

## ORIGIN OF LIFE: TIMELINE LAB ACTIVITY

Directions: Please use website to complete the tasks below: <http://exploringorigins.org/timeline.html>

In groups, you will be required to complete the following:

- 1) **PART A:** Make a timeline of the major events of life. Be sure to include a picture of the event near the time it occurs.
- 2) **PART B:** In the website text, read and answer the questions related to the major events.

### **PART A: MAJOR EVENTS ON THE TIMELINE**

In this part you will be making a timeline of the major events in the history of life. You must find the time the events below happened, put them in order, and then create a timeline indicating when each event occurs. Be sure to also include a Title and visuals (drawings) of the events around the timeline. Make it neat and orderly, using proper spacing, a ruler, and colored markers.

Under the timeline, please answer the question in Step 4.

Step 1: Find the time each event occurs and label each event.

Step 2: Put the events in order with 1 being the oldest.

Step 3: Make a timeline including labels and pictures for the above events.

Step 4: If you could go back to witness one event, which would it be and why? Each member of the group should have their *own* answer to it.

<b>Oldest Geological Evidence</b>	_____ years ago	<b>Order #</b> _____
<b>Formation of the Moon</b>	_____ years ago	<b>Order #</b> _____
<b>Formation of the Earth Crust &amp; Ocean</b>	_____ years ago	<b>Order #</b> _____
<b>Formation of the Solar System</b>	_____ years ago	<b>Order #</b> _____
<b>Cambrian Explosion</b>	_____ years ago	<b>Order #</b> _____
<b>Proliferation of Cyanobacteria</b>	_____ years ago	<b>Order #</b> _____
<b>Evolution of Multicellular organisms</b>	_____ years ago	<b>Order #</b> _____
<b>Evolution of Prokaryotic cells</b>	_____ years ago	<b>Order #</b> _____
<b>Evolution of Eukaryotic cells</b>	_____ years ago	<b>Order #</b> _____
<b>Dinosaurs</b>	_____ years ago	<b>Order #</b> _____

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### Part B:

Using the website provided above, please read the descriptions underneath each of the above headings. Then find the answers to the following questions in these sections.

- 1) When was the late heavy bombardment? \_\_\_\_\_
- 2) Do you think early life could have survived it? \_\_\_\_\_
- 3) What is another name for blue-green algae? \_\_\_\_\_
- 4) What are stromatolites? \_\_\_\_\_
- 5) How many times did photosynthesis evolve? \_\_\_\_\_
- 6) How did modern organelles evolve according to scientists?

\_\_\_\_\_

- 7) Name two membrane bound organelles. \_\_\_\_\_ and \_\_\_\_\_.
- 8) Did multicellular life evolve only once? \_\_\_\_\_
- 9) What is thought to have caused the Cambrian explosion?

\_\_\_\_\_.

- 10) How long did dinosaurs populate the Earth? \_\_\_\_\_.
- 11) What is thought to have led to their extinction?

\_\_\_\_\_.

- 12) What is the current human population? \_\_\_\_\_.

WHAT WAS THE MOST INTERESTING FACT THAT YOU LEARNED FROM THIS ACTIVITY?

\_\_\_\_\_

\_\_\_\_\_.