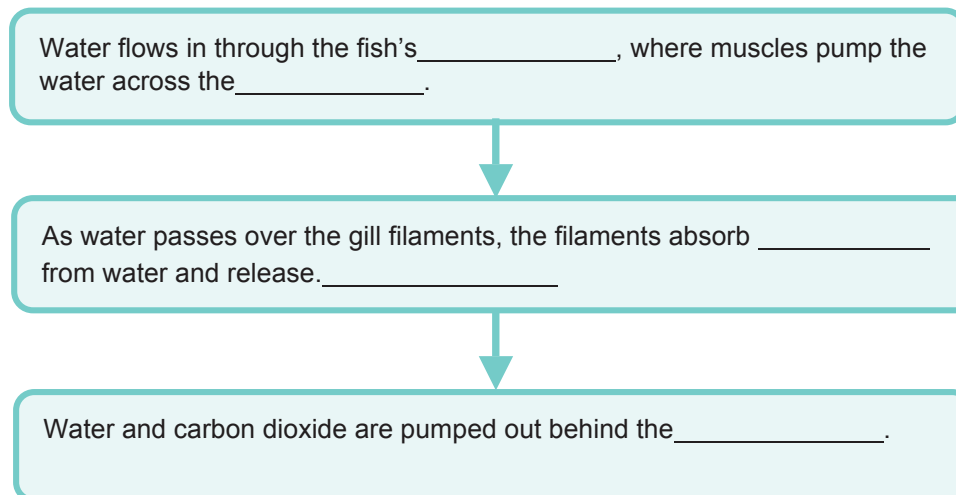
- _____ 1. In respiratory systems, gas exchange occurs through active diffusion.
- _____ 2. Substances diffuse from an area of higher concentration to an area of lower concentration.
- _____ 3. Gases diffuse most efficiently across thin, dry surfaces.
- _____ 4. Respiratory structures have a selectively permeable membrane.
- _____ 5. Respiratory structures maintain a difference in the relative concentrations of oxygen and nitrogen on either side of the membrane.

6. Respiratory organs have large surface areas. How is this an advantage to an animal?

7. Respiratory surfaces are moist. How does this enable respiration to take place?

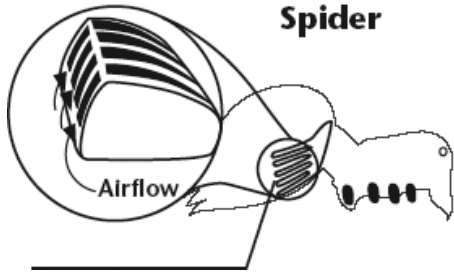
Respiratory Surfaces of Aquatic Animals

8. Complete the flowchart that describes the path of water as it moves through fish.

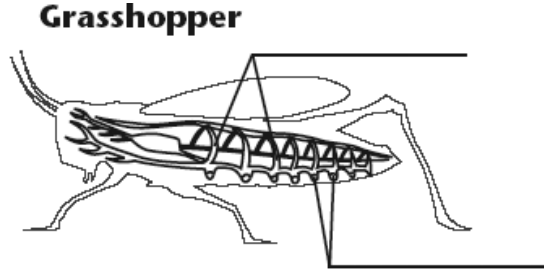


Respiratory Surfaces of Terrestrial Animals

9. **THINK** Label the book lung, spiracles, and tracheal tubes in the organisms below. Write a description of these structures on the lines below the organisms.

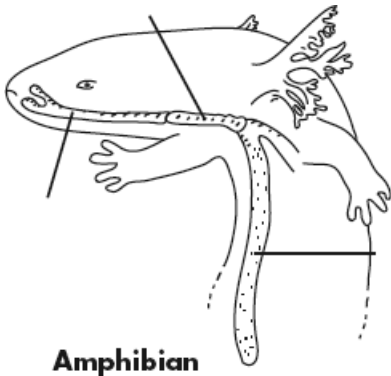


Spider

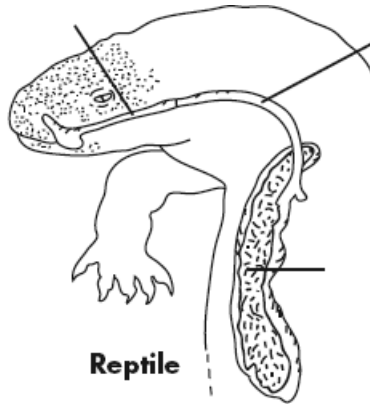


Grasshopper

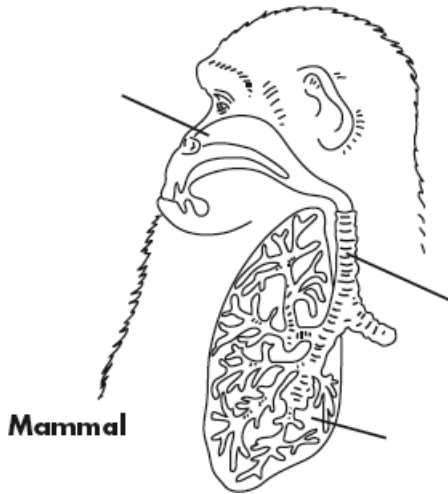
10. **THINK** Label the nostrils, mouth, and throat; trachea; and lungs of the animals below.



Amphibian



Reptile



Mammal