

**Science – Grade 6**

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

<b>4 - Excelling</b>	<b>3 - Meeting</b>	<b>2 - Approaching</b>	<b>1 - Working Below</b>
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)	Generally describes that science and technology uses processes to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)	Sometimes (or with support) describes that science and technology uses processes to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)	Has difficulty (even with support) describing that science and technology uses processes to investigate the natural and constructed world (e.g., multiple trials, re-testing, variations in data)
Independently and consistently describes that science and technology develop over time	Generally describes that science and technology develop over time	Sometimes (or with support) describes that science and technology develop over time	Has difficulty (even with support) describing that science and technology develop over time
Independently and consistently describe ways that science and technology work together	Generally describes ways that science and technology work together	Sometimes (or with support) describes ways that science and technology work together	Has difficulty (even with support) describing ways that science and technology work together
Independently and consistently describe applications of science and technology that have developed in response to human and environmental needs	Generally describes applications of science and technology that have developed in response to human and environmental needs	Sometimes (or with support) describes applications of science and technology that have developed in response to human and environmental needs	Has difficulty (even with support) describing applications of science and technology that have developed in response to human and environmental needs
Independently and consistently 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 positive and negative effects that result from applications of science and technology in their own lives, the lives of others, and the environment	Sometimes (or with support) describes 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) describing positive and negative effects that result from applications of science and technology in their own lives, the lives of others, and the environment
<b>Evidence:</b> (following “Knowledge” section)			

## Science – Grade 6

### Skills: Plan, Perform

4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
Independently and consistently rephrases questions clearly in a testable form (includes two variables) identifying observable or measurable characteristics	Generally rephrases questions clearly in a testable form (includes two variables) identifying observable or measurable characteristics	Sometimes (or with support) rephrases questions in a testable form (includes two variables) identifying observable or measurable characteristics	Has difficulty (even with support) rephrasing questions in a testable form and identifying observable or measurable characteristics
Consistently selects all relevant variables to test, control, and measure	Generally selects relevant variables to test, control, and measure	Sometimes selects some variables to test, control, and measure	Has difficulty (even with support) identifying variables
Independently and consistently uses 'independent', 'dependent', and 'control' terminology	Generally uses 'independent', 'dependent', and 'control' terminology	Sometimes (or with support) uses 'independent', 'dependent', and 'control' terminology	Does not uses 'independent', 'dependent', and 'control' terminology
Independently and consistently makes plausible prediction or hypothesis supported by prior scientific learning and research, written in passive voice (3 <sup>rd</sup> person)	Generally makes plausible prediction or hypothesis supported by prior scientific learning written in passive voice (3 <sup>rd</sup> person)	Sometimes (or with support) makes prediction or hypothesis supported by prior scientific learning; written in first person (e.g., "I predict...")	Has difficulty (even with support) making a prediction or hypothesis
Independently and consistently designs experiments to collect intended evidence; steps are complete, concise and can be understood by others	Generally designs experiments to collect intended evidence; steps are complete and can be understood by others	Sometimes (or with support) designs experiments to collect intended evidence; some steps may be incomplete or missing	Has difficulty (even with support) designing a complete experiment
Independently and consistently conducts experiments that control all needed variables	Generally conducts experiments that control most variables	Sometimes (or with support) conducts experiments that controls some variables	Has difficulty (even with support) conducting an experiment that controls some variables
Independently and consistently uses materials, techniques and equipment competently	Generally uses materials, techniques and equipment competently	Sometimes (or with support) mostly uses materials, techniques and equipment competently	Has difficulty (even with support) using materials, techniques and equipment
Independently and consistently observes and measures relevant evidence accurately	Generally observes and measures relevant evidence accurately	Sometimes (or with support) observes and measures evidence accurately	Has difficulty (even with support) observing and measuring evidence
Independently and consistently records evidence appropriately for the task (symbols, units, labels, readability)	Generally records evidence appropriately for the task (symbols, units, labels, readability)	Sometimes (or with support) records evidence appropriately (symbols, units, labels, readability)	Has difficulty (even with support) recording evidence (symbols, units, labels, readability)
Independently and consistently identifies and uses safety procedures	Generally identifies and uses safety procedures	Sometimes identifies and uses safety procedures	Has difficulty (even with support) using safety procedures
<b>Evidence:</b> (following "Knowledge" section)-			

## Science – Grade 6

### Skills: Analyze, Explain

4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
Consistently organizes evidence effectively and efficiently	Generally organizes evidence appropriately and effectively	Sometimes (or with support) organizes evidence appropriately	Has difficulty (even with support) organizing evidence appropriately
Independently and consistently classifies accurately	Generally classifies accurately	Sometimes (or with support) classifies to some extent	Has difficulty (even with support) classifying
Independently and consistently makes conclusions supported by data	Generally makes conclusions supported by data	Sometimes (or with support) re-states results, but not a complete conclusion	Has difficulty (even with support) making a conclusion
Independently and consistently relates conclusion to prediction based on research	Generally relates conclusion to prediction	Sometimes (or with support) relates conclusion to prediction	Has difficulty (even with support) relating conclusion to prediction
Independently and consistently recognizes and explains patterns and relationships in data	Generally recognizes patterns and relationships in data.	Sometimes (or with support) recognizes some patterns in data	Has difficulty (even with support) recognizing patterns in data
Independently and consistently identifies and explains possible source(s) of error and discrepancies in data with suggestions for improved experimental design	Generally identifies possible source(s) of error and discrepancies in data	Sometimes (or with support) identifies some possible source(s) of error	Has difficulty (even with support) identifying a possible source of error
Independently and consistently applies findings to other situations	Generally identifies how findings can be applied to other situations	Sometimes (or with support) identifies how findings can be applied to another situation	Has difficulty (even with support) identifying how findings can be applied to another situation
Independently and consistently identifies 2 or more new testable questions that arise from what was learned	Generally identifies 1-2 new questions that arise from what was learned (sometimes contains opinion)	Sometimes (or with support) identifies another question that arises from what was learned (often contains opinion)	Has difficulty (even with support) identifying another question that arises from what was learned (contain opinion)
Consistently communicates questions, procedures, and results clearly, effectively and efficiently	Generally communicates questions, procedures, and results clearly and effectively	Sometimes (or with support) communicates questions, procedures, and results	Has difficulty (even with support) communicating questions, procedures, and results
Independently and consistently suggests improvements to a design or device, make a plausible suggestion on how to improve the design or device	Generally suggests improvements to a design or device	Sometimes (or with support) suggests improvements to a design or device	Has difficulty (even with support) suggesting improvements to a design or device
Always uses specific science vocabulary appropriately	Generally uses specific science vocabulary appropriately	Sometimes uses science vocabulary appropriately	Rarely uses science vocabulary appropriately
<b>Evidence:</b> (following “Knowledge” section)			

**Science – Grade 6**

**Knowledge:**

<b>Excelling</b>	<b>Meeting</b>	<b>Approaching</b>	<b>Working Below</b>
Independently and consistently demonstrates understanding of concepts that goes beyond the curricular outcomes	Generally demonstrates understanding of most concepts (4 out of 5 opportunities)	Sometimes (or with support) demonstrates understanding of some concepts (3 out of 5 opportunities)	Has difficulty (even with support) understanding concepts (less than 3 out of 5 opportunities)
Independently, consistently and completely describes content and uses specific science vocabulary appropriately	Generally descriptions of content are mostly complete, using specific science vocabulary appropriately	Sometimes (or with support) describes content (sometimes incomplete); science vocabulary used at times	Has difficulty (even with support) describing content; science vocabulary used at times
Independently and consistently communicates knowledge efficiently and effectively (written, oral, and/or visual)	Generally communicates knowledge effectively (written, oral, and/or visual)	Sometimes (or with support) communicates knowledge with some difficulty (written, oral, and/or visual)	Has difficulty (even with support) communicating knowledge (written, oral, and/or visual)
Applies content to new situations			
<b>Evidence:</b> (following “Knowledge” section)			

**Evidence of Learning: Suggested Sources**

Observations:

- Observe students during “warm up” activities
- Observe students completing experiments
- Observe students during group work
- Observe student presentations and demonstrations
- Observe students during project planning; developing research questions
- “Gallery” walks

Conversations (oral/written):

- Conferences and interviews
- Whole class and group: questions and discussions
- Debates including scientific information, point of view, different perspectives
- Science journal entries and exit slips (written responses)
- Testable questions/predictions/hypothesis; series of steps based on a scenario
- Conclusions and predictions based on results; proposing follow-up investigations (experiment, research project)
- Critiques of lab set-up/scenario – suggests improvements
- Self- and peer assessment and reflection

Products:

- Quizzes (oral/written)
- Projects; research questions; Science Fair; STEAM Expo
- Tests
- Assignments
- Lab reports
- Work samples: tables and/or graphs; classification tree; diagrams
- Exit slips or other responses to questions
- Science journal entry
- Photos of student’s work
- Group problem solving records
- Design or construct a model/device; test prototypes; suggest improvements
- Portfolios
- Review of current events articles and other scientific literature
- Timelines (History of Science and Technology)