



# CUB SCOUT PACK 409 SPACE PROGRAM

## We are sending a balloon to Space!

Cub Scout Pack 409 is launching a mission to space! Pack 409 is chartered to Rockbrook United Methodist Church on 98th and W. Center Road.

This is a STEM project. The latex balloon will be filled with helium and will carry a payload of approximately 4 pounds into the stratosphere. The payload container will contain 3 Go Pro cameras, GPS tracking equipment, science experiments, and a Lego astronaut or alien for each of the Scouts to keep as a memento of the mission. The launch will be made at 9:00 CDT on Saturday, April 7th, weather permitting. The launch location will be determined on Thursday and announced via the Pack's Facebook page: "Cub Scout Pack 409 Space Program." Possible launch locations are: The Strategic Air and Space Museum, Chalco Hills Recreation Area, and Standing Bear Recreation Area.

The balloon will be filled with approximately 275 cubic feet of helium and be about 6 feet in diameter before it is launched. It will rise at a rate of about 20 feet per second until it reaches an altitude of approximately 92,000 feet above earth, in the Stratosphere. At that height the atmosphere will be so thin that the balloon will expand to about 35 feet in diameter before it bursts. The payload will then drop back to the ground suspended from a parachute. The entire flight will take about 3 hours.

During the flight a computer will record temperature, pressure, altitude, and GPS location. Three cameras will record video and still images of the flight and of a science experiment inside the payload box. A radio transmitter will transmit flight



Science does not know its debt to the imagination.

Expected Launch Date:  
April 7, 2018  
9:00am

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**On Facebook:**  
Cub Scout Pack 409  
Space Program

data once a minute on the APRS radio frequency allowing the Cub Scouts and their leaders to track the balloon. There is a backup GPS unit on board to help them recover the payload when it lands. Anyone can track the mission by going to [aprs.if](http://aprs.if) on the internet and searching the Omaha area. Our mission will use the call sign AJOR-11 and the icon will be a balloon.

In preparation for this launch, the Scouts have been learning about space, weather, math, GPS, cameras, physics, the rules of the FAA and FCC, and have been preparing science experiments. They are sending several science experiments up on the mission as part of their STEM program.

The flight train of this mission consists of a 1200 gram weather balloon filled with helium. Suspended below that is a 5 foot diameter parachute hanging loose; a radar reflector to make the craft visible to planes; and a Styrofoam box in a nylon wrap. The box contains all of the remaining payload.

Cub Scout Pack 409 has been chartered to Rockbrook united Methodist Church since 2009. There are 24 boys and girls in the Pack in grades K – 5. The Pack recruits from Westgate Elementary, but it has members from 5 schools in 3 Omaha area school districts. Jim Yelinek of Omaha is the Cubmaster and Larry Koubsky of Omaha is the Committee Chairman.



Photo taken from our 2017 launch.

Want to learn more? Check out one of these sites:

- [BalloonChallenge.org](http://BalloonChallenge.org) or [HighAltitudeScience.com](http://HighAltitudeScience.com)

On Facebook:

- [Cub Scout Pack 409 Space Program](#)

**COME WATCH THE LAUNCH ON THE 7<sup>TH</sup> AND TRACK OUR PROGRESS THROUGH OUR FACEBOOK PAGE.**