

MISSOURI TIME SCALE

For the Missouri Time Scale, you will need 2 meters of adding machine tape.

1. Draw a continuous line down the middle of the tape.
2. Draw a line across the **left** end of the tape.
Label this line: **The Present**.
3. From **The Present** line, draw lines exactly one meter apart.
Label these lines **1 billion years ago, 2 billion years ago, etc.**
4. Plot each **Event** and **Years Ago** from the following list onto the tape.
(**Example:** The first event would be at 15 meters.)
5. Draw in pictures (**10 minimum**) to illustrate the major events.
6. Lightly shade each of the four major Eras a different color.
7. **Label** each of the four Eras.

<u>Event</u>	<u>Years ago</u>	<u>Placement</u>
Volcanic activity in S.E. Missouri creates <u>St. Francis Mts.</u> Volcanoes erupt lava flows and spewed clouds of volcanic ash. Missouri was covered with water except for these volcanic islands.	1.6 billion	60 cm past 1 billion
Magma intruded into volcanic rocks Magma cools slowly below ground forming coarse crystalline granite (<u>Elephant State Park</u>)	1.4 billion	40 cm past 1 billion
Ozarks uplifted	1 billion	1 meter past present
End of Precambrian	600 million	60 cm from present

Beginning of Paleozoic Era	600 million	60 cm from present
Missouri covered by seas (<i>first shelled fossils - brachiopods</i>)	560 million	56 cm from present
Mineralizing fluids from magma form lead, zinc, copper & barite deposits. Rock that will become the <u>Ozark River bluffs & Mo. caves</u> is formed	550 million	55 cm from present
Beach sand deposited in eastern Missouri Sand deposit to become <u>St. Peter's Sandstone</u>	500 million	50 cm from present
Crinoids abundant (<u>Rock Bridge State Park</u>) - seas	350 million	35 cm from present
Ozarks uplifted	280 million	28 cm from present

Beginning of Mesozoic Era	225 million	22.5 cm from present
Ozarks eroded and covered many times	220 million	22 cm from present
S.E. Lowlands form as a depression Collects sediment making an unstable <u>New Madrid fault area</u>	135 million	135 cm from present

Beginning of Cenozoic Era	66 million	6.6 cm from present
Major uplift of Ozarks	60 million	6 cm from present
Last Major Uplift of Ozarks Steep bluffs formed along some rivers by erosion	20 million	2 cm from present
Ice Sheet advances into Missouri Meltwater causes formation of <u>Missouri River channel</u>	1.2 million	1.2 mm from present
Ice Sheet leaves Missouri	1.1 million	1.1 mm from present