During Earth Odyssey, students are exposed to the following national standards.

Next Generation Science Standards

MS-ESS2-1: Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

MS-ESS2-2: Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

MS-ESS2-5: Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.

MS-ESS3-2: Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

MS-ESS3-5: Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

MS-ETS1-2: Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

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

MS-LS4-4: Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.

MS-SEP-P2: Develop and/or use a model to generate data to test ideas about phenomena in natural or designed systems, including those representing inputs and outputs, and those at unobservable scales.

MS-SEP-P3: Conduct an investigation and/or evaluate and/or revise the experimental design to produce data to serve as the basis for evidence that meet the goals of the investigation.

MS-SEP-P3: Collect data to produce data to serve as the basis for evidence to answer scientific questions or test design solutions under a range of conditions.

MS-SEP-P3: Collect data about the performance of a proposed object, tool, process or system under a range of conditions.

MS-SEP-P4: Analyze and interpret data to determine similarities and differences in findings.

MS-SEP-P4: Use graphical displays (e.g., maps, charts, graphs, and/or tables) of large data sets to identify temporal and spatial relationships.

MS-SEP-P4: Construct, analyze, and/or interpret graphical displays of data and/or large data sets to identify linear and nonlinear relationships.

MS-SEP-P5: Apply mathematical concepts and/or processes (e.g., ratio, rate, percent, basic operations, simple algebra) to scientific and engineering questions and problems.

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Common Core State Standards

ELA.LIT.RI.8.4: Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

ELA.LIT.RI.8.7: Integrate information presented in different media formats as well as in words to develop a coherent understanding of a topic or issue.

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

ELA.LIT.RST.6-8.7: Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually.

ELA.LIT.RST.8.4: Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grade.

ELA.LIT.SL.8.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.

ELA.LIT.SL.8.4: Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.

ELA.LIT.SL.8.6: Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

MATH.CON.7.G.B.4: Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

MATH.CON.7.SP.A.2: Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.

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

MATH.PRAC.MP2: Reason abstractly and quantitatively.

MATH.PRAC.MP3: Construct viable arguments and critique the reasoning of others.

MATH.PRAC.MP4: Model with mathematics.

MATH.PRAC.MP5: Use appropriate tools strategically.

MATH.PRAC.MP6: Attend to precision.