Living In Space Standards
3rd Grade

NGSS Life Science:

3-LS3.1: Use evidence to support the explanation that traits can be influenced by the environment.

NGSS Physical Science:

3-PS2-1: Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object

3-PS2-3: Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.

Alaska State Speaking & Listening Standards

SL.3.1.a-d: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly;

a. After learning a protocol (e.g., Socratic method), come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion;
b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion);
c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others;
d. Explain their own ideas and understanding in light of the discussion.

SL.3.2: Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

SL.3.3: Ask and answer questions about information from a speaker, offering appropriate elaboration or explanations and detail.

4th Grade

NGSS Physical Science

4-PS3-1: Use evidence to construct an explanation relating the speed of an object to the energy of that object.

4-PS3-3: Ask questions and predict outcomes about the changes in energy that occur when objects collide.

4-PS4-2: Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.

NGSS Life Science

4-LS1-2: Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

NGSS Earth Systems Science

4-ESS3-1: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

Alaska State Speaking & Listening Standards

SL.4.1.a-d: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly;

a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion;
b. Follow agreed-upon rules for discussions and carry out assigned roles;
c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others;
d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

SL.4.2: Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

SL.4.3: Identify the reasons and evidence a speaker provides to support particular points (e.g., using a graphic organizer to show connections between reasons given and support provided).

5th Grade

Alaska State Speaking & Listening Standards

SL.5.1.a-d: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly;

a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion;
b. Follow agreed-upon rules for discussions and carry out assigned roles;
c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others;
d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.

SL.5.2: Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

SL.5.3: Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence (e.g., use a graphic organizer or note cards completed while listening to summarize or paraphrase key ideas presented by a speaker).

NGSS Physical Science

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

NGSS Earth Systems

5-ESS1-1: Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth.

NGSS Physical Science:

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

NGSS Earth Systems Science

5-ESS1-1:
Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth.

6th Grade

Alaska State Speaking and Listening Standards

SL.6.1.a-d: 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;

a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion;
b. Follow rules for collegial discussions (e.g., establishing norms: taking turns, paraphrasing, respecting diverse viewpoints), set specific goals and deadlines, and define individual roles as needed;
c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion;
d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

SL.6.2: Interpret information presented in diverse media (including but not limited to podcasts) and formats (e.g., visually, quantitatively/ data-related, orally) and explain how it contributes to a topic, text, or issue under study.

SL.6.3: Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.

Middle School

Alaska State Reading Standards for Literacy in Science and Technical Subjects

RST.6-7-8.3: Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

RST.6-7-8.6: Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.

RST.6-7-8.8: Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.

RST.6-7-8.10: By the end of grade 8, read and comprehend science/technical texts in the grades 6-8 text complexity band independently and proficiently.

NGSS Life Science

MS-LS.1-1: Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.

MS-LS.1-8: Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

MS-LS2-1: Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS-4: Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

NGSS Earth and Space Systems

MS-ESS1-1: 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.

MS-ESS1-2: Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.

MS-ESS1-3: Analyze and interpret data to determine scale properties of objects in the solar system.

MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

High School

Alaska State Reading Standards for Literacy in Science and Social Studies

RST.9-10.1: Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

RST.9-10.10: By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

RST.11-12.1: Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

RST.11-12.3: Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Alaska State Speaking and Listening Standards

SL.9-10.1.a-d: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively;

a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas;
b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed;
c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions;

d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

SL.9-10.2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source and noting any discrepancies among data or information.

SL.9-10.3: Identify and evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.

SL.11-12.1.a-d: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively;

a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas;
b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives;
d. Respond thoughtfully to diverse perspectives or arguments; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

SL.11-12.2: Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data or information.

SL.11-12.3: Identify and evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.