SSEP

Student Spaceflight Experiments Program

SSEP Mission 17 to ISS: *Orbiter* Experiments Flying on SpaceX-29 Payload Summary

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39 Experiments from the SSEP Mission 17 to ISS *Orbiter* Payload Flying on SpaceX-29

	Community	Experiment	Team	Grades	At Launch
1	Edmonton, Alberta, Canada	The Effects of Microgravity on the Statoliths and Statocyst Cells in *Lepidium sativum* (Garden Cress)	2 Co-Principal Investigators, 2 Co-Investigators	9	X
2	Ukraine	Effect of Humic Substances on the Growth and Metabolism of Yeasts in Microgravity	1 Principal Investigator, 3 Co-Investigators	8-10	
3	Ukraine	Influence of Microgravity and G-force on Diffusion in Metals	1 Principal Investigator, 2 Co-Investigators, 1 Collaborator	9	
4	Phoenix, Arizona	Red Desiree Potato and Sweet Potato	3 Co-Principal Investigators	5	
5	Glendora, California	Mushroom Leather Proposal	2 Co-Principal Investigators, 1 Investigator, 1 Collaborator	11-12	
6	Moreno Valley, California	The Strength of Concrete with Eggshells as Filler in Microgravity	2 Co-Principal Investigators, 1 Investigator, 1 Collaborator	11	

7	Hillsborough County, Florida	The Microgreen of the Future: *Amaranthus tricolor*	2 Co-Principal Investigators, 4 Co-Investigators	6-8	X
8	Hillsborough County, Florida	The changes of nutritional and germination values of Sesame microgreens in microgravity	2 Co-Principal Investigators	7-8	X
9	Ocala, Florida	Does Microgravity Affect Protein Production of *Escherichia coli*?	1 Principal Investigator	5	X
10	Osprey, Florida	The ability of microalga, *Chlorella vulgaris*, to remove nitrogen and phosphorous from wastewater in microgravity	4 Co-Principal Investigators	7	X
11	Viera, Florida	*E-coli* and endotoxin detection in microgravity via LAL-Horseshoe crab blood testing	1 Principal Investigator, 4 Co-Investigators	7	X
12	Jonesboro, Georgia	Germination of *Mentha spicata* in microgravity	1 Principal Investigator, 2 Co-Investigators		
13	Grayslake, Illinois	The Effects of Microgravity on Cholesterol Lowering Activity by *Lactobacillus acidophilus*	1 Principal Investigator	14	
14	Lake Charles, Louisiana	Growth of Spirulina in Microgravity	1 Principal Investigator	8	X
15	University System of Maryland, Maryland	The Effect of Microgravity on Telomerase Activity and Efficiency in *Saccharomyces cerevisiae*	5 Co-Principal Investigators	16	
16	Westland, Michigan	Mushroom Germination in Microgravity	2 Co-Principal Investigators, 4 Co-Investigators	5	X
17	Edina, Minnesota	Bean Root Growth in Microgravity	3 Co-Principal Investigators	10 and 12	X

18	Las Vegas, Nevada	*Wolffia* in Microgravity	1 Principal Investigator, 3 Co-Investigators	8	X
19	Camden New Jersey	Mold Growth in Microgravity: A evaluation on the spread of fungi in microgravity conditions	3 Co-Principal Investigators	5	X
20	Springfield, New Jersey	The Effect of Microgravity on Gray Mold	5 Co-Principal Investigators	7	
21	Albany, New York	The effects of microgravity on *Oryza sativa* (rice)	5 Co-Principal Investigators	8	
22	Brooklyn, New York - BSEA	The effects of microgravity on the germination of radish seeds	2 Co-Principal Investigators	6	
23	Buffalo/Niagara, New York	The Effect of Microgravity on the Germination of Chamomile Seeds	2 Co-Principal Investigators, 2 Co-Investigators	5	
24	Garden City, New York	Effects of Microgravity on Dill Seed Germination	4 Co-Principal Investigators	7	X
25	Long Beach, New York	How Does Microgravity Affect the Germination of Oyster Mushroom Spawns (*Pleurotus Ostreatus*)?	1 Principal Investigator, 1 Investigator, 3 Collaborators	6	
26	Lynbrook, New York	How do microgravity and space conditions affect the growth of the wine cap mushroom, *Stropharia rugosoannulata*, mycelium?	2 Co-Principal Investigators, 1 Collaborator	9	X
27	Norwood, New York	The Effects of Microgravity on the Reproduction Cycle of *Drosophila melanogaster* (Common Fruit Fly)	2 Co-Principal Investigators	10 and 12	X
28	Red Hook, New York	Examining *Artemia salina* Hatching in the Presence of Microgravity	5 Co-Principal Investigators	12	

29	Pickerington, Ohio	Bamboo Growth in Microgravity	2 Co-Principal Investigators	6	X
30	Gervais, Oregon	Patulin Growth in Space	4 Co-Principal Investigators	11-12	
31	Erie, Pennsylvania	The Effect of Microgravity on Crystal Growth	5 Co-Principal Investigators	7-8	
32	Pittsburgh, Pennsylvania – CCAC	The effect(s) of microgravity on the dormant state of cancer cells	2 Co-Principal Investigators	13	X
33	Bandera, Texas	The Effects of Microgravity on Basil Germination	3 Co-Principal Investigators	7	
34	Burleson, Texas	Can a Cotton Ball Instead of Soil Germinate a Lavender Seed in Microgravity?	4 Co-Principal Investigators	6	
35	Ector County, Texas	*Pestalotiopsis microspora* in Microgravity	2 Co-Principal Investigators, 1 Investigator, 2 Collaborators	10-11	X
36	McKinney, Texas	Does microgravity affect the formation of symbiotic relationships between soy and Rhizobium?	2 Co-Principal Investigators	13 and 16	X
37	Texarkana, Texas	Do Tardigrades Develop Properly in Microgravity?	1 Principal Investigator, 2 Co-Investigators	7	X
38	Renton, Washington	Microgreen Growth in Microgravity Environment	1 Principal Investigator, 2 Co-Investigators, 1 Collaborator	8	
39	iForward-Grantsburg, Wisconsin	Does microgravity affect the germination of *pleurotus ostreatus* spores?	5 Co-Principal Investigators	9	

The Student Spaceflight Experiments Program (SSEP) is a program of the National Center for Earth and Space Science Education (NCESSE) in the U.S. and the Arthur C. Clarke Institute for Space Education internationally. It is enabled through a strategic partnership with Nanoracks, LLC, which is 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.