What is a Rocket?

The word "rocket" can mean different things. Most people think of a tall, thin, round vehicle. They think of a rocket that launches into space. "Rocket" can mean any type of engine. The word can also mean a vehicle that uses that engine.

How does a rocket work?

Like most engines, rockets burn fuel. Most rocket engines turn fuel into hot gas. The engine pushes the gas out its back. The gas makes the rocket move forward. A rocket is different from a jet engine. A jet engine needs air to work. A rocket engine doesn't need air. It carries everything it needs.

There are two main types of rocket engines. Some use liquid fuel. The main engines on the space shuttle in the 1980's and beyond used liquid fuel and so does the Russian Soyuz rocket that is used today to send astronauts to the International Space Station. Some rockets use solid fuel. The two solid rocket boosters for the space shuttle used solid fuel.

In space, an engine has nothing to push against since there is no air. Rockets work by a scientific rule called Newton's 3rd Law of Motion. The third law says that for every action, there is an equal and opposite reaction. The rocket fuel is ignited (allowed to burn) in one direction – away from the rocket and the equal and opposite reaction moves the rocket forward. This is how it gets into space and moves around in space with no air.

This rule can be seen on Earth. Imagine a person on a skateboard throwing a bowling ball. The ball will go forward (the reaction). The person on the skateboard will move too. This is the equal and opposite reaction from throwing the bowling ball.

M.Palopoli – modified/edited from
https://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-is-a-rocket-k4.html

Make New Words

Make as many words as you can from the letters in:

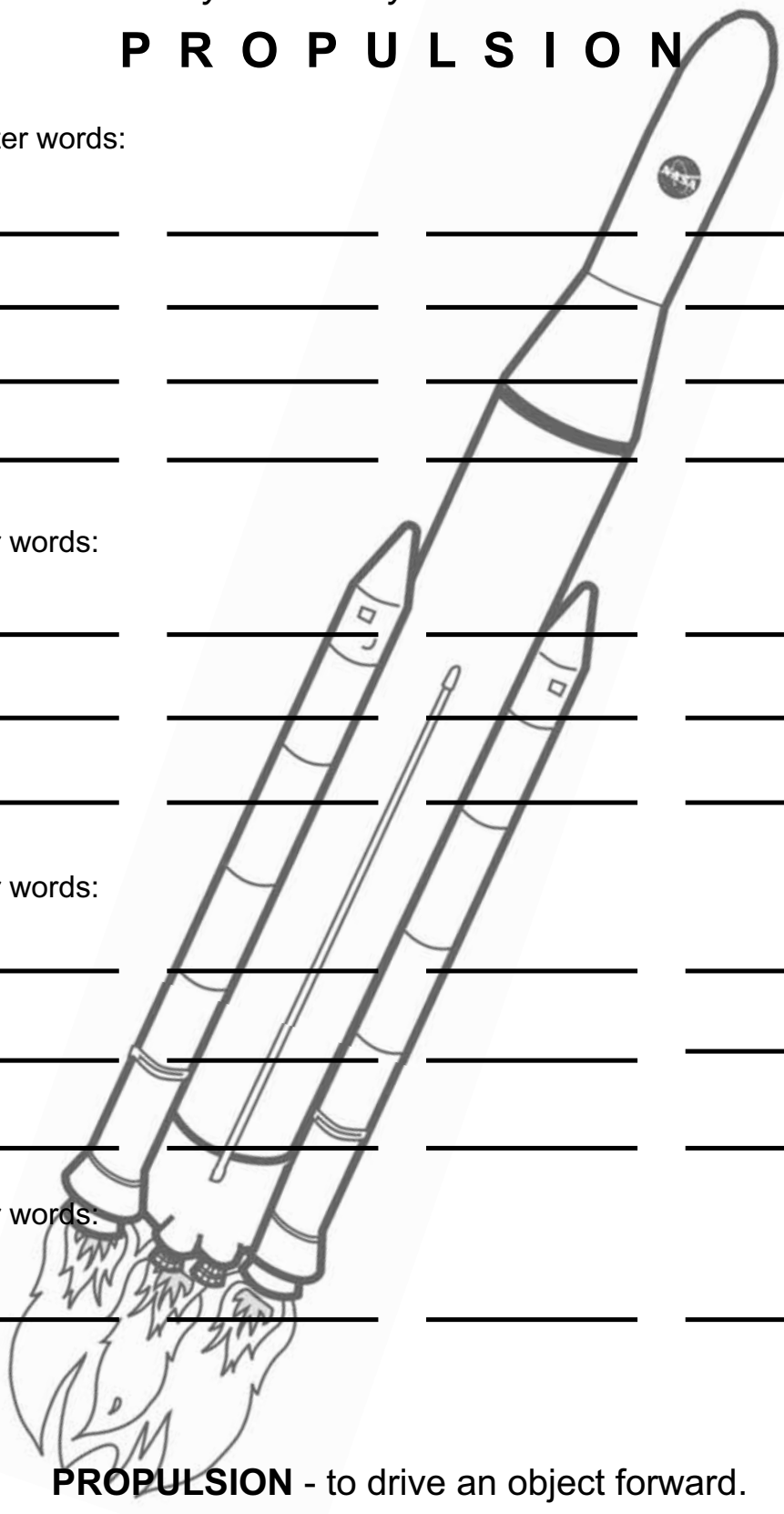
P R O P U L S I O N

2-3 letter words:

4 letter words:

5 letter words:

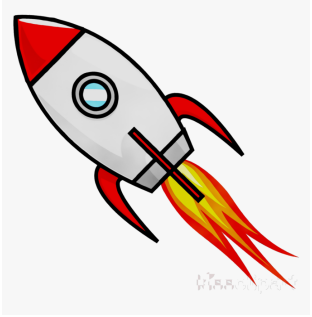
6 letter words:



PROPULSION - to drive an object forward.

☆/☆☆/☆☆☆

Rocket Craft



Take a look at the "Parts of a Rocket" picture. Find whatever you can around the house to create your own rocket. You might have the following: toilet paper tubes, paper towel tubes, paint, crayons, markers, construction paper or other colored paper, pieces of cardboard from food boxes, markers, tissue paper, glitter, foil, glue, tape, etc. (Please don't use any supplies your family needs for other purposes!) There is no right way or wrong way to create your rocket.

Consider making a page on paper or digitally that you can share (Google Classroom) to answer the following:

What is the name of your rocket?

Who will travel in your rocket?

How is it propelled?

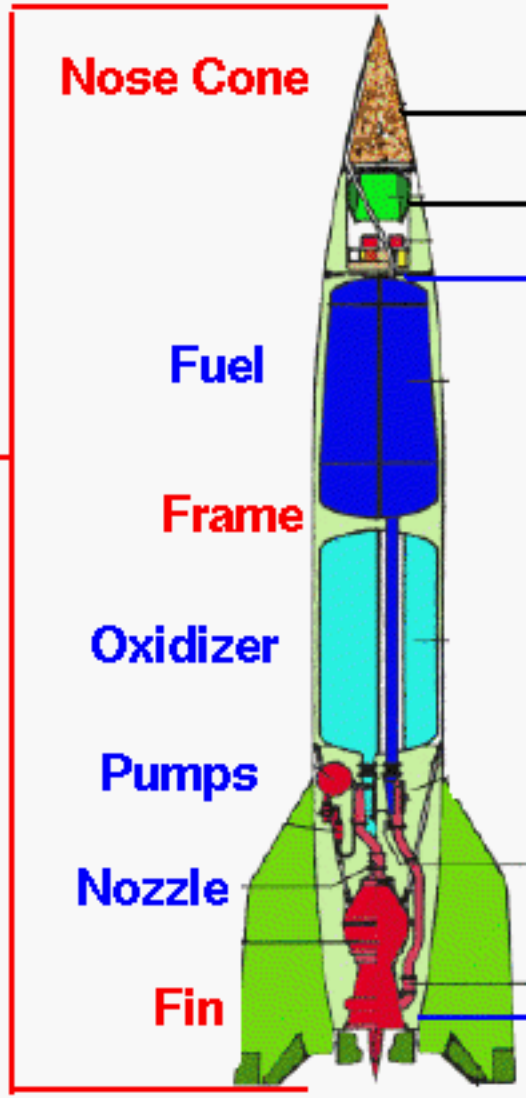
What does it hold? People? Supplies?

What is the mission?

Where is your rocket going?

Will your rocket stay in orbit around the earth at 17,500 mph or escape the earth's gravitational field at over 25,000 mph?

Rocket Parts



Nose Cone

Payload System

Guidance System

Fuel

Structure System

Frame

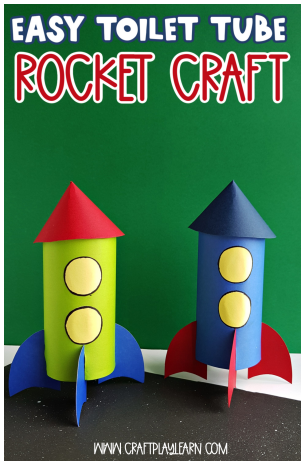
Propulsion System

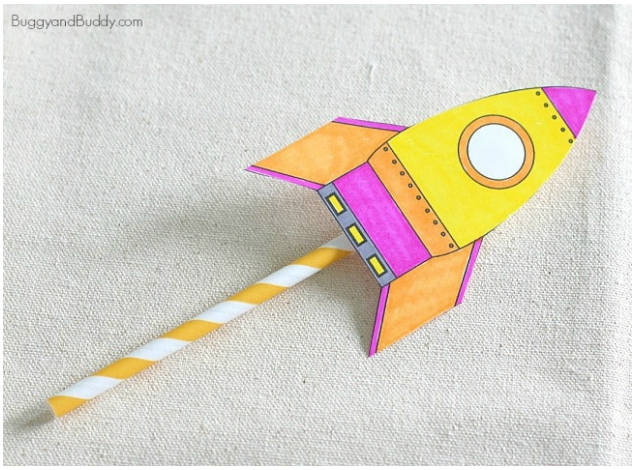
Oxidizer

Pumps

Nozzle

Fin


EASY TOILET TUBE
ROCKET CRAFT
WWW.CRAFTPLAYLEARN.COM


BuggyandBuddy.com


JAMES
WILL

Name _____

Directions

For each category listed along the left side of the page, think of an appropriate word that begins with the letter at the top of the column. The first item is done for you.

	P	L	A	N	E	T	S
Astronomy words							
Nouns							
Verbs							
Word related to computers							
Word related to history							
Adjectives							
Book titles							