

Mars for Earthlings

LESSON 18: The Origin of Life**In-Class Activity 1***Miller-Urey Experiment***What is life?**

1. In your own words, define “life”:
2. What are some requirements for life?

The Miller-Urey Experiment

View the following YouTube animation of the Miller-Urey Experiment:

<http://www.youtube.com/watch?v=iahBQolXQH8>

3. Describe at least 4 conditions of the experiment.
4. What was “applied” after the gases travelled through the horizontal tube?
5. Was O₂ gas an important component of the experiment? Why or why not?
6. Did the experiment accurately represent a scale model of early Earth? Did they set up the conditions of early Earth properly?

The Experiment on Mars

7. Would this experiment be applicable to early Mars?
8. How would you modify the experiment to represent what might have occurred on Mars? Would you modify the experiment?



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NASA NAI-Astrobiology

9. Visit NASA's NAI-Astrobiology website and explore the various "headlines."
<https://astrobiology.nasa.gov/nai/> List at least 2 ongoing investigations that have applicability to researching the "origin of life."
10. Read "About NAI" on the website. Are investigations into the origin of life a NAI focus? Why or why not?
11. When you consider the present and/or past environment of Mars, could you find all the requirements for life?

