



## WORKSHEET OUTLINE ( PRIMARY AND HIGH SCHOOL )

Code  
PGF-02-R07

Date  
August 10<sup>th</sup> to September 11<sup>th</sup>  
2009

**Subject:** Science  
**Term:** 1<sup>st</sup>

**Grade:** Seventh  
**Worksheet #:** 1

**Topics:** **INTEGRATED CONCEPTS:** Specialized Cells in Human Systems: Urinary, Circulatory, Immune and Respiratory.  
Newton's laws, Atomic Structure and Energy, Periodic Table.

### WEEK No. 1 ( August 10<sup>th</sup> – 14<sup>th</sup> )

#### 1. CONTEXT

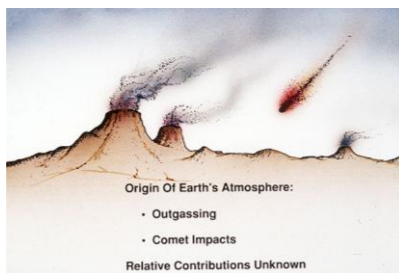
#### HOW DOES LIFE BEGAN ON EARTH? AND HOW DO CELLS EVOLVE INTO SPECIALIZED TISSUES?

One of the most interesting questions scientists have been asking along the history is about the way life began on Earth. Many different scientific disciplines such as: Chemistry, Physics and Biology, have tried to solve this question according to their specific points of view and theories.

Now you have opportunity to share your personal point of view about the way you think, life began on Earth.

#### EXPLORE ACTIVITY:

1. Write in your notebook your ideas about how life began on Earth.
2. What sciences do you think you can use to explain the origin of life on Earth?
3. What do you think Chemistry studies?
4. What do you think Physics studies?
5. What do you think Biology studies?
6. In what ways do you think a cell evolved into a complex organism?
7. Share your ideas with a partner.



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### WEEK No. 2 ( August 17<sup>th</sup> – 21<sup>st</sup> )

#### 2. ACTIVITIES

##### 2.1. INDIVIDUAL WORK

- Solve the questions from the explore activity in your notebook.
- Use different sources: text books in the library and internet pages at home, to find information that support your previous answers.
- Share what you find with your partners and make a summary in your notebook about the most important ideas.

##### 2.2. GROUP WORK

Let's watch a movie related to the way Life Began On Earth. In your group discuss the main ideas you consider the most important. Choice a monitor and distribute different roles to represent a group of scientists trying to explain how life began on Earth and how the first cell appeared on Earth.



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### WEEK No. 3 ( August 24<sup>th</sup> – 28<sup>th</sup> )

#### 2.3. LAB PRACTICES

##### HOW TO THINK LIKE A SCIENTIST?

Let's study the scientific tools to make a research:

1. Making a pre-report:

- a. Find out information about how cells evolved from a single cell to a complex organism. Write the most important information in your notebook and share them with your partners in the group.
- b. You will have an opportunity to observe under the microscope different kinds of cells, you have to analyze in your group the way this practice is connected with the information you found.
- c. Write in your notebook the pre-report, it has to include: Title, Purpose, Hypothesis, Materials and Procedure.

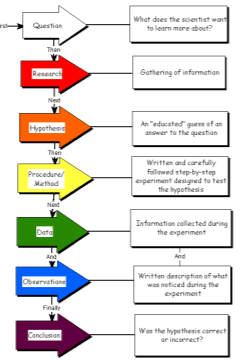
2. Making the final Report: Record your data according to your results and make your conclusions in your notebook.

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**WEEK No. 4 (August 31<sup>st</sup> – September 5<sup>th</sup> )**



**2.4. WHOLE CLASS WORK**

Prepare an exposition in order to explain your practice results and a new project to solve the question about How Life Began On Earth.

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<http://www.chariho.k12.ri.us/faculty/kkvr/smethorq1.GIF>

**WEEK No. 5 (September 7<sup>th</sup> - 11<sup>th</sup> )**

**2.5 CLASS DISCUSSION**

Class discussion about some mechanisms used by cells to use energy and to evolve from single cells to complex organisms.

**3. COMPLEMENTARY ACTIVITIES**

Find out information about the classification of unicellular and multicellular organisms and prepare a power point presentation.

**4. ASSESSMENT**

Students will be evaluated along the whole term throughout:

- ▶ Explore activity results.
- ▶ Appropriated summaries from information collected.
- ▶ Lab practice pre-report and final report.
- ▶ Lab Conclusions.
- ▶ Group activities results.
- ▶ Managing oral presentations.
- ▶ Pop quiz about the studied topics.

**5. REFERENCES AND RESOURCES**

ALDRIDGE, Bill, et al. SCIENCE INTERACTIONS. Glencoe-Mc-Graw Hill. U.S.A. 1.998.

**BIGGS A., et-al.** (2000) Biology, The Dynamics of life. Columbus, Ohio, United States of America. Glencoe-Mc Graw Hill.

**CAMPBELL N., et-al.** (2002) Biology. San Francisco, United States Of America. Benjamin-Cummings.

**HEWITT, P. G.** (2006). Conceptual Physics. U.S.A.: Pearson – Addison Wesley. Tenth Edition.

**WISTROM, Cheryl, et al. CHEMISTRY.** Concepts and Applications. Glencoe-Mc-Graw Hill. USA 2.000.

**ZITZEWITZ, Paul W., et al. PHYSICS.** Principles and Problems. Glencoe-Mc-Graw Hill. USA 1.999.

**HEWITT, Paul G. Conceptual Physics.** Addison Wesley. USA 2005. 10th Ed.

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