



<p>GRADE</p>	<p>OBSERVATION</p> <p><i>An explorer notices and documents the world around her or him and is able to make sense of those observations.</i></p>	<p>COMMUNICATION</p> <p><i>An explorer is a storyteller, communicating experiences and ideas effectively through language and media. An explorer has literacy skills, interpreting and creating new understanding from spoken language, writing, and a wide variety of visual and audio media.</i></p>	<p>COLLABORATION</p> <p><i>An explorer works effectively with others to achieve goals.</i></p>	<p>PROBLEM SOLVING</p> <p><i>An explorer is able to generate, evaluate, and implement solutions to problems. An explorer is a capable decisionmaker—able to identify alternatives and weigh trade-offs to make a well-reasoned decision.</i></p>
<p>PRE-K (3- and 4-year-olds)</p>	<p>Children observe their world, creating the framework for knowing what small means using various scales (e.g. small child, small bug) and experiences with the senses (e.g. sour lemon, soft pillow, hard rain).</p> <p>Children use tools (e.g. rulers, magnifying glasses) to gather data about observed events.</p> <p>Children provide simple answers to questions like “How do you know?”</p>	<p>Children use their growing language skills to talk about their observations and experiences.</p> <p>Children can tell a simple story about an event or experience with prompting.</p> <p>Children begin to initiate conversations but have difficulty waiting their turn to speak.</p> <p>Children become aware of the uses for writing.</p>	<p>Children take turns when playing simple games.</p> <p>Children lead as well as follow in group activities.</p> <p>Children can assign and carry out roles in group activities or games.</p> <p>Children accept compromise when resolving conflicts when the solution is suggested by an adult.</p>	<p>Children solve problems from a single point of view (e.g., how to get a toy that’s out of reach).</p> <p>Children begin to identify solutions to problems involving others (e.g., coming up with a way to share a toy or book).</p> <p>Children hypothesize solutions to problems, choose from a short list of solutions, and evaluate a solution based on simple criteria.</p>
<p>K-1 (5- and 6-year-olds)</p>	<p>Children can categorize objects they observe.</p> <p>Children can place themselves in their surroundings, and make observations relative to their own location.</p> <p>Children employ simple equipment and tools to gather data and extend the senses.</p>	<p>Children introduce and maintain conversation about a topic.</p> <p>Children identify common types of texts and media (e.g., storybooks, poems, videos, pictures, music, maps).</p> <p>Children “write” stories that are creative and filled with color and fantasy.</p>	<p>Children participate and cooperate in group activities.</p> <p>Children follow instructions and rules in games and group situations.</p> <p>Children listen to others without interrupting and practice restraint from speaking out of turn.</p>	<p>Children recognize that problems can have more than one solution.</p> <p>Children think through a problem, understanding reasons behind a problem and ways to solve it.</p> <p>Children solve problems with others by negotiating roles in play and taking turns.</p>
<p>2-3 (7- and 8-year-olds)</p>	<p>Children begin to identify maps as one way to record their observations in the real world.</p> <p>Children ask questions and collect and organize information gathered from observation.</p>	<p>Children understand the main idea or message in visual and age-appropriate media.</p> <p>Children understand that media are created for a purpose by an author who may be trying to communicate to inform, persuade, or entertain.</p> <p>Children understand basic mapping elements and that using maps is a way to communicate information, or tell a story.</p>	<p>Children listen at a level where they are able to restate what someone said.</p> <p>Children solve teamwork problems by talking rather than using physical means.</p> <p>Children express a unique personality and viewpoint when relating to others and recognize different perspectives and “otherness.”</p>	<p>Children begin to be capable of concrete problem solving.</p> <p>Children understand how systems work.</p> <p>Children make simple decisions and evaluate the consequences.</p>



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<p>4 - 5 (9- and 10-year-olds)</p>	<p>Children experience different ways to make observations and glean information, including the use of spatial graphics.</p> <p>Children start to use knowledge of the physical and human features of historic events to inform current observations.</p>	<p>Children combine information from diverse resources to create a single narrative.</p> <p>Children recognize ethical standards and safe practices in social and personal media communications.</p> <p>Children understand that media are constructed from components—including video, words, photos, and music—that are sometimes mixed and sometimes separate.</p>	<p>Children work in teams to solve problems.</p> <p>Children form and state opinions in group activities.</p> <p>Children respect others’ opinions.</p>	<p>Children predict outcomes to problems based on cause and effect.</p> <p>Children work with models and simulations to evaluate problems, pose and test solutions, and determine the best solution(s) to a problem.</p> <p>Children use evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem.</p>
<p>6 - 8 (11- to 13-year-olds)</p>	<p>Youth design and conduct investigations that answer questions.</p> <p>Youth apply scientific ideas and evidence to explain real-world phenomena.</p> <p>Youth are skeptical of claims based only on analogy, generalizations, or unclear data or methods.</p>	<p>Youth understand that media technology and production have changed over time and how the medium affects the message.</p> <p>Youth demonstrate media literacy skills of analysis, evaluation, and discernment in decisions about which media to use or reject.</p> <p>Youth select and use appropriate technologies, maps, and other visual media to communicate their message.</p>	<p>Youth take leadership roles at a level that includes mediating group disagreements and assisting groups to work toward a solution.</p> <p>Youth work cooperatively in group activities toward a common goal.</p> <p>Youth gather, evaluate, and synthesize evidence to form opinions, and they exhibit an ability to change their opinion based on others’ solid evidence.</p> <p>Youth understand the role of multiple points of view in contemporary geographic policies and issues.</p>	<p>Youth employ principles of formal logic to solve problems.</p> <p>Youth ask questions that can be investigated in the classroom, outdoors, and in museums and other public places.</p> <p>Youth come up with explanations and solutions based on multiple perspectives and evidence from science and math, and they construct explanations using models, theories, and experiments.</p>
<p>9-12 (14- to 17-year-olds)</p>	<p>Youth use geographic tools to observe and analyze relationships between people, places, and Earth systems.</p> <p>Youth develop explanations that are supported by multiple sources of evidence consistent with scientific ideas.</p> <p>Youth notice and criticize claims that people make with limited data, or with no mention of other possibilities.</p>	<p>Youth understand that media are simultaneously a reflection of society and a model for society.</p> <p>Youth analyze complex media to identify the explicit and implicit messages and the strategies used to convey those messages.</p> <p>Youth create and publish content across a diverse range of media, and select the format best suited for project goals.</p>	<p>Youth recognize the subtleties in situations involving the diverse perspectives of others.</p> <p>Youth listen to other group members’ ideas or opinions before making decisions, allowing for the possibility of changing one’s mind about a position or opinion.</p> <p>Youth participate in collaborative work (e.g., projects, discussions.) with diverse participants on issues or problems outside of the classroom—in the community or in the larger world.</p>	<p>Youth develop an argument based on compelling evidence that considers multiple perspectives and draws defensible conclusions.</p> <p>Youth use models and simulations to formulate and evaluate testable questions and design problems.</p> <p>Youth plan and take action, and they evaluate the results of actions.</p> <p>Youth understand the influence of geographical features on the evolution of significant historic events and movements, and apply this learning to predict, mitigate, and solve current problems.</p>