

Lesson 2

ANSWER KEYS

Reading Checks

READING CHECK **Determine Central Ideas** What do scientists use to determine how organisms are classified in each level? Explain your answer.

characteristics of the organisms; the more characteristics organisms have in common, the more closely related they are

READING CHECK **Determine Meaning** How are scientific names written?

genus and species, in italics, with first letter of genus name capitalized

READING CHECK **Assess Sources** Suggest one reliable source of information about Charles Darwin. What makes this source reliable?

Sample: A recent biography of Darwin by a scholar should be reliable because the scholar would be an expert and would do the research properly.

Figure 2

1. **Interpret Diagrams** Which contains more kinds of organisms: the phylum or the kingdom that gray wolves belong to? Explain your answer.

Kingdom because every organism in the phylum is also in the kingdom, but there are other organisms in the kingdom that are not in the same phylum.

2. **CCC Predict** Suppose that you randomly picked out two members of the same phylum and two members of the same genus. Which pair of organisms would you expect to have more characteristics in common? Explain your answer.

The two members of the same genus would probably have more in common because they have more levels of classification together and are more closely related.

Figure 3

Binomial Nomenclature

Figure 3 All of these mushrooms are commonly called puffballs.

1. SEP Make Observations

List some characteristics that all three mushrooms share.

white or light colored,

grow on the ground,

round



Calvatia gigantea



Calvatia craniiformis

2. SEP Determine Similarities

Which two mushrooms are most closely related to one another? Explain.

Calvatia gigantea and *Calvatia craniiformis* are most closely

related because they are in the same genus.

Figure 4 & 5

Confusing Common Names

Figure 4 Is this a firefly, a lightning bug, a glowworm, or a golden sparkler? Different names are used in different parts of the country. Luckily, this insect has only one scientific name, *Photinus pyralis*.

Predict What characteristic of the insect do you think scientists used to give it the species name *pyralis*?

the light coming from the insect's tail

Using a Taxonomic Key

Figure 5 While on a hike, you find an organism with eight legs, two body regions, claw-like pincers, and no tail. Use the key to identify the organism.

- 1. Interpret Diagrams** How many different organisms can be identified using this key?
seven
- 2. CCC Patterns** Use the taxonomic key to identify the organism you observed on your hike.
pseudoscorpion

Figure 6 & 7

Evolution of the Dolphin

Figure 6 Darwin compared ancient and modern species to develop his theory of evolution by natural selection. Skeletons of dolphin ancestors show how the species evolved.

Form a Hypothesis Why do you think the ancient ancestor of the dolphin became a water-dwelling animal?

Sample: Their environment changed, and living in the water was an adaptation.



Convergent Evolution

Figure 7 These three organisms evolved a similar characteristic over time.

1. **Identify** ✍ Circle the characteristic that the three organisms share.

2. **Form a Hypothesis** Why did the same characteristic evolve?

Sample: The wings evolved because the animals lived in similar environments.