



SSEP

Student Spaceflight Experiments Program

SSEP Mission 19 to ISS: *Endeavour* Experiments Flying on SpaceX-34 Payload Summary

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20 Experiments from the SSEP Mission 19 to ISS *Endeavour* Payload Flying on SpaceX-34 (1 M19 experiment will fly later this year)

	Community	Experiment	Team	Grades	At Launch
1	São Paulo, Brazil / Lisbon and Porto, Portugal	The Effect of Microgravity on the Osteogenic Potential of Mesenchymal Stem Cells Secretome	6 Co-Principal Investigators	11-12	
2	Edmonton, Alberta, Canada	Will Soybeans Germinate in Space?	4 Co-Principal Investigators, 3 Investigators, 1 Collaborator	8	
3	Guelph, Ontario, Canada	Brine Shrimps Reaction to Purple Sulfur Bacteria	3 Co-Principal Investigators	8	
4	Ukraine	Investigation of the Effect of Microgravity on Germination of Legume Plants	1 Principal Investigator, 1 Investigator	9	X
5	Mesa, Arizona	Microgravity's Impact on In Vitro Tau Protein Aggregation	5 Co-Principal Investigators, 6 Collaborators	10 and 12	
6	Colusa, California	Bioremediation in Microgravity: Harnessing Oil-Eating Bacteria for Environmental Restoration	1 Principal Investigator, 1 Investigator, 3 Collaborators	11	

7	Glendora, California	Microgravity's Effects on <i>Artemia Salina</i> Nauplii Development	1 Principal Investigator, 3 Collaborators	10	
8	Colorado Springs, Colorado	Fungal Bioleaching in Microgravity: Fungal Approaches to Metal Recovery	1 Principal Investigator, 4 Investigators	14-16	X
9	Hillsborough County, Florida	Production of Mung Beans i.e., <i>Vigna radiata</i> in Microgravity	3 Co-Principal Investigators	6-7	
10	Pittsfield, Massachusetts	The Impact of Gravity on Cellular Metabolism in <i>Escherichia coli</i>	1 Principal Investigator	14	
11	Albany, New York	The Effect of Microgravity on <i>Mentha piperita</i>	3 Co-Principal Investigators	8	
12	Long Beach, New York	The Effect of Microgravity on the Germination of Microgreen Seeds	1 Principal Investigator, 1 Investigator, 2 Collaborators	6	
13	Athens, Ohio	Effect of Microgravity on Growth of Watercress: a Promising Space Food	2 Co-Principal Investigators, 1 Collaborator	Undergrad	
14	Pickerington, Ohio	The Effect of Microgravity on Antibacterial Hand Sanitizer	3 Co-Principal Investigators	6	
15	Pittsburgh, Pennsylvania - CCAC	The Effects of Microgravity on the Quantitative Measurements of Calcite Crystals	2 Co-Principal Investigators	13	X
16	Plano, Texas	Capillary Action within <i>Crassula ovata</i> (jade plant) Leaf Cells in Microgravity	2 Co-Principal Investigators	10 and 12	
17	San Antonio, Texas	Microgravity Effect on the Corrosion Rates of Iron and Aluminum	1 Principal Investigator, 3 Investigators	8	X

18	Texarkana, Texas	Can Mold Grow in Microgravity?	2 Co-Principal Investigators, 1 Investigator, 1 Collaborator	7	
19	Waxahachie, Texas	Growing Strawberries in Microgravity	4 Co-Principal Investigators	6	
20	iForward-Grantsburg, Wisconsin	Sunflower Seeds in Microgravity: This Study will Determine if Sunflower Seeds can Germinate in Microgravity and if it can Affect their Health Benefits	7 Co-Principal Investigators	7	

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 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.

The Center for the Advancement of Science in Space (CASIS) is a U.S. National Partner on the Student Spaceflight Experiments Program.