Journey to Mars Implementation Guide

Overview: Journey to Mars takes participants through 5 phases of the Mars settlement process: planning, launching, feeling the health effects of lower gravity, living on Mars, and working on Mars. Each phase is set up as a station. Each station has 1-2 different activities for participants to complete. While there is a natural progression from one phase to the next, the activities do not need to be completed in order and participants do not need to complete all stations. *If using a Passport: Participants receive a stamp in their passport when they complete each station. The stamps should be distributed among all stations, so staff can stamp the passport when participants show they complete the activity.*

Activities:

- Station 1: Prepare for Launch
  - SLS Design Game
- Station 2: Build the Rocket
  - Create Paper Rockets
- Station 3: Feeling the Effects
  - Weight, Bone Density, and Blood Flow Comparisons
- Station 4: Living on Mars
  - Mars Community Builder AR App
  - Build a Mars Habitat with 3D Printing Pens
- Station 5: Working on Mars
  - Program Ozobots
  - Build a Mars Rover

Setup and Staffing: It is recommended that each station have its own table (possibly two) and is staffed by 1-2 people. If space permits, set up each station in a different room. Directions are written so participants can work through the activities independently; however, to maximize engagement, it is best to have someone available at each station to answer questions.

Timing: Each station takes between 10-20 minutes to complete. Some stations, like Station 4 and 5, have activities that can take longer, so it may be beneficial to create time limits to allow for better flow. In total, it takes about two hours to complete all the activities.

Materials: A list of needed materials is included. All paper materials can be printed on standard printer paper and all other materials are available for purchase online (links included). Quantities listed are for 150 participants.

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Materials

Item	Quantity	Link (if applicable)
Station 1 Supplies		
Scissors (Pack of 12)	4	http://a.co/5X6brRk
Tape (Pack of 6)	4	http://a.co/iBEk2r0
Calculator	20	http://a.co/0DlZEAi
Dice (Pack of 100)	1	http://a.co/iAddV9y
Station Instructions	1	Printed
SLS Card Sheet	150	Printed
SLS Design Sheet	150	Printed
Station 2 Supplies		
Scissors	Included in Station 1 Supplies	
Tape	Included in Station 1 Supplies	
Straws (Pack of 200)	1	http://a.co/6WNUwYk
Markers (Set of 120)	4	http://a.co/4uReYOH
Station Instructions	1	Printed
Rocket Cut-outs	150	Printed
Station 3 Supplies		
Plastic Cylindrical Containers w/Tops	12	http://a.co/hTOjl0p
Markers	Included in Station 2 Supplies	
String	2	http://a.co/4OG9Hl6
Scissors	Included in Station 1 Supplies	
Station Instructions	1	Printed
Dry Beans (8-lb)	1	https://bit.ly/2TAmVFP
Styrofoam Cups	300	https://amzn.to/2EFvMg5
Station 4 Supplies		
3D Printing Pen	5	http://a.co/5KApyTT
Box of Filament	3	http://a.co/fS0rij7
Station Instructions	1	Printed
Android Tablet and Charger	1-2	
Play-Doh	1 box	https://amzn.to/2H5wpDi
Station 5 Supplies		
Ozobot (markers included)	5	http://a.co/hovNr09
Stopwatch	5	http://a.co/339TcIP
ZOOB BuilderZ Kit	2	http://a.co/fScp2mY
ZOOB Galax-Z Astrotech Rover	5	http://a.co/aDXIdzR
Station Instructions	1	Printed
Mars Terrain Map	150	Printed