**Science, Technology, Society, Environment (STSE)**

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| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - Working Below** |
| **Independently and consistently**:   * **Describes that science and technology uses processes to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)** * Describes that science and technology develop over time * Describe ways that science and technology work together * Describe applications of science and technology that have developed in response to human and environmental needs * Describe positive and negative effects that result from applications of science and technology in their own lives, the lives of others, and the environment | **Generally**:   * **Describes that science and technology uses processes to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)** * Describes that science and technology develop over time * Describe ways that science and technology work together * Describe applications of science and technology that have developed in response to human and environmental needs * Describe positive and negative effects that result from applications of science and technology in their own lives, the lives of others, and the environment | **With prompting or on occasion**:   * **Describes that science and technology uses processes to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)** * Describes that science and technology develop over time * Describe ways that science and technology work together * Describe applications of science and technology that have developed in response to human and environmental needs * Describe positive and negative effects that result from applications of science and technology in their own lives, the lives of others, and the environment | **Has difficulty even with support to**:   * **Describe that science and technology uses processes to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)** * Describe that science and technology develop over time * Describe ways that science and technology work together * Describe applications of science and technology that have developed in response to human and environmental needs * Describe positive and negative effects that result from applications of science and technology in their own lives, the lives of others, and the environment |

**Skills: Plan, Perform**

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| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - Working Below** |
| Independently and consistently:   * Clearly states testable questions * Identifies all necessary observable or measurable characteristics * Selects all relevant variables to test, control, and measure (quantitatively) * Makes prediction supported by prior scientific learning and research * Designs experiments to collect intended evidence; steps are complete, concise and can be understood by others * Chooses appropriate materials and equipment * Conducts experiments that control all needed variables * Uses materials, techniques and equipment competently * Measures accurately * Observes relevant evidence * Records evidence appropriately (symbols, units, labels, readability) * Identifies and uses safety procedures | Generally:   * Clearly states questions answerable by doing an experiment (not opinion or yes/no) * Identifies observable or measurable characteristics * Selects relevant variables to test, control, and measure * Makes plausible prediction supported by prior scientific learning * Designs experiments to collect intended evidence; steps are complete and can be understood by others * Chooses appropriate materials and equipment * Conducts experiments that control most variables * Uses materials, techniques and equipment competently * Measures accurately * Observes relevant evidence * Records evidence appropriately (symbols, units, labels, readability) * Identifies and uses safety procedures | With prompting or on occasion:   * states a question answerable by doing an experiment (not opinion or yes/no) * Identifies some observable or measurable characteristics * Selects some variables to control * Selects some variables to test and measure * Makes prediction supported by prior scientific learning * Designs experiments to collect intended evidence; some steps may be incomplete or missing * Sometimes chooses appropriate materials and equipment * Conducts experiments that controls some variables * Mostly uses materials, techniques and equipment competently * Measures accurately * Observes evidence * Records evidence appropriately (symbols, units, labels, readability) * Identifies and uses safety procedures | Has difficulty even with support to:   * State a question answerable by doing an experiment (not opinion or yes/no) * Identifies some observable or measurable characteristics * Identify variables * Make a prediction * Design a complete experiment * Rarely chooses appropriate materials and equipment * Conduct an experiment that controls some variables * Uses materials, techniques and equipment * Measures * Observes evidence * Records evidence (symbols, units, labels, readability) * Work safely |

**Skills: Analyze, Explain**

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| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - Working Below** |
| Independently and consistently:   * Organizes evidence efficiently and effectively * Accurately classifies * Recognizes and explains patterns and relationships in data * Makes conclusions supported by data * Relate conclusion to prediction based on research * Identifies and explains possible source(s) of error and discrepancies in data with suggestions for improved experimental design * Applies findings to other situations * Identifies 2 or more new testable questions that arise from what was learned * Communicates questions, procedures, and results efficiently and effectively * Always uses specific science vocabulary appropriately * Collaborates with others * Expresses ideas clearly * Seeks and respects the views of others | Generally:   * Organizes evidence appropriately and effectively * Accurately classifies * Recognizes patterns and relationships in data * Makes conclusions supported by data * Relate conclusion to prediction * Identifies possible source(s) of error and discrepancies in data * Identifies how findings can be applied to other situations * Identifies 1-2 new questions that arise from what was learned (occasionally contains opinion) * Communicates questions, procedures, and results effectively * Uses specific science vocabulary appropriately * Collaborates with others * Expresses ideas clearly * Seeks and respects the views of others | With prompting or on occasion:   * Organizes evidence appropriately * Classifies to some extent * Recognizes some patterns in data * Makes some conclusions * Identifies some possible source(s) of error * Identifies how findings can be applied to another situation * Identifies another question that arises from what was learned (often contains opinion) * Communicates questions, procedures, and results * Sometimes uses science vocabulary appropriately * Collaborates with others * Expresses ideas * Respects the views of others | Has difficulty even with support to:   * Organizes evidence appropriately and effectively * Accurately classifies * Recognizes patterns * Make a conclusion * Identify a possible source of error * Identify how findings can be applied to another situation * Identifies another question that arises from what was learned (contain opinion) * Communicates questions, procedures, and results * Seldom uses science vocabulary appropriately * Collaborate with others * Express ideas * Respect the views of others |

**Knowledge**:

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| **Exceeding** | **Meeting** | **Approaching** | **Working Below** |
| Independently and consistently:   * Understanding of concepts goes beyond the curricular outcomes * Descriptions of content are complete, using specific science vocabulary appropriately * Content can be applied to new situations * Communicates knowledge efficiently and effectively (written, oral, and/or visual) | Generally:   * Demonstrates understanding of most concepts (at least ¾) * Descriptions of content are mostly complete, using specific science vocabulary appropriately * Communicates knowledge effectively (written, oral, and/or visual) | With prompting or on occasion:   * Demonstrates understanding of some concepts (at least 2/3) * Descriptions of content sometimes incomplete; science vocabulary used at times * Communicates knowledge with some difficulty (written, oral, and/or visual) | Has difficulty even with support to:   * understand concepts * Describe content * Communicate knowledge (written, oral, and/or visual) |