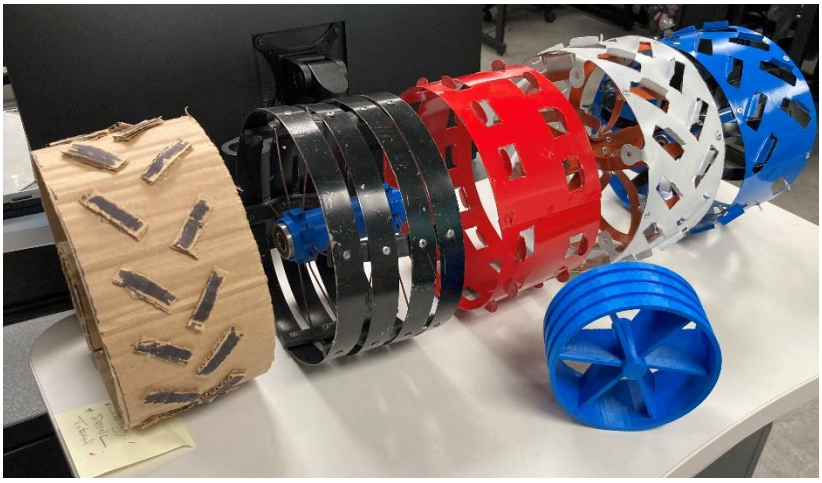
Lunar scooter Wheels questions and answers

I've had a number of schools and teams ask if they could design and build the scooter for the wheels.

I'm ok with teams building a scooter but I know that just designing and building a wheel can take a lot of time and its pretty complicated when you are thinking through multiple prototypes.



A few years ago, one of the projects was to design and build wheels for a Lunar Wagon that could be pulled around by the astronauts to carry their tools and rock samples. This team from Cypress Springs worked through several ideas and learning how to build what they wanted before they got to their final blue design on the end.

If your school chooses to make a scooter for testing your wheels, try to keep it very simple so you don't spend a lot of time on the scooter. Don't make it electric or have brakes, just make it a simple push scooter for testing the wheels. I am certain there could be a commercial market for an electric scooter with larger wheels and could handle the kind of terrain found on the moon.

We are considering a spherical wheel design. By a spherical wheel, we mean one that can rotate in any direction. So the team is wondering if an axel is a requirement.

I am not opposed to the idea. It would require very different testing.
Things to consider:
What kind of traction will you get from a relatively smooth ball?
Will dust be able to get out of the cover going around the top side of the ball?
How will the dust affect the smaller components?