

# 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>
<b>Volcanic activity in S.E. Missouri</b> 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
<b>Magma intruded into volcanic rocks</b> Magma cools slowly below ground forming coarse crystalline granite ( <u>Elephant State Park</u> )	1.4 billion	40 cm past 1 billion
<b>Ozarks uplifted</b>	1 billion	1 meter <b>past</b> present
<b>End of Precambrian</b>	600 million	60 cm <b>from</b> present
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<b>Beginning of Paleozoic Era</b>	600 million	60 cm <b>from</b> present
<b>Missouri covered by seas</b> ( <i>first shelled fossils - brachiopods</i> )	560 million	56 cm <b>from</b> present
<b>Mineralizing fluids</b> from magma form lead, zinc, copper & barite deposits. Rock that will become the <u>Ozark River bluffs &amp; Mo. caves</u> is formed	550 million	55 cm <b>from</b> present
<b>Beach sand</b> deposited in eastern Missouri Sand deposit to become <u>St. Peter's Sandstone</u>	500 million	50 cm from present
<b>Crinoids abundant</b> ( <u>Rock Bridge State Park</u> ) - seas	350 million	35 cm from present
<b>Ozarks uplifted</b>	280 million	28 cm from present
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<b>Beginning of Mesozoic Era</b>	225 million	22.5 cm from present
<b>Ozarks eroded and covered</b> many times	220 million	22 cm from present
<b>S.E. Lowlands</b> form as a depression Collects sediment making an unstable <u>New Madrid fault area</u>	135 million	135 cm from present
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<b>Beginning of Cenozoic Era</b>	66 million	6.6 cm from present
<b>Major uplift of Ozarks</b>	60 million	6 cm from present
<b>Last Major Uplift of Ozarks</b> Steep bluffs formed along some rivers by erosion	20 million	2 cm from present
<b>Ice Sheet advances into Missouri</b> Meltwater causes formation of <u>Missouri River channel</u>	1.2 million	1.2 <b>mm</b> from present
<b>Ice Sheet leaves Missouri</b>	1.1 million	1.1 <b>mm</b> from present