

[98] Family Histories - Issues and Life Science p. F-43 → F-46

1. Look at page F-54 → F-55. Look over the different phyla (pl. phylum) and classes.
2. Look over the different classes. Notice the different physical characteristics that each class has.
3. Read F-43 and look at the table on the bottom of the page.
4. Follow the procedure on pages F-44-->F-45. Do the graphs on student sheet 98.1. Make sure it is stapled to this page before you turn it in.
5. Answer the analysis questions below. These replace the ones in the book.

Analysis

1. Use the information in the graphs to place mammals, fish and reptiles in order, based on when they first appeared in the fossil record. Indicate which period they first appeared. Use the timeline handout for this. The dates in the book are slightly different, but the period of first appearance should be clear.
2. We just want a sense of the order of evolution and the dates are not exact anyway.

Order	Type of Animal	Period of First Appearance
1		
2		
3		

3. Explain how we know about the order in the table above. Use the sentence frames or write your own response. Use evidence from the activity.

We know when animals first appeared from _____. _____ were first. We find their fossils in the _____ period which was from _____ mya to _____ mya. We don't find _____ fossils until the _____ period from _____ mya to _____ mya. Finally, _____ appeared. Write your own sentences to complete the answer

4. How could Darwin's theory of natural selection explain the appearance and disappearance of families of animals from the fossil record? (think extinction and adaptation).

5. Look again at the information on pages F-54-->F-55. Explain which adaptations (physical characteristics) were necessary for animals to evolve to live on land. Where would you place birds in the order of life (table on the front page)?

6. Highly Proficient: Add paper if attempting. Read through the amphibian table and graph on page F-46. Also, review your answers for Analysis Question #1. Where do you think the amphibian family would be placed? Explain your decision.

Use evidence from:

- The tables and graphs
- The physical characteristics of the different animals (F-54-55 or your own research)

Highly Proficient (4)	Proficient (3)	Close to Proficient (2)	Developing (1)
Proficient, plus: <input type="checkbox"/> a <u>clear understanding</u> of the development of life on Earth is evident. <input type="checkbox"/> all answers have <u>evidence and detail</u> . <input type="checkbox"/> The place of amphibians in the evolution of life is well-explained with evidence..	<input type="checkbox"/> student understands the basic development of life on Earth <input type="checkbox"/> analysis questions are complete and <u>most show thought</u> . <input type="checkbox"/> Graph is complete and correct.	<input type="checkbox"/> Student has some knowledge of the development of life <input type="checkbox"/> Answers need more detail for higher level <input type="checkbox"/> Some information is incorrect <input type="checkbox"/> Graph is attempted.	<input type="checkbox"/> no understanding is shown <input type="checkbox"/> questions are mostly incomplete. <input type="checkbox"/> Graph is not attempted