



## During Operation Comet, students are exposed to the following national standards.

### Next Generation Science Standards

**MS-SEP 6-8:** Analyze and interpret data to determine similarities and differences in findings.

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**MS-SEP 6-8:** Conduct an investigation to produce data to serve as the basis for evidence that meet the goals of an investigation.

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**MS-SEP 6-8:** Construct a scientific explanation based on valid and reliable evidence obtained from sources.

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**MS-SEP-6-8:** Obtain and combine information from books and/or reliable media to explain phenomena or solutions to a design problem.

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**MS-SEP-6-8:** Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomena.

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**3-5-ETS1-1:** Engineering Design: Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

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**3-LS4-3:** Biological Evolution: Unity and Diversity: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

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**5-PS1-3:** Matter and Its Interactions: Make observations and measurements to identify materials based on their properties.

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**5-PS2-1:** Support an argument that the gravitational force exerted by Earth on objects is directed down.

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**MS-ESSI-1:** Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.

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**MS-ETS1-1:** Define the criteria and constraints of a design problem with sufficient prevision to ensure successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

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**MS-ETS1-4:** Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.

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**MS-LS1-5:** Construct an explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

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## Common Core State Standards

**CCSS.ELA.SL.6.1:** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

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**CCSS.ELA.RST.6-8.3:** Follow precisely a multistep procedure when carrying out experiments, taking measurements or performing technical tasks.

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**CCSS.ELA.RI.6.7:** Integrate information presented in different media formats as well as in words to develop a coherent understanding of a topic or issue.

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**CCSS.ELA.SL.7.4:** Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

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**CCSS.ELA.SL.7.6:** Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

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**CCSS.ELA.L.7.6:** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or a phrase important to comprehension or expression.

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**CCSS.ELA-LITERACY.RI.5.4:** Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.

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**CCSS.ELA-LITERACY.RI.5.7:** Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

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**CCSS.ELA-LITERACY.RST.6-8.3:** Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks

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**CCSS.MATH.CONTENT.5.NBT.A.3:** Read, write, and compare decimals to thousandths.

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**CCSS.MATH.CONTENT.5.MD.C.5:** Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume.

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**CCSS.MATH.CONTENT.5.MD.A.1:** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

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**CCSS.MATH.CONTENT.7.G.B:** Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

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**MP1:** Make sense of problems and persevere in solving them.

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**MP4:** Model with mathematics.

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**MP5:** Use appropriate tools strategically.

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