Unit 27 · Animal Adaptation

WORKSHEET

Full marks 35

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 35

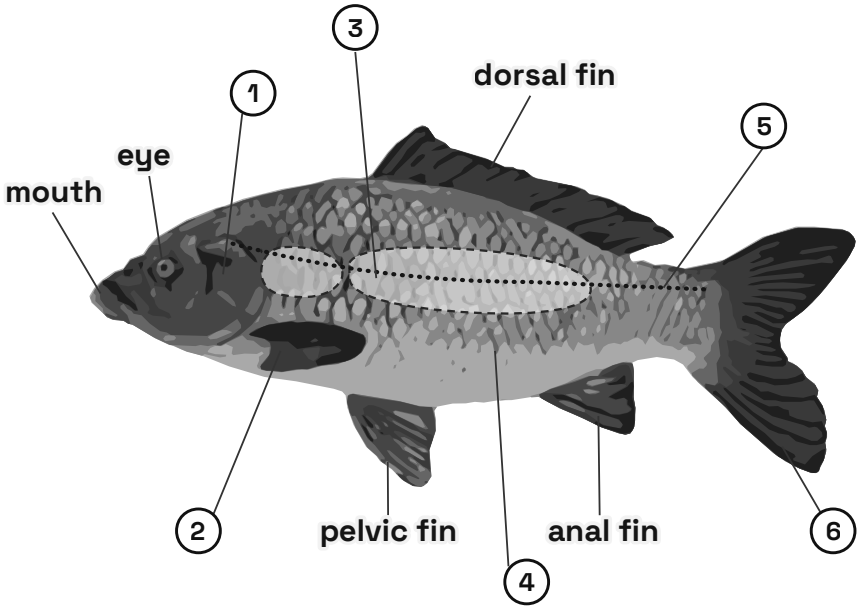
1 Key words [4]

Match each term in column A with its meaning in column B. Two items in column B are not needed. Each match carries 0.5 mark.

Column A		Column B
1. adaptation	☐	**a.** adapted for climbing
2. secondary aquatic	☐	**b.** standing on the hoofed tips of the toes
3. cursorial	☐	**c.** adapted for digging and living underground
4. fossorial	☐	**d.** walking on the whole sole, heel included
5. scansorial	☐	**e.** an animal that lives both on land and in water
6. unguligrade	☐	**f.** adapted for running fast on the ground
7. autotomy	☐	**g.** living in water, with ancestors that lived on land
8. patagium	☐	**h.** the inherited fitting of an organism to its habitat
		i. a fold of skin stretched out as a wing
		j. breaking off a part of one's own body to escape

2 Label the diagram [3]

The diagram shows a carp, with the features that suit it to water. Write the names of the parts 1 to 6. Each carries 0.5 mark.



1. _____ **2.** _____

3. _____ **4.** _____

5. _____ **6.** _____

3 Multiple choice [5]

Choose the correct option for each of the following questions.

i. Which type of foot posture is found in animals of the cat family? [1]

a. unguligrade **b.** digitigrade

c. plantigrade **d.** crawling

ii. Animals adapted for climbing are called: [1]

a. cursorial animals **b.** scansorial animals

c. aquatic animals **d.** burrowing animals

iii. A desert kangaroo rat never drinks; its kidneys make urine so concentrated that it gets all the water it needs from its food. Which kind of adaptation is this? [1]

a. structural **b.** behavioral

c. physiological **d.** none: it is learned

iv. Why is a whale counted as a *secondary* aquatic animal? [1]

a. it lives in water for only part of its life

b. its ancestors were land mammals that returned to the sea

c. it lives in salt water, not fresh water

d. it breathes through both gills and lungs

v. Which feature would you **not** expect in a fossorial animal? [1]

a. short, broad forelimbs with strong claws **b.** a pointed snout

c. large eyes and long outer ears **d.** a short tail

4 Very short answers [3]

Write very short answers to the following questions.

a. What does the lateral line of a fish sense? [1]

b. Which ovary works in most birds? [1]

c. Why does a whale have a thick layer of blubber but almost no hair? [1]

5 Short answers [9]

Write short answers to the following questions.

a. How does a swim bladder help a bony fish? Why do sharks, with no swim bladder, sink if they stop swimming? [2]

b. A horse stands on the tip of one toe of each foot. How does this help it run, and what does it lose by it? [2]

c. A gecko walks across a ceiling. How do its feet hold on? Some books say by suction; are they right? [2]

d. Write any three adaptive features of a fossorial animal, with one example. [3]

6 Long answers [8]

Write long answers to the following questions.

a. Compare and contrast primary aquatic animals and secondary aquatic animals. [4]

b. Compare and contrast volant animals with cursorial animals. [4]

7 Think [3]

A dolphin is shaped like a fish and swims with its tail. Give three features that show that it came from land mammals and is not a fish.

8 Activity: Adaptations in the laboratory (Activity 9.2)

(not marked)

Look at the preserved and stuffed vertebrates in your biology laboratory and fill in the table.

Animal	Habitat	Kind of adaptation	Two adaptive features
rohu	fresh water	primary aquatic	

Which two animals in your table have features that are alike, though they are not closely related?