



MUSEUM OF ARTS & SCIENCES

In Association with the Smithsonian Institution

## Summer Learning Institute Program Course Outline

### **Creative Chemistry**

Through hands-on experiments, this class will help students to connect real-world situations with science. Learn what makes a volcano erupt and create your own bottle rocket using the knowledge of chemical reactions. Combine art and science with projects that allow campers to create chemical themed artwork, including colorful chromatography.

All program classes are organized to address the following aspects:

- STEM/STEAM Education.
- Cultivate an interest in Art, Science, and History.
- Continued knowledge and comprehension regarding Volusia County School Standards.
- Develop interpersonal skills such as teamwork and problem solving.
- Foster curiosity and imagination of the world around us.

**Pre-requisites:** None

**Date:** June 17-21

**Software/Materials/Books/Media:** Handouts and materials provided in class.

*Exhibits/Galleries that correspond with camp:*

- Apothecary in Root Family Museum
- Art throughout the Museum
- Children's Museum

### **Course Objectives:**

*Students will:*

- Learn basic chemistry skills and knowledge.
- Create a hand on understanding with chemical reactions, bonds, and changes.
- Demonstrate a basic understanding of "rocket science."

## 5 Day Course Outline Example:

*Schedules must consider, lunch time, snack time, free play, and lessons in the gallery. All movies/shows must be approved by MOAS staff prior to viewing.*

- Day One: Overview of the periodic table, demonstrations of chemical reactions, and tactile examples of chemical bonds. Art/craft activities.
- Day Two: Lessons chemistry relating to biology, medicine, and medical history, with relating art/craft activity. A trip to the Root Family Museum Apothecary would be recommended.
- Day Three: Lessons on rocketry with bottle rocket craft. Comparison and contrasting of real-world rocket science with this basic chemical reaction. A trip to the Planetarium would be recommended.
- Day Four: Learn about chemistry and art, potential guest speaker from Curatorial team on art conservation. Art/craft activities using this knowledge.
- Day Five: Wrap up day, art/craft activities.

### Assessment:

*Student's ability to demonstrate the following:*

1= Below Expected Outcome

3= Meets Expected Outcome

5=Exceeds Expected Outcome

<b>The Student Has:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Demonstrated knowledge chemistry and the basic bond types.					
Demonstrated an understanding of how chemistry is used in daily life.					
Demonstrated a desire for continued learning.					