



Rio Grande Educational Collaborative Before and After School Program Lesson Plan

TITLE OF LESSON: Balloon Rocket STEM Challenge

DATE:

SITE NAME:

CLASS SIZE:

NAME(S) OF INSTRUCTOR:

DURATION OF LESSON:

CREDIT (website used): https://thatafterschoollife.com/balloon_rockets.html

COMMON CORE STANDARDS: [CCSS.ELA-Literacy.SL.3.1](#), [CCSS.ELA-Literacy.SL.5.6](#)

LEARNING OBJECTIVES:

Students will understand the following:

- How to describe and demonstrate construction techniques using given materials
- How to make a design work with limited materials
- Transferral of force and a surface understanding of Newton's first and third laws of motion

ACTIVITY:

Instructional Sequence:

(Step by step instructions, should another instructor pick up and teach the lesson successfully)

1. Ask students if they have ever blown up a balloon and then let it go without trying the end. What happens? Show students the supplies and tell them they need to create a way for a balloon to travel from one wall to the opposite wall (in larger spaces, you can use chairs or table markers).
2. Students may work in groups or individually. 2-3 is a good limit.
3. Let students try to figure out the solution without hints or advice.
4. Once they've had a good chunk of time to try and succeed (or fail), debrief and discuss what they tried to do, what worked, what didn't, and what the solution is. How are these physics and mechanisms used in other contexts?

Solution:

Tape or tie one end of the wire or string to one wall, secure it high on the wall. Place the straw on the wire or string and pull it to the opposite wall and tie or tape it towards the bottom of the wall, so it creates an incline. Blow up the balloon. Do not tie it but hold it securely, pull the straw to the wall where the string is taped up high. Use tape and secure the balloon to the straw. Let the balloon go, and it will fly from the higher wall down the string to the opposite wall.

MATERIALS:

The following materials or equipment needed for this lesson:

(Include special equipment request)

- Balloons
- Straws
- Thin string or wire
- Masking tape

SIGNATURE: _____ **DATE:** _____

SITE SUPERVISOR'S SIGNATURE: _____ **DATE:** _____

INSTRUCTOR'S REFLECTION:

Reflection on the lesson given:

1. How many students participated in the lesson given? _____
2. Name(s) of instructors participated. _____
3. How long did your lesson take? (Amount of time) _____
4. How did the students feel about the lesson? _____
5. Did the students like the lesson? _____
6. What part of the lesson did the students like? _____

7. What part of the lesson did the students not like? _____

8. Were the students interested in the topic of the lesson? _____
9. Was the content of the lesson difficult for the students? _____
10. What could you have changed to make the lesson interesting? _____

11. Did you have any trouble getting your lesson together? (Idea & Materials) _____

12. How do you rate your lesson? (1-10) Why? _____

SITE SUPERVISOR'S REFLECTION:

Reflection on the instructor's lesson:

1. How many students participated in lesson? _____
2. How many instructors participated in lesson? _____
3. Did the students enjoy the lesson? _____
4. What part did the students enjoy? _____

5. What part did the students NOT enjoy? _____

6. What could have been changed to make the lesson interesting? _____

7. Was the content of this lesson difficult for students to understand? Why? _____

8. What part of STEAM or literacy was used? (Science, Technology, Engineering, Art, Mathematics or Literacy)

9. Comments: _____

