Chapter 5: Classification

Challenge 5.1: Department store classification

Experiment worksheet answers (pages 80–81 and 192)

Discussion

Student responses for this challenge will vary based on their own planning and comparison of their classification model with other students’ work.

Challenge 5.3: Dichotomous key

Experiment worksheet answers (pages 84–85 and 193)

Processing, analysing and evaluating

Student responses for this challenge will vary based on their own design of a dichotomous key and self-evaluation.

Communicating

Swap dichotomous keys with another group. How effective is the dichotomous key constructed by the other group? Ask them to evaluate your key. Which was the best dichotomous key designed in your class? What features made it the best key?

Student responses for this challenge will vary based on their own design of a dichotomous key and evaluation of others.

Challenge 5.4: Can you understand scientific names?

Experiment worksheet answers (pages 86–87 and 194)

Discussion

1 Use the information in Table 10.1 to match the scientific names of the Australian animals with their pictures in Figure 10.45.

a *Macropus rufus*

b *Tachyglossus aculeatus*

c *Phascolarctus cinereus*

d *Ornithorhynchus anatinus*

e *Chlamydosaurus kingii*

a red kangaroo

b echidna

c koala

d platypus

e frilled neck lizard

2 What do you think a *Macroglossus aculeatus* might look like? On a sheet of A4 paper, sketch this imaginary animal, using the information in Table 10.1 to help you.

Students sketch should contain the following features: *macro* = big; *gloss* = tongue; *aculeate* = spiny

Challenge 5.5: Classifying living things

Experiment worksheet answers (pages 88–89 and 195)

Discussion

Student tables will vary based on the images they have selected.

Experiment 5.6: Dissecting skeletons

Experiment worksheet answers (pages 90–91 and 196)

Discussion

1 Consider the fish.

a Where is the skeleton of the fish located?

b What is this type of skeleton called?

a inside its body

b an endoskeleton

2 Consider the prawn.

a Where is the skeleton of the prawn located?

b What is this type of skeleton called?

a outside its body

b an exoskeleton

3 Does the squid have a skeleton?

A squid does not have a skeleton; however, it has an internal gladius to support the mantle.

4 In which group of animals (vertebrate or invertebrate) would you place each of the organisms observed? Why?

fish – vertebrate; prawn – invertebrate; squid – invertebrate.

5 What are you: a vertebrate or an invertebrate?

Humans are vertebrates and have an endoskeleton.

Conclusion

What types of skeletons are possible?

Two types of skeleton are possible – internal (endo) and external (exo). Squids, however, have no skeletons.

Challenge 5.6: Identifying invertebrates

Experiment worksheet answers (pages 90–91 and 197)

There are no questions for this experiment.

Challenge 5.7: Who are the vertebrates?

Experiment worksheet answers (pages 92–93 and 197)

Student graphic organisers and descriptions will vary based on the animals they have selected.

Challenge 5.8: Identifying plants

Experiment worksheet answers (pages 94–95 and 198)

Discussion

3 Does the plant produce flowers seeds, or nuts? If so describe these.

Student answers will vary

4 Is there anything else unusual or special about this plant?

Student answers will vary

6 What features did all plants have in common?

Student answers will vary

7 What differences did you observe between the plants? Describe these differences.

Student answers will vary, but may include reference to the height, width, shape, smell, texture, leaves (size, position and number).