

Getting A Grasp of Time

Purpose: To make a graphic scale of earth time and plot major events in earth's geological, biological, and human history.

Materials: ✓ 5 meters of adding machine tape per group
✓ Meter stick
✓ Colored pencils

Procedure:

1. Start with a strip of adding machine paper a little over 5 meters in length.
2. About one centimeter from one end of the strip, draw a solid line across and label the line "NOW".
3. Starting from the "now" line, mark four dotted lines across the strip at 1 meter intervals.
4. Mark the dotted line nearest the "now" line with "1 billion years ago".
5. Mark the remaining 3 dotted lines with "2, 3, and 4 billion years ago" as each dotted line gets further from the "now" line.
6. Plot the data listed below on the time line.

HINT: 1 meter = 1,000,000,000 years ago
1 centimeter = 10,000,000 years ago
1 millimeter = 1,000,000 years ago

Data:

- | | | |
|-----|--|-----------------------|
| 1. | Origin of earth? | 4.5 billion years ago |
| 2. | Oldest known rocks | 3.3 billion years ago |
| 3. | First known plants | 2.0 billion years ago |
| 4. | First known animals | 1.2 billion years ago |
| 5. | Beginning of Cambrian period & abundant fossil information | 600 million years ago |
| 6. | Beginning of Ordovician | 500 million years ago |
| 7. | Beginning of Silurian | 440 million years ago |
| 8. | Beginning of Devonian | 400 million years ago |
| 9. | Beginning of Mississippian | 350 million years ago |
| 10. | Beginning of Pennsylvanian | 305 million years ago |
| 11. | First Reptiles | 290 million years ago |
| 12. | Beginning of Permian | 270 million years ago |
| 13. | Beginning of the Triassic | 225 million years ago |
| 14. | First mammals | 200 million years ago |
| 15. | Beginning of the Jurassic | 180 million years ago |
| 16. | First Birds | 160 million years ago |
| 17. | Beginning of Cretaceous | 135 million years ago |
| 18. | Beginning of Paleocene | 70 million years ago |
| 19. | Beginning of Eocene | 60 million years ago |
| 20. | Beginning of Oligocene | 40 million years ago |
| 21. | Beginning of Miocene | 25 million years ago |
| 22. | Beginning of Pliocene | 11 million years ago |
| 23. | First man like animals | 2 million years ago |

How do you plot the following events in the space that is left on the time line?

- 24. Beginning of the Pleistocene 1 million years ago
- 25. Man using tools and fire 500,000 years ago
- 26. Last ice age 10,000 years ago
- 27. 356 day calendar is first used in Eqypt 4234 years B.C.
- 28. Erathosthenes calculates the earth's size 200 years B.C.
- 29. Mount Vesuvius eruption destroys Pompeii 79 years A.D.
- 30. Civil War 1861 years A.D.
- 31. John F. Kennedy assassinated 1963 years A.D.
- 32. Neil Armstrong is the 1st man on the moon 1969 years A.D.
- 33. Dissolution of the USSR 1991 years A.D.

Review: Refer back to the time line that was created:

- What significance is mankind compared to the total passage of time shown on the time line?