Chapter 1 study guide Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Directions:

1. Look over the list of skills you should have.

2. Complete the review questions below using information from Chapter 1 in your textbook and your notes.

3. Look back at list of skills and check off the ones you now have.

4. Bring completed study guide to class on Tuesday.

**List of Skills:**

|  |  |  |
| --- | --- | --- |
| You should be able to: | Do you have this skill? | Questions you have about this skill. |
| 1. Explain why the study of science is important for Christians
 |  |  |
| 1. define the Creation Mandate and the image of God in man and explain their significance to studying Chemistry
 |  |  |
| 1. define scientific modeling
 |  |  |
| 1. compare and contrast a naturalistic worldview with a Christian worldview
 |  |  |
| 1. define chemistry and matter
 |  |  |
| 1. summarize the historical development of chemistry
 |  |  |
| 1. define the six major branches of chemistry
 |  |  |
| 1. explain why chemistry is the central science
 |  |  |
| 1. define science
 |  |  |
| 1. compare and contrast deductive and inductive reasoning
 |  |  |
| 1. classify examples of logic as inductive or deductive reasoning
 |  |  |

**Review Questions:**

(Note: these questions are in order based on the powerpoint, but may be out of order based on the textbook)

1. What is the goal of science?

2. Describe the naturalistic worldview in a nutshell.

3. Describe the Christian worldview in a nutshell.

4. What is Genesis 1:26-28 called?

5. Gen 1:26-28 tells us something about our identity and something about our calling as humans.

 a. What does Genesis 1:26-28 tell us about our identity?

b. What does Genesis 1:26-28 tell us about our calling?

6. Putting the two above ideas together, what does the Creation Mandate tell us to do?

7. What does it mean to steward something?

8. How does studying science help us steward Creation?

9. What are three reasons for studying chemistry?

10. What are some practical benefits that you will get from studying chemistry?

11. What is chemistry?

12. What is matter?

13. Using information on pages 8-11, complete the following table:

|  |  |
| --- | --- |
| Period of History | Major ideas/developments of this time |
| Old Testament |  |
|  | Theories, no experimentation |
| Alchemists |  |
|  | New definition of elements |
| Chemistry of today |  |

14. List the six major branches of chemistry.

15. Define the six major branches of chemistry.

16. A scientist studies chemical reactions in plant cells. What two branches of chemistry would she be a part of?

17. A scientist studies the temperatures at which materials melts. What branch of chemistry would he using?

18. Why is chemistry considered the foundational science?

19. What is science?

20. Define pure science and applied science and give an example of each.

21. What is the difference between objective and subjective observations?

22. What is the difference between qualitative data and quantitative data?

23. If I measure the weight of an object and find that it weighs 2301 lbs, have I conducted an objective or subjective observation? Have I generated qualitative or quantitative data?

24. Define deductive reasoning.

25. Define inductive reasoning.

26. What is the limitation of inductive reasoning?

27. What is a scientific model?

28. To be a good experiment, the number of variables should be \_\_\_\_\_\_.

29. Define hypothesis, scientific theory, and scientific law.

30. It could be said that the scientific method is a model to explain how science works. What is the meaning of the word “model” in this context?