

## Checkpoint #2

## *A SHORT HISTORY OF NEARLY EVERYTHING*

### *Book Questions*

1. How long is the average human life, in hours?
2. What percent of species have gone extinct?
3. What were Penzias and Wilson able to detect with their communications antenna in 1965?
4. Using Drake's equation with the most conservative inputs, how many advanced civilizations could be present in the Milky Way?
5. What are the biggest events in creation?
6. What did supernovae generate that the Big Bang had not?
7. Why did Newton invent Calculus?
8. Which revelation from Newton's *Principia* caused a French team to travel to the Peruvian Andes to calculate the circumference of Earth?
9. What question did the first cooperative international scientific venture hope to answer?
10. Who was the first person to isolate hydrogen and combine hydrogen and oxygen to form water?
11. Describe Hutton's conclusions about how marine fossils ended up at the tops of mountains?
12. Describe Lyell's belief named uniformitarianism.
13. What happened to the first dinosaur bone ever found?
14. Who was finally able to put together a formal description of a mastodon based on bones found in America?
15. How long did it take Anning to excavate a plesiosaur?
16. Who was responsible for making museums accessible to the "common man?" Which museum did he open?
17. What element did Hennig Brand distill from human urine?
18. Although the term "atom" had been around since the Greeks, what did Dalton contribute to our understanding of them?
19. What would be the size of a nucleus if an atom were expanded to the size of a cathedral, as Cropper put it?
20. From which material did Patterson discover the age of the Earth? From which material do scientists turn to for modern climatological studies?
21. Which crater on Earth is generally accepted as the impact site that killed the dinosaurs?
22. Where and when were the world's first extremophiles found?
23. List the four principal breaks we have had on Earth that allow life to flourish here.
24. What did *Alvin* discover in 1977 that was one of the most important and startling discoveries of the 20<sup>th</sup> Century?

25. List three things bacteria do that help us out.
26. What is the third largest killer of humans in the Western world?
27. What must happen to become a fossil?
28. Which extinction event is as close as we have ever come to total obliteration?
29. Which system of classification was established in the 1700s and is still used today?

*Take-Aways*

1. Describe three “take-aways” from the book. What did you learn while reading it?
2. What topics in class did the book help you understand better?
3. What questions do you still have about the topic and why?