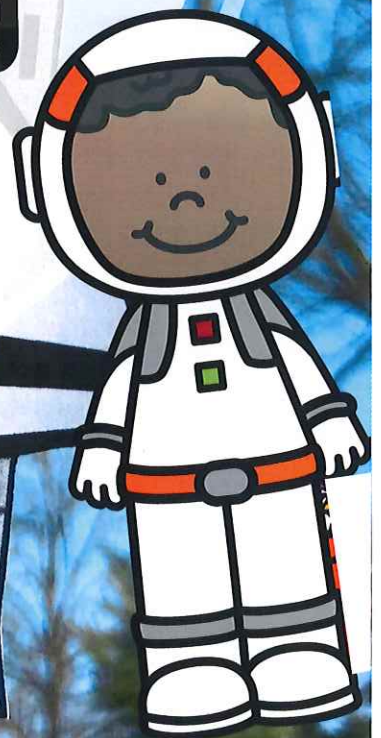


READ
ALoud
STEM
Mae Among
the Stars
Carly and Adam



VIDEO LINKS

Resources:

Mae C. Jemison: Mini Bio

(2:28 min)

<https://www.youtube.com/watch?v=EgOaIKshbIU>

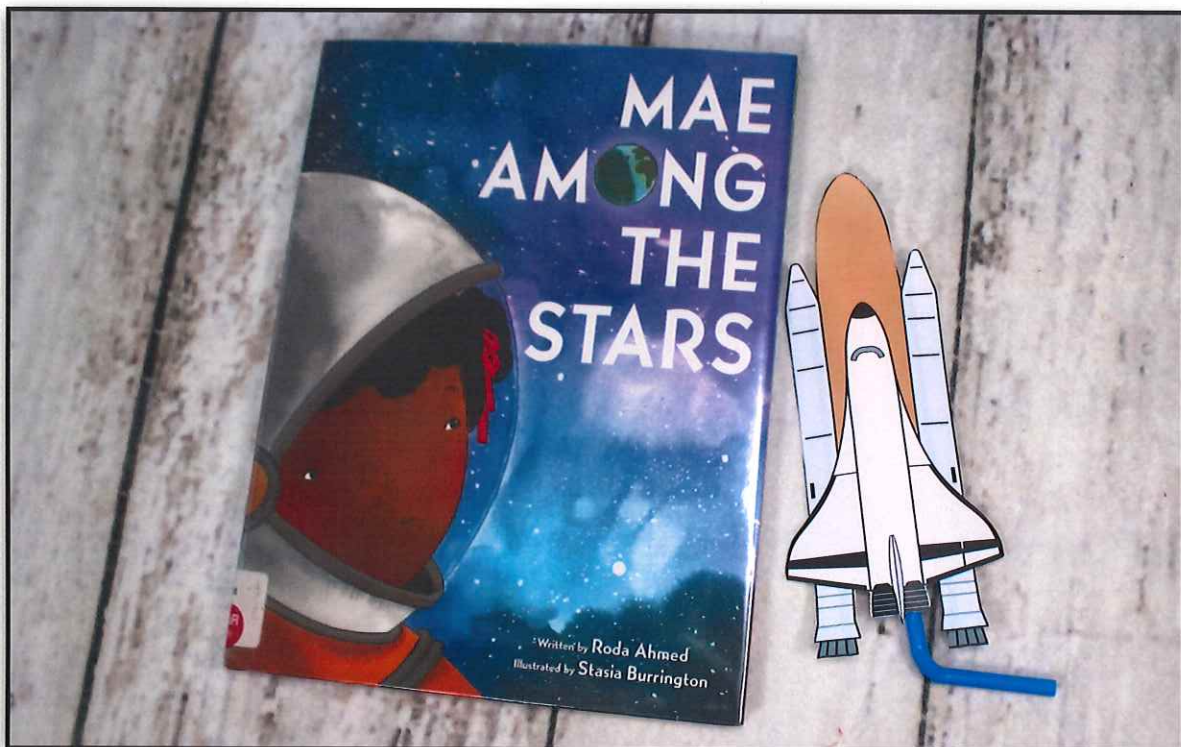
How Do We Launch Space Rockets?

(1:41 min)

<https://www.youtube.com/watch?v=-cn37Eg-qz0>

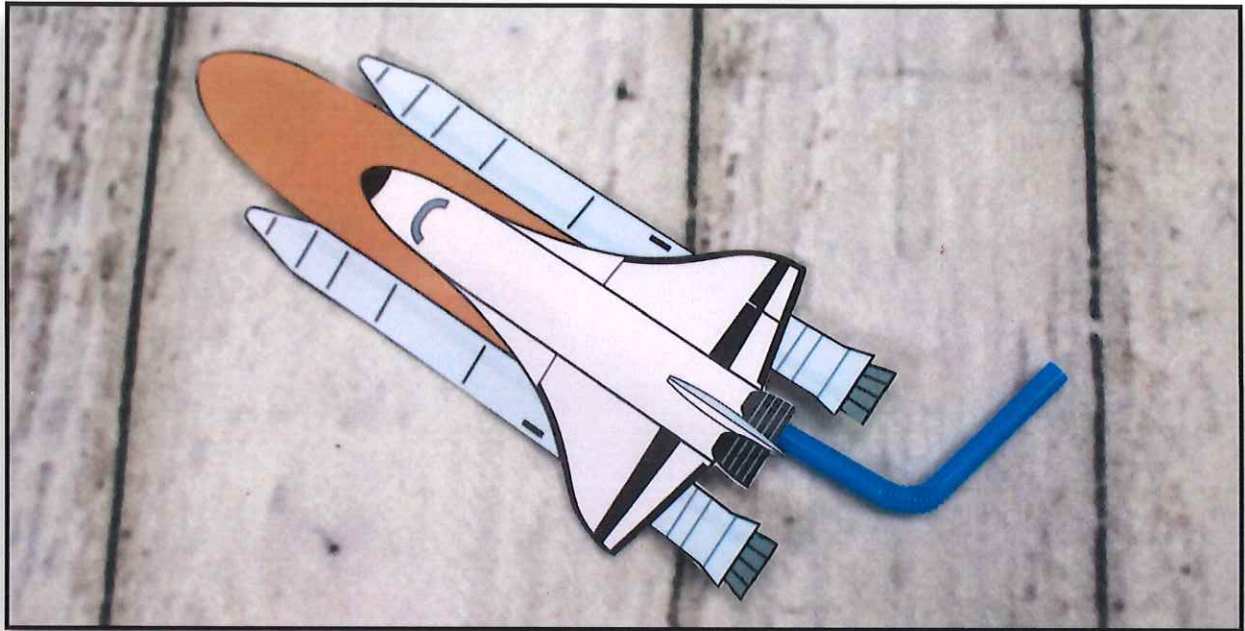
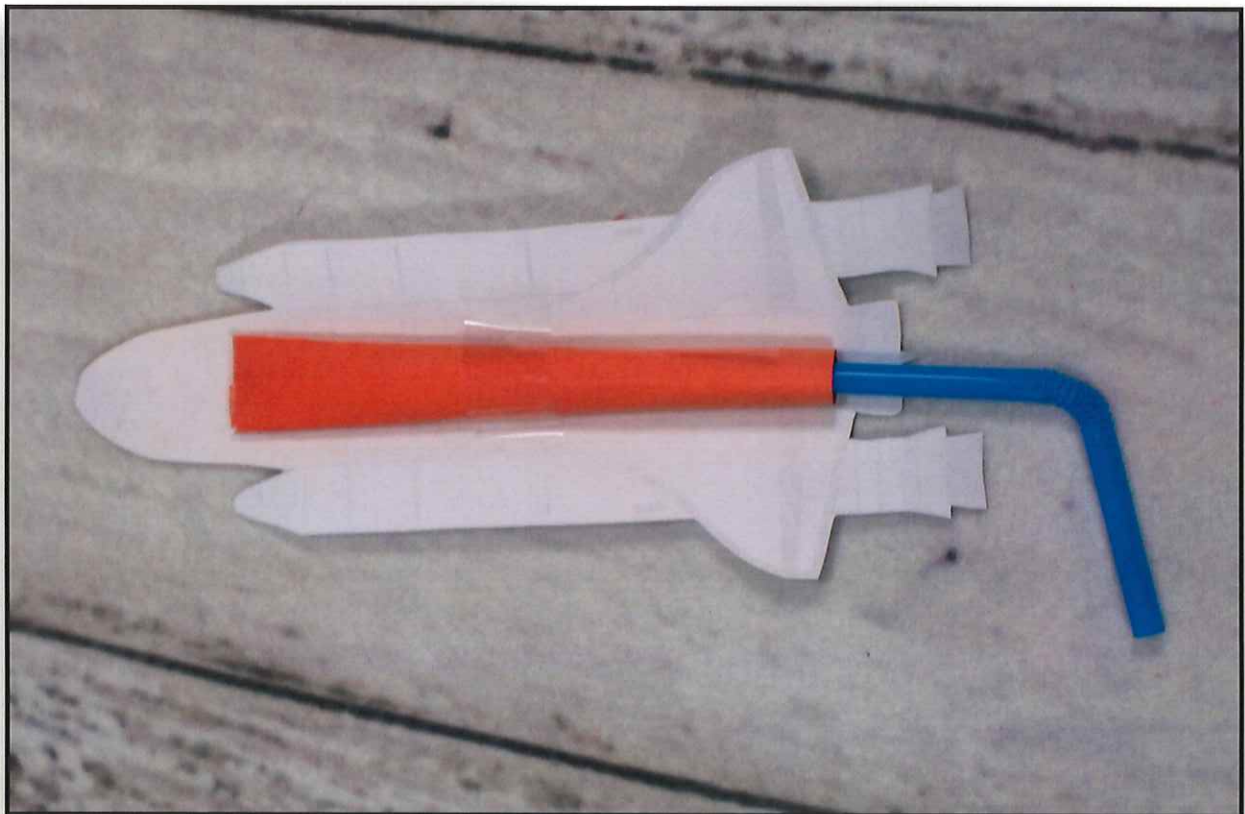
ROCKET LAUNCHER STEM

Teacher Instructions: EXAMPLE



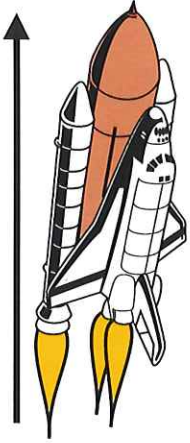
ROCKET LAUNCHER STEM

Teacher Instructions: EXAMPLE



Rocket Vocabulary

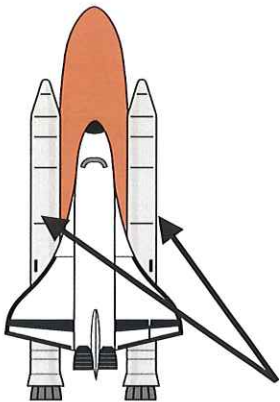
Directions: Use the vocabulary cards to pre-teach the science vocabulary words before completing the activities.



Propulsion: the force that moves something forward.

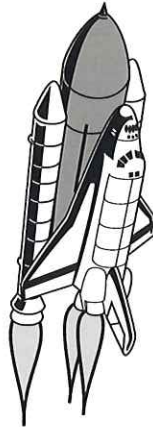


Escape Velocity: the minimum speed that a rocket must have to escape the gravitational field of earth.



Rocket Booster: a motor used to propel a rocket into space.

Name: _____



Dear Students,

You are helping prepare for the launch of the space shuttle Endeavour. Part of your job involves designing the rocket booster to launch the rocket into outer space. In order to create your rocket launcher you may use any of the materials listed below. To create your rocket booster you will wrap a strip of construction paper loosely around the straw and tape the rocket to it. One member of your team will sit on the ground and blow into the straw while another team member will measure how high the rocket travels.

You will have 10 minutes to plan your rocket booster design individually and 10 minutes to plan as a team. Your team will have 20 minutes to construct your rocket booster. At the end of the time limit you will test your rockets. Good luck!

Materials:

1 piece of construction paper

tape

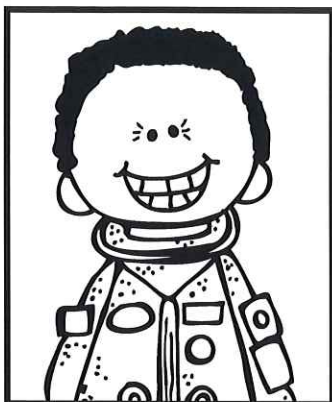
1 straw

1 rocket cutout

scissors

Name: _____

Who is Dr. Mae Jemison?



Dr. Mae Jemison was born on October 17, 1956 in Decatur, Alabama. She is an American astronaut and physician. Jemison became the first female African American astronaut on September 12, 1992 when she went into space aboard the Endeavour.

Jemison's family moved to Chicago, Illinois, when she was three years old. As a child Mae Jemison was very interested in learning, especially about science. She spent many hours in her school library reading books about astronomy.

In high school she decided that she wanted to pursue a career in biomedical engineering. She graduated as an honor student in 1973 and went on to attend Stanford University. She graduated in 1977 with a degree in chemical engineering. After graduating, she attended medical school at Cornell University Medical College.

After working in the medical field for a few years, Jemison decided to make a career change in order to follow her passion. In October of 1985 she applied for admission to NASA's astronaut training program. The process was delayed due to The Challenger tragedy, however Jemison reapplied the following year and was accepted.

Due to her accomplishments, Dr. Mae Jemison has received multiple awards. These recognitions include several honorary doctorates, the Essence Science and Technology Award, and the Ebony Black Achievement Award.

Name: _____

Directions: Answer the following questions after reading the article.

When was Dr. Mae Jemison born?

What two careers did Jemison pursue?

What is Dr. Mae Jemison most known for?

What are some awards given to Jemison?

Name: _____

ASK



What is the problem you are trying to solve?

IMAGINE



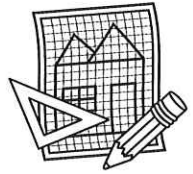
Imagine the best way to solve the problem on your own.
Sketch out your design and brainstorm a list of ideas.

Think about:

- *How will you use your materials?*
- *How will you get your rocket to travel the farthest distance?*
- *What possible problems could come up during construction?*

Name: _____

PLAN



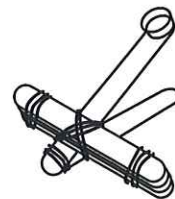
With your group, sketch out your plan to solve the problem.

A large, empty rectangular box with rounded corners, intended for students to sketch out their plan to solve the problem.

Name: _____

CREATE

Build your rocket launcher.



EXPERIMENT

Record how many inches your rocket traveled during each of your trials.



IMPROVE

What could you do to improve your rocket launcher?



Name: _____

Rocket Booster Recording

Directions: Record how many inches your rocket traveled during each of your trials.

Trial #1: _____ inches

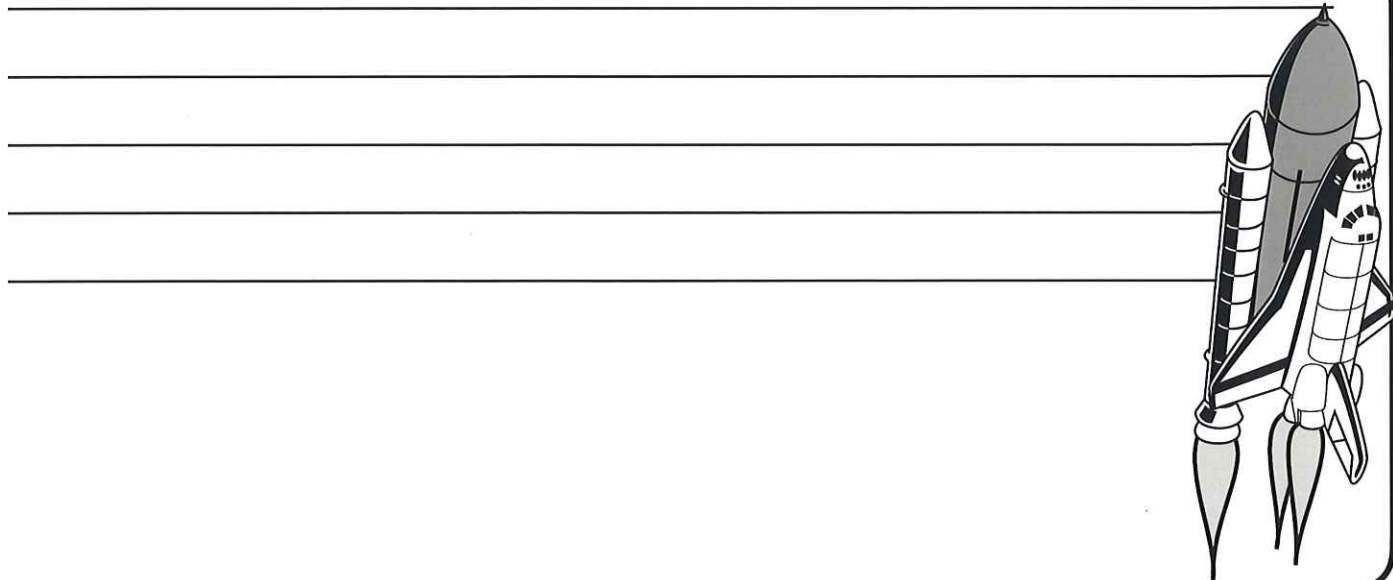
Trial #2: _____ inches

Trial #3: _____ inches

Trial #4: _____ inches

Trial #5: _____ inches

During which trial did your rocket travel the highest? What factors do you think contributed to the rocket traveling higher?

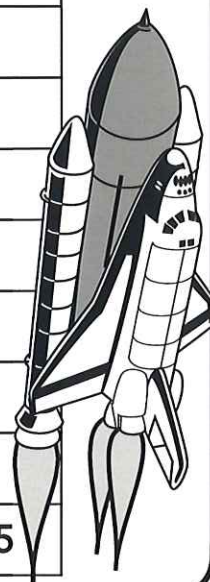


Name: _____

Rocket Booster Graphing

Directions: Create a bar graph of your data showing how high your rocket traveled during each trial.

40					
38					
36					
34					
32					
30					
28					
26					
24					
22					
20					
18					
16					
14					
12					
10					
8					
6					
4					
2					
# of Inches	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5



Name: _____

Directions: Write about what you have learned about Mae Jemison. Use the graphic organizer to plan your writing.

Topic Sentence:

Supporting Detail #1:

Supporting Detail #2:

Supporting Detail #3:

Conclusion: