Mission X: Train Like an Astronaut Pilot Study

C.W. Lloyd, Pharm.D.,¹ C. Olivotto, Ph.D.,² A. Boese, Ph.D.,³ F. Spiero, Ph.D., ⁴ G. Galoforo, Ph.D., ⁵ M. Niihori, Ph.D.⁶

¹ Human Research Program Education & Outreach (HRPEO) Program Manager, NASA, Johnson Space Center, charles.w.lloyd@nasa.gov ² HSF-CO, Coordination Office, European Space Agency ³ Strategies and Alliances, German Aerospace Center DLR ⁴ Responsable Vols Habités et Exploration, Manager, Human Spaceflight and Exploration, CNES ⁵ External Relations – Education and Outreach Office, ASI - Italian Space Agency ⁶ Aerospace Project Research Associate, JAXA Space Biomedical Research Office (J-SBRO)

PROJECT OVERVIEW

Mission X: Train Like an Astronaut is an international educational challenge focusing on fitness and nutrition as we encourage students to "train like an astronaut." Teams of students (aged 8-12) learn principles of healthy eating and exercise, compete for points by finishing training modules, and get excited about their future as "fit explorers." The 18 core exercises (targeting strength, endurance, coordination, balance, spatial awareness, and more) involve the same types of skills that astronauts learn in their training and use in spaceflight.

This first-of-its-kind cooperative outreach program has allowed 14 space agencies and various partner institutions to work together to address quality health/fitness education, challenge students to be more physically active, increase awareness of the importance of lifelong health and fitness, teach students how fitness plays a vital role in human performance for exploration, and inspire and motivate students to pursue careers in STEM fields.

The project was initiated in 2009 in response to a request by the International Space Life Sciences Working Group. USA, Netherlands, Italy, France, Germany, Austria, Colombia, Spain, and United Kingdom hosted teams for the pilot this past spring, and Japan held a modified version of the challenge. Several more agencies provided input into the preparations. Competing on 131 teams, more than 3700 students from 40 cities worldwide participated in the first round of Mission X.

OUTCOMES AND BEST PRACTICES

Members of the Mission X core team will highlight the outcomes of this international educational outreach pilot project, show video highlights of the challenge, provide the working group's initial assessment of the project and discuss the future potential of the effort. The team will also discuss ideas and best practices for international partnership in education outreach efforts from various agency perspectives and experiences.