

“Origins: Earth is Born” Worksheet

This video covers three major ideas: how the Earth formed, how the moon formed, and where Earth’s water came from. Answer the following questions while watching the video. The questions do go in chronological order to the video. Some answers to questions will be very close to each other in the video and some will be further away. The final section is for you to answer after the video is finished. The responses do not have to be in complete sentences.

1. Was the moon closer or farther when the Earth was younger?

2. If we imagine Earth’s total 4.5 billion year history to be over the span of one day, how long ago did humans begin to walk the Earth?

3. What is the name of the small early planets, which formed through gravitational attraction reaching sizes of a few miles to eventually the size of our moon?

4. When the Earth first formed (at midnight on our 24-hour clock of Earth’s history), what was the Earth like?

5. What type of object can give us information about the conditions in which the solid planets (like Earth) formed?

6. What are scientists able to calculate from the radioactive elements found in a meteorite that decay at a particular rate?

7. What name do scientists give to Earth when the outer surface was completely molten?

8. During this time when the Earth was liquid rock, what type of elements sank toward Earth’s center?

9. Is the magnetic north pole’s movement picking up speed or slowing down over more recent years?

10. Earth’s iron core creates a magnetic field which protects the planet from _____.

11. What planet is believed to have once had a magnetic field that disappeared when the planet’s iron core cooled?

12. When scientists used radioactive dating on rocks from the moon, how did the moon's age compare to Earth's age? Was the composition (material) of the rocks the same or different from the Earth?
13. The leading theory for the moon's formation involves what catastrophic event?
14. How quickly is the moon moving away from the Earth?
15. What are scientists trying to determine when they look at the age of zircons in Australia?
16. How long ago were there at least islands of continental crust on Earth?
17. What are two possible sources of the water on the Earth's surface today?
18. What special kind of water do scientists look at in the ocean and in comets to see if the proportions match?

After video:

List three things you already knew from the video.

- 1.
- 2.
- 3.

List three things you learned from the video.

- 1.
- 2.
- 3.

List two things that still confuse you or you have further questions about from the video.

- 1.
- 2.