



For educators who work with children of ages 5-10

July 10-12, 2007

Lead Instructor: Dr. Julie Lutz, Research Professor of Astronomy, University of Washington

Registration Deadline: June 22, 2007

MAJOR TOPICS COVERED

- Integration of astronomy and space topics and themes with other disciplines, particularly reading, writing, mathematics, art and music
- Rocket math, space food and nutrition, constellations and stars, day and night, solar system.

COURSE OBJECTIVES AND OUTCOMES

1. Participants will do some space science-themed activities that will help their students learn arithmetic and letters.
2. Participants will get some ideas for activities in arts, music, humanities, reading and writing that can be used to help students learn astronomy concepts that are part of the GLEs at levels 1 and 2. Emphasis will be on actually going through the activities and reflecting on how they can be used with kids.
3. Participants will learn content and activities on topics for younger kids (constellations, stars, sun, moon, planets, comets, meteors).

EDUCATION STANDARDS

The content and activities presented in Blast Off to Learning! are related to the State of Washington Grade Level Expectations for grades K-4 in a variety of subjects. These relationships will be covered during the workshop.

WORKSHOP OUTLINE

Day 1

9:00-9:30 Workshop introductions and logistics

9:30-10:30 Kick-off Activity: Connection to NASA Ames Research Center via the Digital Learning Network

10:30-10:45 Break

10:45-11:15 Space Food and Nutrition video

11:15-12:15 Space Food and Nutrition activities

12:15-1:00 Lunch

1:00-2:00 Space Food and Nutrition activities

2:00-2:30 Introduction to the 3, 2, 1...Liftoff! curriculum book and background information

2:30-2:45 Activity 3: Countdown Begins

Kids associate a countdown with a rocket launch and practice counting down from 10 to 1.

2:45-3:00 Break

9:30-9:45 Activity 11: Rocket Rhymes and Songs

Kids use rhymes, chants songs and creative movements to practice rhyming words.

3:00-3:30 Activity 4: Simple Rocket Science

Kids perform a simple science experiment to show how a rocket works.

3:30-4:00 Activity 6: Launch Time

Kids construct and launch paper rockets and measure how far the rockets travel.

Day 2

9:00-9:15 Opening Activity: Make a sunclock

9:15-9:30 Activity 10 Rocket Alphabet

Kids practice uppercase letter recognition and sequencing uppercase letters in the correct order.

9:45-10:15 Activity 12: Rocket Math

Kids find missing addends in simple number sentences.

10:15-10:30 Break and sunclock observation

10:30-10:45 Activity 14: Number Rockets

Kids identify numerals and the number each numeral represents.

10:45-11:00 Activity 15: Rockets by Size

Kids sequence objects from shortest to tallest and tallest to shortest

11:00-11:30 Activity 18: Hide and Seek Rocket

Kids use numeral recognition and position words to locate a hidden rocket.

11:30-12:00 Debriefing 3, 2, 1...Liftoff! Curriculum

12:00-12:45 Lunch and sunlock observation

12:45-1:30 Introductory Discussion: What do they know and when do they know it?

Day and Night

Telling Time

Stars

Constellations

Moon

Planets

Sun

Comets and Meteors

1:30-2:15 Day, Night and Telling Time

Demonstrations

Ancient observatories

Toilet Plunger sunlock

2:15-2:30 Break and sunlock observation

2:30-3:45 Stars and Constellations

Things to Know

Books to read

Songs to sing

Constellation pictures

Create a constellation and a story

Create a Starframe

3:45-4:00 Debrief sunlock activity

Day 3

9:00-9:30 Questions and discussion

9:30-10:30 Moon

Things to know

Books to read

Moon phases

Moon cookies

Birthday moon

10:30-10:45 Break

10:45-12:15 Solar system

- Things to know
- Books to read
- Songs to sing
- Planets
- Hey, what about Pluto?
- Understandings about planet Earth

12:15-1:00 Lunch

1:00-2:15 Solar System

- Comets and meteors
- Create a Creature

2:15-2:30 Break

2:30-3:00 Sun

- Things to know
- Books to read
- Our Star, the Sun NASA book
- Solar cookies

3:00-3:15 Discussion of assignment

3:15-3:45 Questions and general discussion

3:45-4:00 Workshop evaluation