



# Space and Beyond

**K-5 Theme Week**

## *Wild About Learning Science*

# Balloon Rocket



### Materials:

- Drinking straw
- Paper rocket drawing-you design
- Balloon
- Tape
- String
  
- 2 chairs

Fewer materials option:

- Tape paper rocket to a balloon.
- Blow up balloon and let go!

### Directions:

1. Draw a rocket and cut out.
2. Tape rocket to a straw.
3. Tape straw to balloon.
4. Push string through straw and tape ends of string to 2 chairs.
5. Blow up balloon and let go to see your rocket zoom!

### Make it an experiment!

*Try to answer the following questions:*

- Does the shape of the balloon affect how far (or fast) the rocket travels?
- Does the length of the straw affect how far (or fast) the rocket travels?
- Does the type of string affect how far (or fast) the rocket travels (try fishing line, nylon string, cotton string, etc.)
- Does the angle of the string affect how far (or fast) the rocket travels?

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# Balloon Rocket Follow Up



### How It Works:

- As air rushes out of the balloon, it creates a forward motion called thrust.
- Thrust can be explained by Newton's Third Law of Motion, which states that for every action there is an equal but opposite reaction.
  - Thrust is a pushing force created by energy.
- In this balloon rocket experiment, the thrust comes from the energy of the balloon forcing the air out.
  - As the air is released out of the balloon in one direction, the force propels the balloon in the other direction.
- Different shapes and sizes of the balloon will create more or less thrust.
- In a real rocket, thrust is created by the force of burning rocket fuel as it blasts from the rocket engine - as the engine blasts down, the rocket goes up!

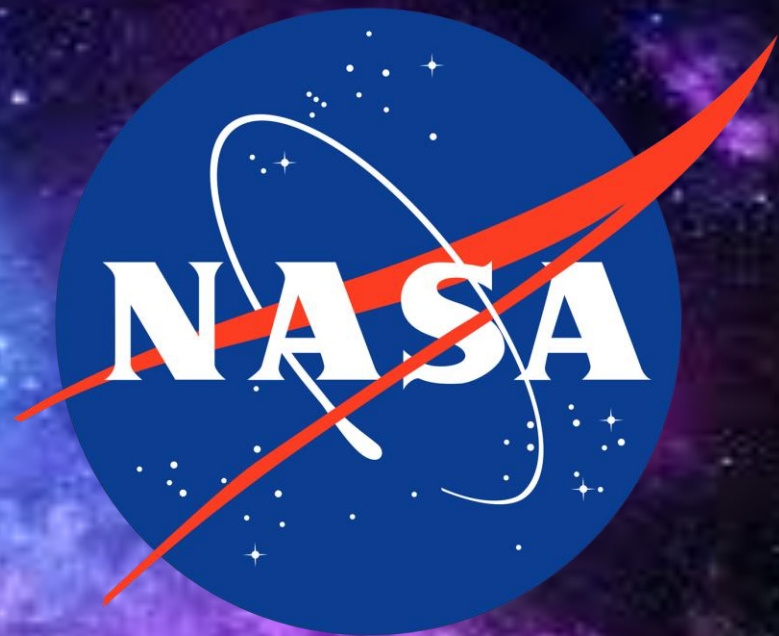
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## Space and Beyond Links to Explore

[NASA Virtual Tours](#)

[NASA Activities For Students \(Grades K-4\)](#)

[NASA Activities For Students \(Grades 5-8\)](#)



# Books to Explore



What can you learn about space?  
Click on links above to login. Ask  
your school librarian for  
username and password.

Digital eBooks and Audiobooks  
from Sno-Isle (Click on Picture to  
check them out!) [Get Library Card](#)



Click to return to digital summer  
reading resources.

# Reading, Writing and Math

Check out the activities by grade below to support summer learning!  
*Wild About Learning* activities can be repeated and practiced in any order.

[Kindergarten](#)

[First Grade](#)

[Second Grade](#)

[Third Grade](#)

[Fourth Grade](#)

[Fifth Grade](#)