**Agenda:**

**Saturday**

9:00 AM - 9:30 AM: Introductions, Overview & Icebreaker

9:30 AM - 10:15 AM: Zoom with Dr. Horgan

10:15 AM - 10:45 AM: Break and explore your kit

10:45 AM - 11:45 AM: Blind Operational Launcher Activity

Noon: Lunch Time

1:00 - 2:30: Intro to Engineering Design and Apollo 13 Egg Drop

2:45 - 4:00: 4-H Lander Activity

4:00 - 5:00: Cosmic Claw

5:00 - 5:30: Rover Overview

5:30 - 5:45: Wrap-up & Questions

Space - 4 instead of 6-7 lessons

9-11:45 - Zoom with Dr. Horgan

 Introductions and overview

 Engineering and design icebreakers

 Operational Launcher - no instruction

1:00 - 5:45 Cosmic Claw - 1 - 1 ½ hour

 Egg Drop Challenge - 1 ½ hour

 Operational Launcher - ½ hour

 Access mars 1 hour

Lander - 1 ½ hour

 Rover - 1 ½ hour

1. Fluid Power- Cosmic Claw - 3D Printer Pens - Sam
	1. Pens will be delivered this week
	2. Filament will be delivered this week
2. Engineering design - space - Remote/virtual optional
	1. Apolo 13 - egg drop design - Sam
	2. Lander - <https://www.jpl.nasa.gov/edu/learn/project/make-an-astronaut-lander/> - Heather
		1. 1 piece of stuff paper or cardboard
		2. 1 small paper or plastic cup
		3. 3 index cards
		4. 2 regular marshmallows
		5. 10 miniature marshmallows
		6. 3 rubber bands
		7. 8 plastic straws
		8. Scissors
		9. Tape
3. Mars Base Camp
	1. Rover - Heather -
	2. Operational Launcher - for fairs and quick interactions - Heather
		1. Foam Board Launcher
			* 2 foam boards ( 6” x 2 ½”)
			* 1 rubber band
			* 3 1” brass plated fasteners
			* 1 parachute man (2020 Mars Stem Challenge Kit)
		2. Plastic Corrugated Board
			* 1 plastic corrugated board (6” x 2 ½”)
			* 1 rubber band
			* 3 1” brass plated fasteners
			* 1 parachute man (2020 Mars Stem Challenge Kit)
4. Virtual Option - Rachel
	1. accessmars.withgoogle.com -
	2. <https://docs.google.com/document/d/1HjF0jv0FRpr397LSdzpwZzelLwOB92AHpMbY-G4eLbk/edit?usp=sharing>
5. Egg Drop Supply List
	1. Grid Paper – for designing
	2. Dal rods - Thin
	3. Pop sticks – Large and Small
	4. Straws - Non bendy
	5. Paper Clips - Small
	6. Brass Brads
	7. Rubber bands - variety pack
	8. 3DDoodler 3-D Printing Pen
	9. 3-D Pen Filament
	10. 3-D Pen pattern

(Calipers)

[https://www.amazon.com/MCIGICM-Millimeter-Conversion-Measuring-batteries/dp/B08GY7S6YV/ref=asc\_df\_B08GY7S6YV/?tag=hyprod-20&linkCode=df0&hvadid=475911129316&hvpos=&hvnetw=g&hvrand=1106407063303092038&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9016722&hvtargid=pla-1040865222642&psc=1](https://www.amazon.com/MCIGICM-Millimeter-Conversion-Measuring-batteries/dp/B08GY7S6YV/ref%3Dasc_df_B08GY7S6YV/?tag=hyprod-20&linkCode=df0&hvadid=475911129316&hvpos=&hvnetw=g&hvrand=1106407063303092038&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9016722&hvtargid=pla-1040865222642&psc=1)

Description of ISS Track:

Have an interest in engineering design concepts and how they apply to space travel? Form a team and join us to learn all about how NASA astronauts complete tasks through curriculum designed from the National 4-H STEM Challenge and Indiana Educators.

Up to 12 youth (3 teams) will be eligible to travel to Kennedy Space Station, Florida. This excursion will happen this July 11 - 16th. This will be a completely free trip due to a generous grant received from the ISS National Laboratory.

