

The Edible New and Improved "Shuttle"

NASA is retiring the Space Shuttle around 2010. However, it needs a new way to "Shuttle" astronauts back and forth between Earth and the International Space Station – and the Moon – and eventually, Mars! NASA's new spacecraft – the Ares Launch Vehicle, and the Orion Crew Vehicle will get crew and cargo to the space station. Orion will be able to rendezvous with a lunar landing module and an Earth departure stage in low-Earth orbit to carry crews to the moon and, one day, to Mars-bound vehicles assembled in low-Earth orbit.

The Ares Launch Vehicle, and the Orion Crew Vehicle are comprised of several parts. The three main components of it are the orbiter which houses the crew members; a large external tank which holds the fuel for the main J2 engines; and two solid rocket boosters which give the Shuttle its lift during the first two minutes of flight.

In this activity, you and your child will learn about the main components of the new Space Shuttle design by building an edible one!

What You Need:

-  1 Twinkie (External Tank)
-  1 Swiss Roll (Orbiter)
-  1 Marshmallow (J2 Engine)
-  1 Hershey's Kiss (Nose Cap)
-  1 Pirouline broken in half (Solid Rocket Boosters)
-  Marshmallow Cream
-  Paper towel
-  Spoon
-  Wipes!
-  Image of the new [Space Shuttle](#)



What To Do:

-  The Twinkie represents the External Tank.
-  Using marshmallow cream, attach a marshmallow to the top/end of the Twinkie. This marshmallow represents the J2 Engine.
-  Attach 1 Swiss Roll to the other side of the marshmallow with marshmallow cream. The Swiss Roll represents the Orbiter.
-  To the top/end of the Swiss Roll, attach a Hershey's Kiss using marshmallow cream. The Hershey's Kiss represents the Nose Cap.
-  Attach ½ of a Pirouline to each side of the Twinkie using the marshmallow cream. These Piroulines represent the Solid Rocket Boosters.
-  Now you've got yourself an edible Space Shuttle!

Parent Prompts:

What are the main components of the Space Shuttle?
(External Tank, Solid Rocket Boosters, and the Orbiter)

What is different about the new Space Shuttle design?
(The new design doesn't have a winged Shuttle on the side of the external tank.
Rather it is a tall structure that looks much like Apollo!)