Field Guide: Student Worksheet

Bob Winters ©

Activity 2

Classification

(Level 7)

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1. What is classification?

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2. Scientists have divided living things into six kingdoms. The plant and animal kingdom are two of these. How are kingdoms further grouped?

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Plant classification

3. Go to the Flora section, on the Flora and Fauna Field Guide. Look up the following six plants and write down identifying characteristics in the table:

Plant common name	Plant group	Identifying characteristics
Hoary Sunray	Daisy	
Duckweed	Duckweed	
Tufted Bluebell	Bluebell	
Water ribbon	Arrowgrass	
Yellow Gum	Eucalypt	
Pacific Azolla	Fern	

4. What is a dichotomous key?

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5. Develop a dichotomous key to classify each of these plants by looking closely at their characteristics;
Hoary Sunray, Duckweed, Tufted Bluebell, Water Ribbon,
Yellow Gum and Pacific Azolla.

6. How did you classify the plants in the dichotomous key?

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7. Look at someone else's dichotomous key. How does this compare to yours?

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Animal classification

8. Go to the Reptiles section, on the Flora and Fauna Field Guide. Look up lizards, and compare the taxonomy of the following two Skinks:

Taxonomy	Bougainville's Skink	Centralian Ranges Rock-skink
Phylum		
Class		
Order		
Family		
Genus		
Species		

9. How closely related are the two Skinks?

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_____

10. Compare the taxonomy of the Skinks to Bibron's Toadlet (an amphibian).
How related are they to one another?

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Animal characteristics

11. Explore the classification of animals further. Examine the animals in these groups and define the characteristics. The following list of animal characteristics may be useful.

produce milk	backbone	thin skin	no backbone	lay eggs	breathe under water
feathers	hair or fur	beak	teeth	scaly skin	wings

Animal Group	Definition
Bird	These animals are endotherms, which means they can generate their own body heat. _____ _____
Mammal	These animals are endotherms, which means they can generate their own body heat. _____ _____
Amphibian	These animals are ectotherms, which means that their body temperature varies with the temperature of their environment. _____ _____
Invertebrate	These animals are ectotherms, which means that their body temperature varies with the temperature of their environment. _____ _____
Reptile	These animals are ectotherms, which means that their body temperature varies with the temperature of their environment. _____ _____

12. Birds, mammals, amphibians and reptiles are vertebrates. How do they differ from invertebrates?

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13. Which animals are ectotherms? What does this mean for the animal?

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14. Which animals are endotherms? What does this mean for the animal?

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15. Which of these animal groupings are similar to one another? Why?

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Mammal classification

Explore the classification of mammals further. Examine the animals in this group carefully. Look at the characteristics of these animals and use the definitions provided to link them to the appropriate mammal group.

Mammal group	Definition
Placental	Females have pouches, containing teats where the young are fed and carried.
Marsupial	Females lay eggs.
Monotreme	Females give birth to live young.

16. Identify an example for each group.

Marsupial

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Monotreme

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Placental

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17. Which group of mammal do humans fit into?

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Marsupial classification

18. Explore the classification of marsupials further. Examine the animals in this group carefully. Look at the characteristics of these animals. You need to group these animals into smaller groups based on their characteristics.

Group 1 –

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Group 2 –

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Group 3 –

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Group 4 –

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Group 5 –

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Group 6 –

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19. How many groups did you end up with?

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20. Explain why you organised each group of animals together?

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Conclusion

21. How do scientists classify organisms?

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22. Which level of classification indicates that group members have the least in common?

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23. Which level of classification indicates that group members have the most in common?

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