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

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| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - Working Below** |
| **Independently and consistently:*** **Describes various processes used in science and technology to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)**
* Describe the development of science and technology over time
* Explain how science and technology interact with and advance one another
* Illustrate how the needs of individuals, society, and the environment influence and are influenced by scientific and technological endeavors (e.g., careers, industry, and special interest groups)
* Analyze social issues related to the applications and limitations of science and technology, and explain decisions in terms of advantages and disadvantages for sustainability, considering a few perspectives
 | **Generally:*** **Describes various processes used in science and technology to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)**
* Describe the development of science and technology over time
* Explain how science and technology interact with and advance one another
* Illustrate how the needs of individuals, society, and the environment influence and are influenced by scientific and technological endeavors (e.g., careers, industry, and special interest groups)
* Analyze social issues related to the applications and limitations of science and technology, and explain decisions in terms of advantages and disadvantages for sustainability, considering a few perspectives
 | **With prompting or on occasion:*** **Describes various processes used in science and technology to investigate the natural and constructed world(e.g., multiple trials, re-testing, variations in data)**
* Describe the development of science and technology over time
* Explain how science and technology interact with and advance one another
* Illustrate how the needs of individuals, society, and the environment influence and are influenced by scientific and technological endeavors (e.g., careers, industry, and special interest groups)
* Analyze social issues related to the applications and limitations of science and technology, and explain decisions in terms of advantages and disadvantages for sustainability, considering a few perspectives
 | **Has difficulty even with support to:*** **Describes various processes used in science and technology to investigate the natural and constructed world(e.g., multiple trials, re-testing, variations in data)**
* Describe the development of science and technology over time
* Explain how science and technology interact with and advance one another
* Illustrate how the needs of individuals, society, and the environment influence and are influenced by scientific and technological endeavors (e.g., careers, industry, and special interest groups)
* Analyze social issues related to the applications and limitations of science and technology, and explain decisions in terms of advantages and disadvantages for sustainability, considering a few perspectives
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**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 or hypothesis 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 effectively, accurately, and safely
* Observes relevant evidence
* Records evidence appropriately given the task (symbols, units, labels, readability)
 | 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 or hypothesis 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 major variables
* Uses materials, techniques and equipment effectively, accurately, and safely
* Observes relevant evidence
* Records evidence appropriately given the task (symbols, units, labels, readability)
 | 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 effectively, accurately, and safely
* Observes evidence
* Mostly records evidence appropriately given the task (symbols, units, labels, readability)
 | 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 safely
* Observes evidence
* Records evidence (symbols, units, labels, readability)
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**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
* Identifies strengths and weaknesses of data collection and organization
* Interprets patterns and relationships in data
* Make predictions using data patterns and relationships
* States a conclusion based on data and explains how evidence supports or refutes an initial idea
* Identifies and explains sources 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
* Defends a position on an issue in a logical, reasoned way
 | Generally:* Organizes evidence appropriately and effectively
* Accurately classifies
* Identifies strengths and weaknesses of data collection and organization
* Interprets patterns and relationships in data
* Make predictions using data patterns and relationships
* States a conclusion based on data and explains how evidence supports or refutes an initial idea
* Identifies possible source(s) of error and discrepancies in data
* Identifies and evaluates 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
* Defends a position on an issue based on their findings
 | With prompting or on occasion:* Organizes evidence appropriately
* Classifies to some extent
* Recognizes patterns and relationships in data
* Identifies a strength or weakness of data collection and/or organization
* Make a prediction using data patterns
* States a conclusion based on data
* Identifies a possible source of error and a discrepancy in data
* 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
* can occasionally work in groups to:
* Collaborate with others
* Express idea
* Respect the views of others
* Defend a position on an issue
 | Has difficulty even with support to:* Organize evidence appropriately
* Classify
* Recognize patterns and relationships in data
* Identify a strength or weakness of data collection and/or organization
* Make a prediction using data patterns
* State a conclusion based on data
* Identify a possible source of error and a discrepancy in data
* Identify how findings can be applied to another situation
* Identify 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
* Defend a position on an issue
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**Knowledge**

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| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - 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)
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