

1-13-2015

Theme B: Introduction: Teacher Resource Plan Overview

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Recommended Citation

Purdue University College of Education, "Theme B: Introduction: Teacher Resource Plan Overview" (2015). *"Becoming a Spacewalker: My Journey to the Stars" Teacher Resources*. Paper 12.
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THEME B

TEN-DAY STEM EXTENSION OVERVIEW INTEGRATED WITH THEME A LITERACY/LANGUAGE ARTS PLANS

Title: *Becoming a Spacewalker: My Journey to the Stars*, by Astronaut Jerry L Ross

by Andra L. Zoller

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<p><u>Language Arts:</u> Interactive Read Aloud</p> <p><u>Science Investigation:</u> Gravity and a Bouncing Basketball *Video: Tell Me a Story Jerry Ross—What Was I Thinking? (Total Time 1:58) https://www.youtube.com/watch?v=NTWWOfyObo8</p> <p>STEM Objective: To investigate force and a bouncing basketball.</p> <p>Vocabulary: Change, sound, sight, force, bounce, gravity, weight</p> <p>Materials: basketball, scale, science notebook/journal/iPad, chart paper, marker, pencil</p> <p>Resources: Tell Me a Story Jerry Ross—What Was I Thinking? (1:58) https://www.youtube.com/watch?v=NTWWOfyObo8</p> <p>What is gravity really? http://spaceplace.nasa.gov/what-is-gravity/en/</p>	<p><u>Language Arts:</u> Interactive Read Aloud</p> <p><u>Science Investigation:</u> Gravity and an Inflated Beach Ball</p> <p>STEM Objective: To discover how a force can act upon a beach ball; To explore what a beach ball and <i>Sputnik 1</i> have in common.</p> <p>Vocabulary: Change, sound, sight, force, gravity, weight</p> <p>Materials: beach ball, scale, science notebook/journal/iPad, chart paper, marker, pencil</p> <p>Resources: <i>Sputnik</i> and the Dawn of the Space Age (NASA) http://www.hq.nasa.gov/office/pao/History/sputnik/</p>	<p><u>Language Arts:</u> Interactive Read Aloud</p> <p><u>Science Investigation:</u> Weight Comparison: On Earth vs. Felt Like in Space</p> <p>STEM Objective: To investigate weight on earth and what it feels like in space. What is it like to experience G-forces on earth?</p> <p>Vocabulary: weight (on earth versus “felt like in space”)</p> <p>Materials: scale, science notebook/journal/iPad, chart paper, marker, pencil, prediction/results chart</p> <p>Resources: Connection: “felt like I was riding a roller coaster in the sky” p. 21 Roller Coaster Design by Aditya and Tyler http://pbskids.org/dragonflytv/show/rollercoasterdesign.html</p> <p>Space Shuttle <i>Discovery</i> Launch (April 27, 2011) https://www.youtube.com/watch?v=OnoNITE-CLc</p> <p>Basketball by Jai and Jonathan (Arc) http://pbskids.org/dragonflytv/show/basketball.html</p>	<p><u>Language Arts:</u> Shared Reading <i>KID STUFF</i></p> <p><u>Science Investigation:</u> Float or Sink?</p> <p>STEM Objective: To explore floating and sinking using simple available materials.</p> <p>Vocabulary: gravity, transport, investigate, countryside, marsh</p> <p>Materials: Science notebook, transparent tub, water, floating/sinking objects, prediction/results lab, large towel</p> <p>Resources: Love My Science: Floating and Sinking—Float or Sink http://www.lovemyscience.com/floatorsinkexercise.html</p> <p>Mark 111 Suit Test Evaluation in WETF with Jerry Ross https://www.youtube.com/watch?v=DY8tBAui2ug</p> <p>Metric Conversion Chart http://www.metric-conversions.org/weight/pounds-to-kilograms.htm</p>	<p><u>Language Arts:</u> Shared Reading <i>THE SPACE AGE</i></p> <p><u>STEM Investigation:</u> Space Age Mathematics</p> <p>STEM Objective: To investigate “Space Age” weight/size and utilize data to solve mathematical comparisons.</p> <p>Vocabulary: orbit, venture, man-made, launched, satellite, bulletin, rocket</p> <p>Materials: <i>Sputnik 1</i> Information, Wikipedia: Mercury 7 website, science notebook/journal/iPad/ computer, calculator, pencil, chart paper, charts</p> <p>Website Resources: <i>Sputnik 1</i> http://www.hq.nasa.gov/office/pao/History/sputnik/</p> <p>Wikipedia: Mercury Seven http://en.wikipedia.org/wiki/Mercury_Seven</p> <p>Resources: NASA History—Explorer 1 Launch on https://www.youtube.com/watch?v=NfMirKkzRx8</p> <p>Metric Conversion Chart http://www.metric-conversions.org/weight/pounds-to-kilograms.htm</p>

<p>DAY 6</p> <p>Language Arts: Shared Reading <i>SCIENTIFIC CURIOSITY</i></p> <p>Science Investigation: BLAST OFF! The Balloon Rocket Experiment</p> <p>*Video STS-74 Flight Day 1 <i>Atlantis</i> Liftoff! November 12, 1995 (Total Time: 17:46/Begin viewing at 12:00)</p> <p>STEM Objective: To integrate language arts concepts and STEM to explore propulsion and the impact of various conditions using rocket balloons.</p> <p>Vocabulary: propelled, blast, payload, countdown, miscalculation</p> <p>Materials: safety glasses, string, three straws of differing diameters/flexibility, clock or timing device, science notebooks, long balloons, tape</p> <p>Prediction lab and results lab</p> <p>Resources: Science Investigation website: The Balloon Rocket Experiment https://sciencebob.com/make-a-balloon-rocket/</p> <p>*STS-74 Flight Day 1 Atlantis Lift Off! (November 12, 1995) https://www.youtube.com/watch?v=Xk0tdqxjGq8</p>	<p>DAY 7</p> <p>Language Arts: Shared Reading <i>TRY, TRY AGAIN</i></p> <p>Science Investigation: Impact of Gravity on Structural Design</p> <p>STEM Objective: To integrate language arts concepts with STEM through bridge building. What part of a bridge is important to the construction of the International Space Station? Why are force and resistance critical to its stability?</p> <p>Vocabulary: spacewalk, astronaut, engineer, space station, habitable, structure, force, resistance, colossal, extreme, shuttle</p> <p>Materials: 8 ½" × 11" cardstock or construction paper (7–10 pieces) 5-ounce paper or plastic cup Pile of pennies 2 same-size, empty boxes from cereal, shoes or crackers. Scissors Tape or glue Tabletop or flat surface Computer/Internet capabilities Prediction/Results Lab</p> <p>Science investigation: The Lawrence Hall of Science http://static.lawrencehallofscience.org/kidsite/activities/bridges/</p> <p>Resources: Bridge Builders http://static.lawrencehallofscience.org/kidsite/activities/bridges/</p> <p>(November 26, 1985) https://www.youtube.com/watch?v=8Jwvlpvzy8Y</p>	<p>DAY 8</p> <p>Language Arts: Shared Reading <i>SPACE TRAVELER</i></p> <p>Science Investigation: Space Travel: From Your Point of View</p> <p>Science Objective: To provide an opportunity for children to sketch to stretch child's own understanding of space travel using various mediums to express what they are learning.</p> <p>Vocabulary: ignition, thunderous, trajectory, parallel, acceleration, G-force, construction, robotic, hatch, crew members, hostile, liftoff, atmosphere</p> <p>Materials: paper (8 ½" × 14"), pencil, markers, clay, paint, paint brush, computer, iPad, Notebook, etc.</p> <p>Resources: *Space Shuttle STS-110 Atlantis Space Station Assembly ISS-8A S0 Truss 2002 NASA https://www.youtube.com/watch?v=Uq8Nnt5VzgE</p>	<p>DAY 9</p> <p>Language Arts: Shared Reading <i>LIFE IN ZERO GRAVITY</i></p> <p>Science Investigation: Space Menu: "Need vs. Want"</p> <p>STEM Objective: To provide the students with an opportunity to "think like a chef on a budget" and develop one menu (breakfast, lunch, and dinner menu for one day with cost to be determined) to feed one person up in space.</p> <p>Vocabulary: portable, magnetized, galley, cramped, resistance, zero gravity, treadmill</p> <p>Resources: Kroger https://www.kroger.com/</p> <p>Target http://www.target.com/</p> <p>Walmart http://www.walmart.com/</p> <p>*Video: Eating Food in Space (Chris Hadfield's Space Kitchen) http://www.sciencekids.co.nz/videos/astronauts/eatingfoodinspace.html</p>	<p>DAY 10</p> <p>Language arts/STEM culminating activity: Extending the learning</p> <p>Student Activity: Children create a means to express what Jerry Ross's story means to them using any medium of choice.</p> <p>Menu of possible topics:</p> <ul style="list-style-type: none"> • Space facts/research • Design a space experiment • What if you woke up one morning and there was no gravity? • Passion project (child's own idea) • Design mission patch • Research <i>Orion</i> Build an Orion model • Create a scrapbook of your dream <p>Language Arts/STEM Learning Objective: To provide an opportunity for children to express and extend what they have learned about space, history of space exploration, positive character traits, plan careers, scientific process and procedures.</p> <p>Materials: To be determined by student</p> <p>Resources: <i>Orion</i> http://www.nasa.gov/exploration/systems/mpcv/index.html#U_OW6Pdx1Y</p> <p>Mission Patch http://www.spacecenter.org/docs/Activities-MissionPatch.pdf</p>

INTRODUCTION-SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS STANDARDS

Becoming a Spacewalker: My Journey to the Stars by Astronaut Jerry L. Ross
STEM Standards Andra L. Zoller

Next Generation Science Standards Science and Engineering Practices:

Asking Questions and Defining Problems; Analyzing and Interpreting Data; Using Mathematics and Computational Thinking

NGSS Connections:

Interdependence of Science, Engineering and Technology

- Science and technology support each other.
- Tools and instruments are used to answer scientific questions, while scientific discoveries lead to the development of new technologies.
- People's needs and wants change over time, as do their demands for new and improved technologies.
- Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands.
- When new technologies become available, they can bring about changes in the way people live and interact with one another.

Influence of Engineering, Technology and Science on Society and the Natural World

Home/Community/School Connections:

- Increasing parent involvement in their children's science classroom and encouraging parents' roles as partners in science learning
- Engaging students in defining problems and designing solutions of community projects in their neighborhoods (typically engineering)
- *Focusing on science learning in informal environments*

The International Society for Technology in Education (ISTE) National Educational Technology Standards (NETS) and Performance Indicators for Students: (Include)

Standard 1.0 Creativity and Innovation; Standard 2.0 Communication and Collaboration; Standard 3.0 Research and Information Fluency; Standard 4.0 Critical Thinking, Problem Solving, and Decision Making; Standard 5.0 Digital Citizenship Standard 6.0 Technology Operations and Concepts

1. Creativity and innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

- a. Apply existing knowledge to generate new ideas, products, or processes
- b. Create original works as a means of personal or group expression
- c. Use models and simulations to explore complex systems and issues
- d. Identify trends and forecast possibilities

2. Communication and collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

- a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media

- b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats
- c. Develop cultural understanding and global awareness by engaging with learners of other cultures
- d. Contribute to project teams to produce original works or solve problems

3. Research and information fluency

Students apply digital tools to gather, evaluate, and use information.

- a. Plan strategies to guide inquiry
- b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- d. Process data and report results

4. Critical thinking, problem solving, and decision making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

- a. Identify and define authentic problems and significant questions for investigation
- b. Plan and manage activities to develop a solution or complete a project
- c. Collect and analyze data to identify solutions and/or make informed decisions
- d. Use multiple processes and diverse perspectives to explore alternative solutions

5. Digital citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

- a. Advocate and practice safe, legal, and responsible use of information and technology
- b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- c. Demonstrate personal responsibility for lifelong learning
- d. Exhibit leadership for digital citizenship

6. Technology operations and concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.

- a. Understand and use technology systems
- b. Select and use applications effectively and productively
- c. Troubleshoot systems and applications
- d. Transfer current knowledge to learning of new technologies

Fourth Grade Compatible STEM Standards Addressed in STEM Investigations

Becoming a Spacewalker: My Journey to the Stars by Astronaut Jerry L. Ross with Susan G. Gunderson
Compatible STEM Standards Andra L. Zoller

Day One: A DREAM BEGINS

Next Generation Science Standards (NGSS): 4-ESS2 Earth's Systems, 4.4.1, 4.MD.A.1, PS2.A, PS2.B
<http://www.nextgenscience.org/next-generation-science-standards>

Common Core (CC) Math: 4.MD.A.1

<http://www.corestandards.org/>

Indiana Academic Standards (IAS):

IAS Mathematics: PS.1, PS.2, PS.3, PS.4, PS.5, PS.6, PS.7, 4.NS.1, 4.NS.6, 4.M.2, 4.DA.1

IAS Science: 4.4.1

IAS Physical Education: 4.RI.7, 4.RI.8, 4.1.2, 4.2.1, 4.3.3

IAS Health and Wellness: 4.1.1, 4.2.3, 4.2.4, 4.2.5

<http://www.doe.in.gov/standards>

High Ability Resource Guide for the IAS for ELA and Mathematics:

<http://www.doe.in.gov/sites/default/files/standards/highability-resource-guide-20140905.pdf>

Indiana Academic Standards Technology (IAST):

Standard 1.0 Creativity and Innovation; Standard 2.0 Communication and Collaboration; Standard 3.0 Research and Information Fluency; Standard 4.0 Critical Thinking, Problem Solving, and Decision Making; Standard 5.0 Digital Citizenship; Standard 6.0 Technology Operations and Concepts

<http://www.doe.in.gov/sites/default/files/standards/iste.pdf>

The International Society for Technology in Education (ISTE),

National Educational Technology Standards (NETS) and Performance Indicators for Students:

Standard 1.0 Creativity and Innovation; Standard 2.0 Communication and Collaboration; Standard 3.0 Research and Information Fluency; Standard 4.0 Critical Thinking, Problem Solving, and Decision Making; Standard 5.0 Digital Citizenship Standard 6.0 Technology Operations and Concepts

http://www.iste.org/docs/pdfs/20-14_ISTE_Standards-s_PDF.pdf

Day Two: GRIT AND DETERMINATION

NGSS: NGSS: 4-ESS2 Earth's Systems, 4.MD.A.1. Mathematics-To solve problems, Physical Science-PS2.A Forces and motion, PS2.A Types of interactions, PS4.A Wave properties, PS4.C Information technologies and instrumentation

CC: 4.MD.A.1

IAS Mathematics: PS.1, PS.2, PS.3, PS.4, PS.5, PS.6, PS.7, 4.NS.1, 4.NS.6, 4.DA.1

IAS Science: 4.4.1

IAS Physical Education: 4.RI.7, 4.RI.8, 4.W.8, 4.1.2, 4.2.1, 4.3.3, 4.RI.7, 4.RI.8, 4.W.8, 4.1.2, 4.2.1, 4.3.3

IAST, ISTE/NETS: Standards 1-6

Day Three: SPACE - AT LAST

NGSS: 4-ESS2 Earth's Systems, 4.MD.A.1, PS2.A, PS2.B

CC: 4.NBT.A.1, 4.NBT.A.2, 4.NBT.B.4, 4.MD.A.1, 4.MD.A.2,

IAS Math: PS.1, PS.2, PS.3, PS.4, PS.5, PS.6, PS.7, 4.NS.1, 4.NS.6, 4.NS.7, 4.NS.9, 4.M.2, 4.DA.1, 4.DA.3 (utilizing T-chart and bar graph)

IAS Science: 4.4.1

IAST, ISTE/NETS: Standards 1-6

Day Four: KID STUFF

NGSS: Standard 4: Science, Engineering and Technology, 4.4.1, 4.MD.A.1, 4.MD.A.2.

NGSS Connections to CCSSM Standards for Mathematical Practice: MP.2, MP.4, MP.5

http://www.nextgenscience.org/sites/ngss/files/Appendix-L_CCSS%20Math%20Connections%2006_03_13.pdf

NGSS Science and Engineering Practices: Eight practices for science and engineering

<http://www.nextgenscience.org/sites/ngss/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf>

CC: 4.OA.C.5, 4.NBT.A.1, 4.MD.A.1, 4.MD.A.2, 4.MD.B.4

IAS Mathematics: PS.1, PS.2, PS.3, PS.4, PS.5, PS.6, PS.7, 4.NS.1, 4.NS.6, 4.NS.7, 4.DA.1, 4.DA.3, 4.M.2

IAS Science: All Science and Design Process Standards, 4.4.1

IAST, ISTE/NETS: Standards 1-6

Day Five: THE SPACE AGE

NGSS: 4.MD.A.1, 4.MD.A.2

Connections to CCSSM Standards for Mathematical Practice: MP.2, MP.4, MP.5

NGSS Science and Engineering Practices: Eight practices for science and engineering

CC: 4.OA.A.1, 4.OA.A.2, 4.OA.A.3, 4.OA.C.5, 4.NBT.A.1, 4.NBT.A.2, 4.NBT.A.3, 4.NBT.B.4, 4.NBT.B.5, 4.MD.A.1, 4.MD.A.2,

IAS Mathematics: PS.1, PS.2, PS.3, PS.4, PS.5, PS.6, PS.7, PS.8, 4.NS.1, 4.NS.2, 4.NS.6, 4.NS.9, 4.C.1, 4.C.2, 4.AT.1, 4.AT.3, 4.AT.4, 4.M.2, 4.M.3, 4.DA.1, 4.DA.3

IAS Science: 4.4.1

IAST, ISTE/NETS: Standards 1-6

Day Six: SCIENTIFIC CURIOSITY

NGSS: Standard 4: Science, Engineering and Technology

Core Standard: Design a moving system and measure its motion 4.4.1, 4.MD.A.1, 4.MD.A.2

CC: 4.NBT.A.1, 4.NBT.A.3, 4.MD.A.1, 4.MD.A.2

IAS Mathematics: PS.1, PS.2, PS.3, PS.4, PS.5, PS.6, PS.7, PS.8, 4.NS.1, 4.NS.2, 4.NS.3, 4.NS.6, 4.NS.9, 4.C.1, 4.AT.1, 4.M.1, 4.M.2, 4.M.3, 4.DA.1, 4.DA.2, 4.DA.3

IAS Science: 4.4.1, 4.4.2, 4.4.3, 4.4.4 (Student choice)

IAST, ISTE/NETS: Standards 1-6

Day Seven: TRY, TRY AGAIN

NGSS: Physical Science: PS2.A, PS2.B

CC: 4.OA.A.3, 4.OA.C.5, 4.NBT.A.1, 4.NBT.A.2, 4.NBT.A.4, 4.MD.A.1

IAS Mathematics: PS.1, PS.2, PS.3, PS.4, PS.5, PS.6, PS.7, PS.8,

IAS Science: 4.2.5, 4.4.1, 4.4.2, 4.4.3, 4.4.4

IAST, ISTE/NETS: Standards 1-6

Day Eight: SPACE TRAVELER

NGSS: To apply comprehension strategies and illustrate the “Interdependence of Science, Engineering and Technology”

NGSS Connections: *Interdependence of Science, Engineering and Technology; Influence of Engineering, Technology and Science on Society and the Natural World-Home/Community/School Connections: “Home and Community Connections to School Science for Student Diversity”*

NGSS Connections: In the Next Generation Science Standards-“*Interdependence of Science, Engineering, and Technology*” and “*Influence of Engineering, Technology, and Science on Society and the Natural World* (3-5 Connections Statements)

http://www.nextgenscience.org/sites/ngss/files/APPENDIX%20J_0.pdf

CC: {From a Visual Arts point of view and individual artistic application} 4.OA.C.5, 4.NF.A.1, 4.NF.C.5, 4.MD.A.1, 4.MD.A.2, 4.MD.B.4, 4.MD.C.5.A, 4.MD.C.5.B, 4.MD.C.6

IAS Mathematics: PS.2, PS.4, PS.5, PS.6, PS.7, PS.8, 4.M.1, 4.M.2, 4.M.3

IAS Science: Cumulative Science Standards Application

IAS Visual Arts: 4.RI.1, 4.RI.2, 4.RI.3, 4.RI.4, 4.RI.5, 4.RI.7, 4.RI.9, 4.RI.10, 4.W.1, 4.W.2, 4.W.3, 4.W.4, 4W.5, 4W.6, 4.W.7, 4.W.8, 4.W.9, 4.W.10, 4.3.1, 4.3.2, 4.4.1, 4.4.2, 4.4.3, 4.5.1, 4.5.2, 4.6.1, 4.6.2, 4.6.3, 4.6.4, 4.6.5, 4.6.6, 4.7.1, 4.7.2, 4.7.3, 4.7.4, 4.7.5, 4.8.1, 4.8.2, 4.8.3, 4.8.4

http://www.doe.in.gov/sites/default/files/standards/fine-arts-dance-music-theatre-visual-arts/2010_in_visual_arts_standards.pdf

IAS Social Studies: 4.1.13, 4.1.14, 4.1.15, 4.1.18, 4.2.6, 4.3.2, 4.3.3, 4.3.12, 4.3.13, 4.4.2, 4.4.6, 4.4.7, 4.4.8, 4.4.10

<http://www.doe.in.gov/sites/default/files/standards/socialstudies/ss-2014-gr4-20140718.pdf>

IAST, ISTE/NETS: Standards 1-6

Day Nine: LIFE IN ZERO GRAVITY

NGSS: To apply comprehension strategies and illustrate the “Interdependence of Science, Engineering and Technology”

NGSS Connections: *Interdependence of Science, Engineering and Technology*

CC: Math/Measurement & Data 4.MD.A.1, 4MD.A.2, 4.OA.C.5, 4.OA.A.1, 4.OA.A.3, 4.NBT.B

IAS Mathematics: PS.1, PS.2, PS.3, PS.4, PS.5, PS.6, PS.8, 4.NS.1, 4.NS.9, 4.C.1, 4.AT.1, 4.M.3, 4.DA.1

IAS Science: Cumulative Science Standards Application

IAS Social Studies: 4.4.4, 4.4.6, 4.4.10

Health and Wellness: 4.1.1, 4.2.2, 4.2.5, 4.3.2

IAST, ISTE/NETS: Standards 1-6

Day Ten: EXTENDING THE LEARNING “The Final Countdown”

NGSS, NGSS Connections, Common Core, IAS, IAS Technology, ISTE/NETS- All appropriate standards will be applied in the completion of the final product.

Note:

In addition to the above standards, the Fourth Grade Literacy Standards Addressed in Interactive Read Alouds, Shared Reading, and Graphic Organizers can be found in the “Theme A: Introduction: Teacher Resource Plan Overview.”

MISSION SCHEDULE

by Andra L. Zoller

DAY 1:

Science Investigation: Bouncing Basketball
Gravity and a Bouncing Basketball

DAY 2:

Science Investigation: Inflated Beach Ball
Gravity, Inflated Beach Ball, and *Sputnik 1*

DAY 3:

Science Investigation: Weight on Earth and in Space
Weight Comparison: On Earth vs. Felt Like in Space

DAY 4: KID STUFF

Science Investigation: Float or Sink?
Objects that Float or Sink

DAY 5: THE SPACE AGE

Science Investigation: Space Age Mathematics Adventures
Mathematics Problem(s) Computation

DAY 6: SCIENTIFIC CURIOSITY

Science Investigation: Balloon Rocket
BLAST OFF! The Balloon Rocket Experiment

DAY 7: TRY, TRY AGAIN

Science Investigation: Bridge Builders
Impact of Gravity on Structural Design

DAY 8: SPACE TRAVELER

Science Investigation: Space Travel Interpretation
Space Travel: From Your Point of View

DAY 9: LIFE IN ZERO GRAVITY

Science Investigation: Space Food and a Budget
Space Menu: Need vs. Want

DAY 10: EXTENDING THE LEARNING

Language Arts/STEM Culminating Activity:
The Final Countdown