

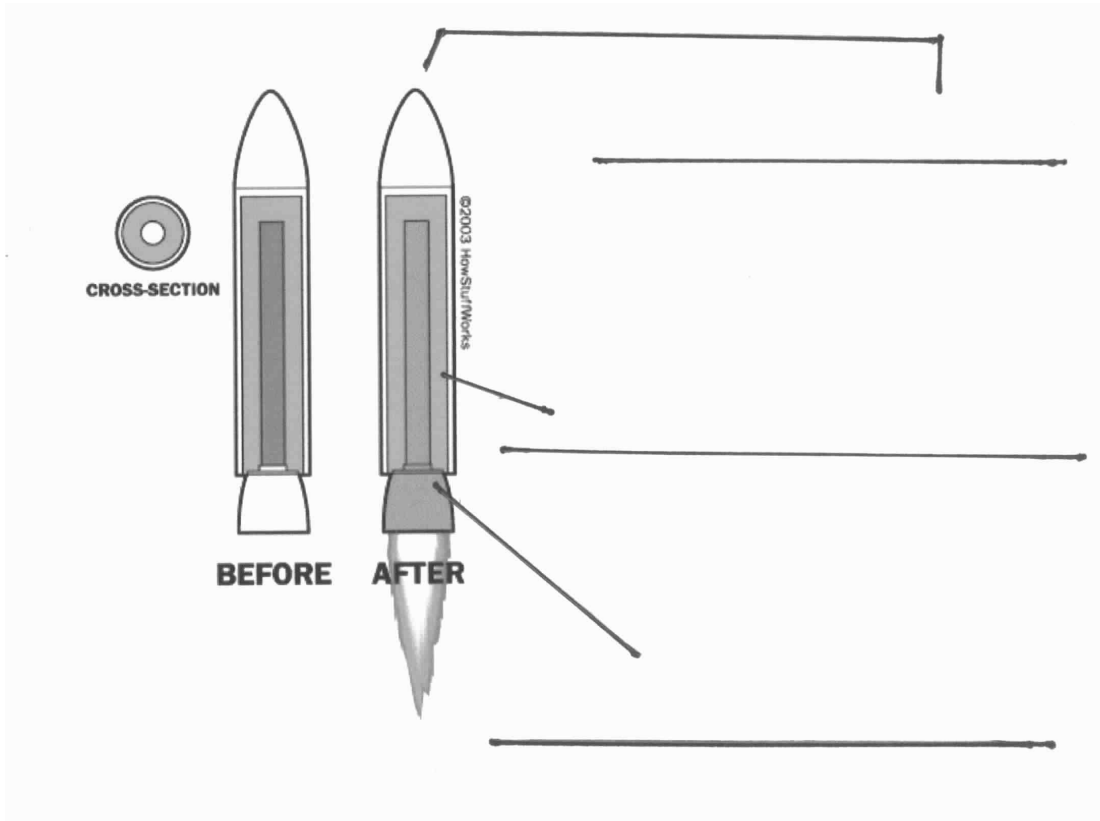
Introduction to Rocket Parts Bonus

Rockets! We find lots of children are excited to learn about them. In this bonus your child can read on his own about the parts of a rocket and how it works. Your child may enjoy labeling the rocket parts in the picture below.

The passages are written at fourth grade level. We provide them with, and without, helpers for words other than those on Rocket Phonics' First Common Word List.

What makes a rocket a rocket?

u ay i i



Label the rocket's parts after reading the passage

ay u i o ij

be♦low.

i oa

Only three parts!

oa ea ea o

A rocket has three parts. These are the payload,

i z ea o ea z o

the fuel chamber and the exhaust nozzle.

yoo ay ks o ul

The payload is the small section at the rocket's

z o k shun i

tip. This is what you want to move.

z u oo o oo oo

The fuel chamber is the large part below the

yoo ay z o j o i oa

payload. It pushes the payload forward.

ou z oa o

The nozzle is the part below the fuel chamber.

ul z o i oa yoo ay

The nozzle controls the direction of the exhaust.

ul k u oa z k shun uv ks o

Sir Isaac Newton was a scientist who studied

i k oo uz oo ea

movement. He found three laws of motion. One law is

oo ea ow ea o z uv oa shun wu o z

"to every action there is an equal and opposite

oo ea k shun ay z ea kw u u z

reaction."

k shun

This law is the basic concept driving a rocket

o z ay k k s ie i

engine. A rocket engine throws mass in one

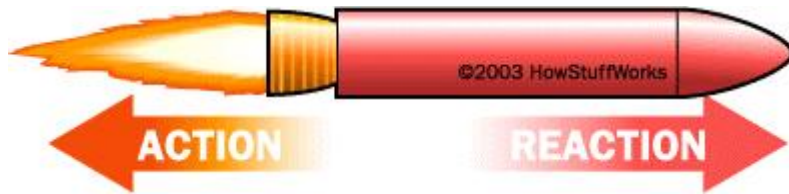
j i j oa z wu

direction. As a result, a reaction takes place in the

k shun z ea ea k shun ay ay s

other direction. This moves the rocket.

u k shun oo z i



Guess what else is a rocket?

u z i

When you blow up a balloon and let it go, what

oo oa u oa u

does it do? It flies all over the room before running out

u z oo z o oa i oa ow

of air!

uv ay

You have created a rocket engine. The fuel is

oo k ea ay i j yoo z

the air inside the balloon. It may surprise you that air

ay ie u iez oo ay

molecules have weight, but they do. When you let the

kyoo z ay ay oo oo

balloon go, you throw them out the balloon's nozzle.

u oa oo oa ow u z ul

The rest of the balloon reacts in the opposite

uv u ea k uz

direction.

u k shun

To get the balloon to fly straight you need a better

oo u oo ie ay oo ea

nozzle.

ul

You could tape a small payload to the balloon.

oo k ay o oo u

Careful, though! Too big of a payload and the balloon

k ay oa uv u

won't go anywhere! (The engine doesn't have enough

oa oa e ea ay j u z i u f

thrust. Thrust is an engine's strength.)

z j z