# Timeline of the Last Billion Years

**Overview:** This is the graded part of the assignment. You did the first 3.6 billion years will as a group. Each one of you will be creating a timeline of the most recent billion years (1.0 meter).

#### **Materials**

- →register tape (1.0 meter)
- ◆Geologic time scale (separate handout)
- ♦meter stick / ruler
- ◆pencil and marking pen (like an ultra-fine point sharpie)
- ◆colored pencils

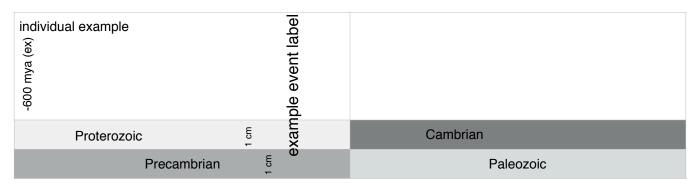
mya = millions of years ago my = million years bya = billions of years ago

### Scaling the timeline

1.0 m = 1 billion years; 1 centimeter = 10 million years; 1 millimeter = 1 million years

### Individual Timeline Procedure

- 1. On your own, measure out a 1.0 m piece of wide register tape. Put your name and period on the back.
- 2. Label the **right** end of your register tape as PRESENT DAY. Label this vertically.
- 3. Add two 1 cm bars to the bottom of your timeline.
- 4. Using the scale above, make a small mark at each 100 million years going back in time. This is the same scale.
- 5. Add the periods and eras to your timeline. Color each period and era. Avoid using similar colors near each other.
- 6. Add the events from the Precambrian reading to your timeline.



## **Geologic Time Scale**

Era	Period	Time (approximate)
Cenozoic		Present - 65 mya
	Quarternary	Present - 1.6 mya
	Tertiary	1.6 mya - 65 mya
Mesozoic		65 mya - 250 mya
	Cretaceous	65 mya - 146 mya
	Jurassic	146 mya - 200 mya
	Triassic	200 mya - 250 mya
Paleozoic		250 mya - 540 mya
	Permian	250 mya - 300 mya
	Carboniferous	300 mya - 359 mya
	Devonian	359 mya - 416 mya
	Silurian	416 mya - 445 mya
	Ordovician	445 mya - 490 mya
	Cambrian	490 mya - 540 mya
Precambrian		540 mya - 4600 mya (4.6 bya)
	Proterozoic	540 mya - 2500 mya
	Archean	2500 mya - 3800 mya
	Hadean	3800 mya - 4600 mya

Evolution: Analyze and interpret the existence, diversity, extinction and change in life forms throughout the history of Earth

Highly Proficient (4)	Proficient (3)	Close to Proficient (2)	Developing (1)
Proficient, plus:  Timeline of human history is complete and final draft quality  Event and adaptation explanations are complete.  Product teaches us about the topic	<ul> <li>student understands the basic development of life on Earth</li> <li>analysis questions are complete and most show thought.</li> <li>Information is mostly correct</li> <li>Timeline is Proficient quality</li> </ul>	<ul> <li>Student has some knowledge of the development of life</li> <li>Answers need more detail for higher level</li> <li>Some information is incorrect</li> <li>Work is incomplete</li> </ul>	no understanding is shown questions are mostly incomplete.

Science and Engineering Practices: Modeling the history of the Earth

Highly Proficient (4)	Proficient (3)	Close to Proficient (2)	Developing (1)	
Proficient, plus:  Billion year timeline is final draft quality  Labels are written neatly and easy to read.  Events are written neatly and are easy to read	<ul> <li>Timeline is complete, labeled and mostly correct</li> <li>Timeline could be made neater and easier to use as a model.</li> </ul>	timeline is partially complete labels are incorrect, messy or missing. events are incorrect, messy or missing	timeline is incomplete.	