

Higher Biology

Maintaining A Water Balance Checktest

1. Describe **where** in their bodies and by **which process** bony fish may gain or lose water.
2. In relation to bony fish state **the location** of the chloride secretory cells and **the process** they use to pump ions in or out of a fish.
3. State the probable **size** and **number** of glomeruli that a fresh water fish would have in its kidneys.
4. Salmon migrate between fresh and salt water. For each phrase below state whether it applies to the fish in **fresh water** or **salt water**.
 - A. Salmon drinks large volume of water.
 - B. Salmon produces large volume of dilute urine.
 - C. Chloride secretory cells pump out ions.
 - D. Salmon gains water by osmosis.
5. Explain how a high level of ADH in the bloodstream would help a kangaroo rat conserve water.
6. Name **two other** physiological adaptations that would help a kangaroo rat conserve water.
7. Name **two** behavioural adaptations that a kangaroo rat could use to conserve water.
8. What is the major force involved in the transpiration stream?
9. Name the force that holds water molecules together as they travel up xylem vessels.
10. Describe the movement of water required and the state the guard cells must be in for stomata to close.
11. What is the advantage to plants of having their stomata closed at night?
12. Name **two** conditions that would result in an increase in the rate of transpiration in a plant.
13. Name **two** benefits to plants of the transpiration stream.