

Jefferson City Public Schools–Curriculum

SUBJECT: Elementary

COURSE: EER

STRAND: Space Camp

Objectives	Assessment/Evaluation	Instructional Activities
(A) Compare the distance the planets in our solar system are from the sun Performance: 1.3, 2.1, 3.1, 4.1 Knowledge: (CA) 1,3,4,6 (FA) 1 (H/PE) 2,4,7 (MA) 1-6 (SC) 1,2,5-7 (SS) 4 CAGLE: R.1.Ea-c (gr. 6), R.1.Ha-f (gr. 8) MAGLE: NO.1.A (gr. 5), NO.1.D (gr. 5), NO.2.A (gr. 4), AR.2.A (gr. 6), AR.3.A (gr. 6), M.1.A,B (gr. 5), M.2.A (gr. 5) SCGLE: SC6.1.Ea-c (gr. 7), SC6.2.Ca,d,g (gr. 7)	• Model measurements of the planets sheet • Walk the proportional distance from one planet to another in the parking lot to place the planets where they belong in relation to the sun • Mars Factorial sheet calculations	• Paper Rockets experiment - measurement • Calculate model measurements of the planets • Mars Factorial! - calculating factorials
(B) Recreate the adaptations of astronauts' daily living habits in space Performance: 1.3, 2.1, 3.1, 4.1 Knowledge: (CA) 1,3,4,6 (FA) 1 (H/PE) 2,4,7 (MA) 1-6 (SC) 1,2,5-7 (SS) 4 CAGLE: R.1.Ea-c (gr. 6), R.1.Ha-f (gr. 8), R.3.Ab (gr. 6) MAGLE: NO.3.B (gr. 5) SCGLE: SC2.1.Aa-c (gr. 7), SC2.2.D.a-d (gr. 7) PEGLE: PALW.1.B (gr. 5)	• Explain the method used to make and eat pudding in space • Presentation of things students would take into space and explain the significance of each	• Seven Days in Space video clip • Outward experiment - centrifugal force • Baseline Shuttle Food and Beverage List • Upside Down Experiment - swallowing in space • Drinking Tang in space experiment • Making and eating pudding in space experiment
(C) Simulate Newton's Laws of Motion and gravity's effect on space travel Performance: 1.3, 2.1, 3.1, 4.1 Knowledge: (CA) 1,3,4,6 (FA) 1 (H/PE) 2,4,7 (MA) 1-6 (SC) 1,2,5-7 (SS) 4 CAGLE: R.1.Ha-f (gr. 8) MAGLE: NO.1.B (gr. 7) SCGLE: SC2.2.Aa,b (gr. 7), SC2.2.Ba-c (gr. 7), SC2.2.Da-d (gr. 7), SC7.1.E (gr. 6) PEGLE: PALW.1.A (gr. 6), PALW.1.B (gr. 5)	• Astronaut fitness - calculate how much they would weigh on each of the planets • Gravity Busters data sheet • Gravity Busters graph • Toys in Space sheet • Pop Can Hero Engine data sheet	• Magic Box experiment - gravity • Microgravity Through Falling experiment • Astronaut Fitness calculations - percentages • Gravity Busters experiment - averages • Toys in Space video clip • Pop Can Hero Engine experiment

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(D) Dramatize why the surface of the moon and the planets have craters Performance: 1.3, 2.1, 3.1, 4.1 Knowledge: (CA) 1,3,4,6 (FA) 1 (H/PE) 2,4,7 (MA) 1-6 (SC) 1,2,5-7 (SS) 4 CAGLE: R.1.Ha-f (gr. 8) SCGLE: SC7.1.E (gr. 6), SC7.1.E (gr. 6), SC5.2.Ac-d (gr. 6)	• Crater Making sheet: • diameter • graphing • proportion • Conclusion about the surface of the moon • Scoring guide	• Impact Craters background information sheet • Impact Craters experiment - diameter
(E) Demonstrate the importance of thrust in a successful launch Performance: 1.3, 2.1, 3.1, 4.1 Knowledge: (CA) 1,3,4,6 (FA) 1 (H/PE) 2,4,7 (MA) 1-6 (SC) 1,2,5-7 (SS) 4 CAGLE: R.1.Ha-f (gr. 8) MAGLE: NO.1.C (gr. 5) SCGLE: SC2.1.Aa-c (gr. 7), SC2.2.Da-d (gr. 7), SC7.1.Ca-c (gr. 6)	• Foamie Flyer Astronaut data sheet • Balloon Staging design sheet • Rocket Transportation sheet • Alka Seltzer Rocket observation sheet	• Foamie Flyer experiment • Balloon Staging experiment - thrust/staging • Rocket Transportation - thrust/payload • Construct a Rocket Altitude Tracker • Alka Seltzer Rocket construction
(F) Construct rockets, robotics, and vehicles Performance: 1.3, 2.1, 3.1, 4.1 Knowledge: (CA) 1,3,4,6 (FA) 1 (H/PE) 2,4,7 (MA) 1-6 (SC) 1,2,5-7 (SS) 4 SCGLE: SC2.2.Da-d (gr. 7), SC8.1.A (gr. 6-8), SC8.3.B (gr. 6-8)	• Rocket Racer test report • Rocket Racer data sheet • Robotic Hand test sheet • Project X-35 Balance Projection sheet • Project X-35 Balance sheet • Project X-35 checks • Scoring guide • Rocket Stability Determination sheet • Actual launching of bottle rockets	• Rocket Racer vehicle construction • Robotic Hand construction • Space Shuttle Gliders • Project X-35 - construct a bottle rocket
(G) Increase ability to use the scientific inquiry process to conduct an experiment Performance: 1.3, 2.1, 3.1, 4.1 Knowledge: (CA) 1,3,4,6 (FA) 1 (H/PE) 2,4,7 (MA) 1-6 (SC) 1,2,5-7 (SS) 4 CAGLE: R.1.Ha-f (gr. 8) MAGLE: AR.1.B (gr. 6) SCGLE: SC7.1.Aa-e (gr. 6), SC7.1.Ba-f (gr. 7), SC7.1.Ca-c (gr. 6), SC7.1.Da,b (gr.6), SC7.1.E (gr. 6)	• Seed Germination student log sheet • Antacid Tablet Race experiment 1 sheet • Antacid Tablet Race experiment 2 sheet • Presentation of an experiment they would do in space and explain why the results would be significant	• Seed Germination in Space experiment • Space Microbes background sheet • Microbes in a Bag experiment • Antacid Tablet Race experiment 1 • Antacid Tablet Race experiment 2