



# SSEP

## Student Spaceflight Experiments Program



### SSEP Mission 12 to ISS: *Mercury* Experiments Payload Summary

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#### 34 Experiments Comprising the SSEP Mission 12 to ISS *Mercury* Payload

	Community	Experiment	Team	Grades	At Launch
1	Sao Paulo, BRAZIL	Addition of "Green Plastic" to Enhance Cement Properties in Space	6 Co-Principal Investigators	7	X
2	Nanaimo, British Columbia, CANADA	Prevention of Muscle Atrophy in Microgravity: An Evaluation of L- carnitine in Planarian ( <i>Dugesia tigrina</i> )	3 Co-Principal Investigators	11	X
3	Winnipeg, Manitoba, CANADA	Growth of Lacinato in Microgravity	2 Co-Principal Investigators, 2 Co-Investigators, 1 Collaborator	6	X
4	Winnipeg, Manitoba, CANADA	Can Yarrow Germinate in Microgravity?	5 Co-Principal Investigators	5-6	X
5	Winfield City, AL	The Effects of Microgravity on the Germination of Kudzu Seeds	5 Co-Principal Investigators	7	
6	Corcoran, CA	Broccoli Study	2 Co-Principal Investigators, 2 Co-Investigators, 1 Collaborator	6	
7	Moreno Valley, CA	Effects of Microgravity on Soybean Germination	4 Co-Principal Investigators	10-12	
8	Riverside, CA	The Brine Shrimp	4 Co-Principal Investigators	6	
9	Sanger, CA	The Effect Microgravity has on the Developmental Stages of Brine Shrimp	2 Co-Principal Investigators, 2 Collaborators	7	

10	San Jose, CA	The Effect of Microgravity on Spider Plant Seed Germination	2 Co-Principal Investigators, 3 Co-Investigators	7	
11	Bridgeport, CT – University of Bridgeport	The Effect of Microgravity on Nanoparticle-Cellular Interaction	2 Co-Principal Investigators	15-16	
12	Stamford, CT	Effects of Crossbreeding <i>Sordaria fimicola</i> in Microgravity	13 Co-Principal Investigators	11	
13	Hillsborough County, FL	The Effect of Microgravity on Wheat Germination	3 Co-Principal Investigators, 4 Collaborators	5	X
14	Port St. Lucie, FL	The Effect of Microgravity on the Growth of Golden Lake <i>Artemia</i>	3 Co-Principal Investigators, 4 Co-Investigators	8	X
15	Jackson County, GA	Fairy Shrimp in Space	3 Co-Principal Investigators	5	
16	Honolulu, HI	How Microgravity Affects Reproduction in <i>Caenorhabditis elegans</i>	4 Co-Principal Investigators	11	X
17	Indianapolis, IN	Growing Carrots on the International Space Station in Microgravity	4 Co-Principal Investigators	8	
18	University System of Maryland, MD	The Effect of Microgravity on Bacteriophage Replication and Infectivity	2 Co-Principal Investigators	15	
19	Kalamazoo & Detroit – Michigan Archdiocese, MI (St. Fabian)	Planarian Worm Head Regrowth	3 Co-Principal Investigators	7	
20	Kalamazoo & Detroit – Michigan Archdiocese, MI (St. Monica)	Rust in Microgravity	2 Co-Principal Investigators, 2 Co-Investigators	6	
21	East Orange, NJ	Effect of Microgravity on Root Growth of <i>Brassica Rapa</i>	3 Co-Principal Investigators	7	
22	Galloway, NJ – Stockton University	The Effects of Microgravity on PGMA Based Self-Assembly and Impacts on Drug Delivery Systems	2 Co-Principal Investigators	13-14	X
23	Springfield, NJ	Will Tardigrade Eggs Hatch and Develop in Microgravity?	1 Principal Investigator, 3 Co-Investigators, 1 Collaborator	7	
24	Belen, NM	Death and Decomposition of Tomato Leaves in Microgravity	2 Co-Principal Investigators, 2 Co-Investigators, 2 Collaborators	9-12	

25	WNY STEM – Buffalo/Niagara, NY	The Effect of Ascorbic Acid on the Rate of Regeneration in Microgravity	2 Co-Principal Investigators, 2 Co-Investigators, 2 Collaborators	12	
26	Sumter, SC	The Effects of Microgravity on Seed Germination in Sodium Polyacrylate	2 Co-Principal Investigators, 2 Co-Investigators	6	X
27	Knox County, TN	The Effect of Microgravity on Tooth Decay	5 Co-Principal Investigators	7-8	X
28	Brazosport, TX	Would Lemnoideae Seeds Germinate in Microgravity?	1 Principal Investigator, 2 Co-Investigators, 2 Collaborators	6	X
29	Burleson, TX	The Effects of Microgravity on Penicillium Mold Growth	1 Principal Investigator, 2 Co-Investigators, 2 Collaborators	6	
30	Ector County, TX	The Efficacy of <i>Ideonella Sakaiensis</i> in a Microgravity Environment	1 Principal Investigator, 12 Collaborators	9-11	
31	Fort Bend, TX	Growing <i>Solanum Tuberosum</i> in Microgravity	2 Co-Principal Investigators	5	
32	Fort Bend, TX	The Effect of Microgravity on the Germination of <i>Apium graveolens</i>	1 Principal Investigator, 3 Co-Investigators	7	
33	Pharr, TX	What is the Effect that Microgravity has on the Development of Synthetic Brine Shrimp?	3 Co-Principal Investigators	11	X
34	iForward – Grantsburg, WI	Grain Size and Distribution Analysis of Gallium in Microgravity	4 Co-Principal Investigators	6-8	X

The Student Spaceflight Experiments Program (SSEP) is a program of the National Center for Earth and Space Science Education (NCSSE) in the U.S. and the Arthur C. Clarke Institute for Space Education internationally. It is enabled through a strategic partnership with DreamUp, PBC and NanoRacks, LLC, which are working with NASA under a Space Act Agreement as part of the utilization of the International Space Station as a National Laboratory. SSEP is the first pre- college STEM education program that is both a U.S. national initiative and implemented as an on-orbit commercial space venture.