

Standards and Scoring Criteria

for Assessment Tasks and Student Performance



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Standards and Scoring Criteria for Writing Tasks

GENERAL RULES

The main point here is to estimate the extent to which successful completion of the task requires the kind of cognitive work indicated by each standard.

- If a task has different parts that imply different expectations (e.g., worksheet/short answer questions and a question asking for explanations of some conclusions), the score should reflect the teacher's apparent dominant or overall expectations. Overall expectations are indicated by the proportion of time or effort spent on different parts of the task and criteria for evaluation, if stated by the teacher.
- Take into account what students can reasonably be expected to do at the grade level.
- When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the task meets minimal criteria for the higher score.
- If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the introductory paragraphs of the standard.

SCORING CRITERIA

Standard 1: Construction of Knowledge

The task asks students to interpret, analyze, synthesize, or evaluate information in writing about a topic, rather than merely to reproduce information. To score high, the task should require interpretation, analysis, synthesis, or evaluation of information that goes deeper than simple familiarity with the information.

These requirements can be inferred either through explicit instructions from the teacher or through a task that cannot be successfully completed without students doing these things.

SCORE	DESCRIPTION	NOTES
3	The task's dominant expectation is for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	
2	There is some expectation for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	
1	There is very little or no expectation for students to interpret, analyze, synthesize, or evaluate information. The dominant expectation is that students will merely reproduce information gained by reading, listening, or observing.	

Standard 2: Elaborated Written Communication

The task asks students to draw conclusions or make generalizations or arguments and support them through extended writing.

SCORE	DESCRIPTION	NOTES
4	Explicit call for generalization AND support. The task asks students, using narrative or expository writing, to draw conclusions or to make generalizations or arguments, AND to substantiate them with examples, summaries, illustrations, details, or reasons.	
3	Call for generalization OR support. The task asks students, using narrative or expository writing, either to draw conclusions or make generalizations or arguments, OR to offer examples, summaries, illustrations, details, or reasons, but not both.	
2	Short-answer exercises. The task or its parts can be answered with only one or two sentences, clauses, or phrasal fragments that complete a thought.	
1	Fill-in-the-blank or multiple choice exercises.	

Standard 3: Connection to Students' Lives

The task asks students to connect the topic to their lives.

SCORE	DESCRIPTION	NOTES
3	The task asks students, using narrative or expository writing, to connect the topic to experiences, observations, feelings, or situations significant in their lives.	
2	The task offers the opportunity for students, using narrative or expository writing, to connect the topic to experiences, observations, feelings, or situations significant in their lives, but does not explicitly call for them to do so.	
1	The task offers very minimal or no opportunity for students to connect the topic to experiences, observations, feelings, or situations significant in their lives.	

Standards and Scoring Criteria for Student Writing

GENERAL RULES

The task is to estimate the extent to which the student's performance illustrates the kind of cognitive work indicated by each of the three standards: Construction of Knowledge, Forms and Conventions, and Elaborated Mathematical Communication. Each standard will be scored according to different rules, but the following apply to all three standards:

- Scores should be based only on evidence in the student's performance relevant to the criteria. Do not consider things such as following directions, correct spelling, neatness, etc. unless they are relevant to the criteria.
- Scores may be limited by tasks which fail to call for construction of knowledge or elaborated written communication, but the scores must be based only upon the work shown.
- Take into account what students can reasonably be expected to do at the grade level. However, scores should still be assigned according to criteria in the standards, not relative to other papers that have been scored.
- When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the paper meets minimal criteria for the higher score.
- If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the introductory paragraphs of the standard.
- Completion of the task is not necessary to score high.

SCORING CRITERIA

Standard 1: Construction of Knowledge: Interpretation, Analysis, Synthesis, or Evaluation

Student performance demonstrates interpretation, analysis, synthesis, or evaluation in order to construct knowledge, rather than merely to reproduce information.

This standard is intended to measure the extent to which the student writing goes beyond mechanically recording, reporting, or otherwise reproducing information. The essential question is whether students demonstrate construction of knowledge by means of thinking and organizing information, versus reproduction of knowledge by means of restating what has been previously given to them.

To score high on this standard, a significant portion of the student's work must appear reasonably original, not merely a restatement of some analysis previously given in a text or discussion. In scoring construction of knowledge, the proportion of work that illustrates knowledge construction is more important than the number of statements indicating this.

SCORE	DESCRIPTION	NOTES
4	Substantial evidence of construction of knowledge. Almost all of the student's work shows interpretation, analysis, synthesis, or evaluation.	
3	Moderate evidence of construction of knowledge. A moderate portion of the student's work shows interpretation, analysis, synthesis, or evaluation.	
2	Some evidence of construction of knowledge. A small portion of the student's work shows interpretation, analysis, synthesis, or evaluation.	
1	No evidence of construction of knowledge. No portion of the student's work shows interpretation, analysis, synthesis, or evaluation; OR virtually all construction of knowledge is in error.	

Standard 2: Forms & Conventions: Grammar, Usage, Mechanics, and Vocabulary

Student performance demonstrates proficiencies with grammar, usage, mechanics, and vocabulary appropriate to grade level.

This standard is intended to measure the degree to which students attempt to, and succeed at, using language structures at the sentence and word level to make their meaning understandable to readers.

Scorers should not count individual errors, but instead should assess the degree to which errors interfere with understanding the student’s meaning. Scorers should take into consideration the efforts students might make at trying out new language structures that represent a “stretch” for someone at their grade level and not fault students severely if these “stretch” efforts are not carried off with complete success. Scorers should assess the quality of the actual written work and not take into consideration possible effects of a student’s possible linguistic background or learning disability.

SCORE	DESCRIPTION	NOTES
4	The student writing is an exemplary use of grammar, usage, mechanics, and/or vocabulary for the grade level. Though it may contain some error, the writing presents no problem for understanding the student’s meaning, nor does the performance compromise the student’s credibility.	
3	The student writing is a satisfactory use of grammar, usage, mechanics, and/or vocabulary for the grade level. There are a few errors, but they present no problem for understanding the student’s meaning.	
2	There are significant errors in grammar, usage, mechanics, and/or vocabulary, and it is difficult but not impossible to understand the student’s meaning.	
1	The use of grammar, usage, mechanics, and/or vocabulary is so flawed that it is not possible to understand the student’s meaning.	

Standard 3: Elaborated Written Communication

Student performance demonstrates an elaborated, coherent account that draws conclusions or makes generalizations or arguments and supports them with examples, summaries, illustrations, details, or reasons.

Elaboration consists of two major parts: a conclusion, generalization, or argument AND support for it, in the form of example, summary, illustration, detail, or reason. Elaboration is coherent when the examples, summaries, illustrations, details, or reasons do indeed provide appropriate, consistent support for the conclusions, generalizations, or arguments.

The score should not be based on the proportion of student work central to the task that contains explanation/argument/representation but on the quality of the communication, wherever it may be in the work.

SCORE	DESCRIPTION	NOTES
4	Explanations or arguments are clear, convincing, and accurate, with no significant errors. Communication is exemplary.	
3	Explanations or arguments are present. They are reasonably clear and accurate, but less convincing.	
2	Explanations or arguments are present. However, they may not be finished, may omit a significant part of an argument/explanation, or may contain significant errors. Generally complete, appropriate, and correct work or representations (e.g., a graph or diagram) should be scored a 2 if no other part of the student's work on the task warrants a higher score.	
1	Explanations, arguments, or representations are absent or, if present, are seriously incomplete, inappropriate, or incorrect. This may be because the task did not ask for argument or explanation, e.g., fill-in-the-blank or multiple-choice questions, or reproducing a simple definition in words or pictures.	

Standards and Scoring Criteria for Mathematics Tasks

GENERAL RULES

The main point here is to estimate the extent to which successful completion of the task requires the kind of cognitive work indicated by each of the three standards: Construction of Knowledge, Elaborated Written Mathematical Communication, and Connections to Students' Lives. Each standard will be scored according to different rules, but the following apply to all three standards.

- If a task has different parts that imply different expectations (e.g., worksheet/short answer questions and a question asking for explanations of some conclusions), the score should reflect the teacher's apparent dominant or overall expectations. Overall expectations are indicated by the proportion of time or effort spent on different parts of the task and criteria for evaluation, if stated by the teacher.
- Take into account what students can reasonably be expected to do at the grade level.
- When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the task meets minimal criteria for the higher score.
- If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the introductory paragraphs of the standard.

SCORING CRITERIA

Standard 1: Construction of Knowledge

The task asks students to organize and interpret information in addressing a mathematical concept, problem, or issue.

Consider the extent to which the task asks the student to organize and interpret information, rather than to retrieve or to reproduce fragments of knowledge or to repeatedly apply previously learned algorithms and procedures.

Possible indicators of mathematical organization are tasks that ask students to decide among algorithms, to chart and graph data, or to solve multi-step problems. Possible indicators of mathematical interpretation are tasks that ask students to consider alternative solutions or strategies, to create their own mathematical problems, to create a mathematical generalization or abstraction, or to invent their own solution methods.

These indicators can be inferred either through explicit instructions from the teacher or through a task that cannot be successfully completed without students doing these things.

SCORE	DESCRIPTION	NOTES
3	The task's dominant expectation is for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	
2	There is some expectation for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	
1	There is very little or no expectation for students to interpret, analyze, synthesize, or evaluate information. Its dominant expectation is for students to retrieve or reproduce fragments of knowledge or to repeatedly apply previously learned algorithms and procedures.	

Standard 2: Elaborated Written Communication

The task asks students to elaborate on their understanding, explanations, or conclusions through extended writing.

Consider the extent to which the task requires students to elaborate on their ideas and conclusions through extended writing in mathematics. Possible indicators of extended writing are tasks that ask students to generate prose (e.g., write a paragraph), graphs, tables, equations, diagrams, or sketches.

SCORE	DESCRIPTION	NOTES
4	Analysis / Persuasion / Theory. Explicit call for generalization AND support. The task requires the student to show his/her solution path, AND to explain the solution path with evidence such as models or examples.	
3	Report / Summary. Call for generalization OR support. The task asks students, using narrative or expository writing, either to draw conclusions or make generalizations or arguments, OR to offer examples, summaries, illustrations, details, or reasons, but not both.	
2	Short-answer exercises. The task or its parts can be answered with only one or two sentences, clauses, or phrasal fragments that complete a thought. Students may be asked to show some work or give some examples, but this is not emphasized and not much detail is requested.	
1	Fill-in-the-blank or multiple choice exercises. The task requires no extended writing, only giving mathematical answers or definitions.	

Standard 3: Connection to Students' Lives

The task asks students to address a concept, problem, or issue that is similar to one that they have encountered or are likely to encounter in daily life outside of school.

Consider the extent to which the task presents students with a mathematical question, issue, or problem that they have actually encountered or are likely to encounter outside of school. Estimating personal budgets would qualify as a real world problem but completing a geometric proof would not.

Certain kinds of school knowledge may be considered valuable in social, civic, or vocational situations beyond the classroom (e.g., knowing basic arithmetic facts or percentages). However, task demands for “basic” knowledge will not be counted here unless the task requires applying such knowledge to a specific mathematical problem likely to be encountered beyond the classroom.

SCORE	DESCRIPTION	NOTES
3	The question, issue, or problem clearly resembles one that students have encountered or are likely to encounter in their lives. The task asks students to connect the topic to experiences, observations, feelings, or situations significant in their lives.	
2	The question, issue, or problem bears some resemblance to one that students have encountered or are likely to encounter in their lives, but the connections are not immediately apparent. The task offers the opportunity for students to connect the topic to experiences, observations, feelings, or situations significant in their lives, but does not explicitly call for them to do so.	
1	The problem has virtually no resemblance to questions, issues, or problems that students have encountered or are likely to encounter in their lives. The task offers very minimal or no opportunity for students to connect the topic to experiences, observations, feelings, or situations significant in their lives.	

Standards and Scoring Criteria for Student Work in Mathematics

GENERAL RULES

The task is to estimate the extent to which the student's performance illustrates the kind of cognitive work indicated by each of the three standards: Mathematical Analysis, Disciplinary Concepts, and Elaborated Written Mathematical Communication. Each standard will be scored according to different rules, but the following apply to all three standards:

- Scores should be based only on evidence in the student's performance relevant to the criteria. Do not consider things such as following directions, correct spelling, neatness, etc. unless they are relevant to the criteria.
- Scores may be limited by tasks which fail to call for mathematical analysis, disciplinary conceptual understanding, or elaborated mathematical written communication, but the scores must be based only upon the work shown.
- Take into account what students can reasonably be expected to do at the grade level. However, scores should still be assigned according to criteria in the standards, not relative to other papers that have been scored.
- When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the paper meets minimal criteria for the higher score.
- If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the introductory paragraphs of the standard.
- Completion of the task is not necessary to score high.

SCORING CRITERIA

Standard 1: Mathematical Analysis

Student performance demonstrates thinking about mathematical content by using mathematical analysis.

Consider the extent to which the student demonstrates thinking that goes beyond mechanically recording or reproducing facts, rules, and definitions or mechanically applying algorithms.

Possible indicators of mathematical analysis are organizing, synthesizing, interpreting, hypothesizing, describing patterns, making models or simulations, constructing mathematical arguments, or inventing procedures.

The standard of mathematical analysis calls attention to the fact that the content or focus of the analysis should be mathematics. There are two guiding questions here.

- First, has the student demonstrated mathematical analysis? To answer this, consider whether the student has organized, interpreted, synthesized, hypothesized, invented, etc., or whether the student has only recorded, reproduced, or mechanically applied rules, definitions, or algorithms. If work is not shown, correct answers can be taken as an indication of analysis if it is clear that the question requires analysis to answer it correctly.
- Second, how often has the student demonstrated mathematical analysis? To answer this, consider the proportion of the student's work in which mathematical analysis is involved.

To score 3 or 4, there should be no significant mathematical errors in the student's work.

If the student showed only the answer(s) to the task and it is incorrect, score it 1. If the student showed only the answer(s) to the task and it is correct, decide how much analysis is involved to produce a correct answer, and score according to the rules above. It is not necessary for the analysis to be at a high conceptual level to score a 3 or 4. In scoring analysis, the proportion of work that illustrates analysis is more important than the number of statements indicating analysis.

SCORE	DESCRIPTION	NOTES
4	Mathematical analysis was involved throughout the student's work.	
3	Mathematical analysis was involved in a significant portion of the student's work.	
2	Mathematical analysis was involved in some portion of the student's work.	
1	Mathematical analysis constituted no part of the student's work.	

Standard 2: Disciplinary Concepts

Student performance demonstrates understanding of important mathematical concepts central to the task.

Consider the extent to which the student demonstrates use and understanding of mathematical concepts. Low scores may be due to a task that fails to call for understanding of mathematical concepts.

Possible indicators of understanding important mathematical concepts central to the task are expanding upon definitions, representing concepts in alternate ways or contexts, or making connections to other mathematical concepts, to other disciplines, or to real-world situations.

A guiding question for using this standard is, “Does the student show understanding of the fundamental ideas relevant to the mathematics used in the task?” Correct use of algorithms does not necessarily indicate conceptual understanding of the material.

Even if no work is shown, the work may still receive a 3 or 4. Correct answers can be taken as an indication of the level of conceptual understanding if it is clear to the scorer that the task or question requires conceptual understanding in order to be completed successfully. In this case, the scorer must determine the level of understanding and score it appropriately.

The score should not be based on the proportion of student work central to the task that shows conceptual understanding but on the quality of the understanding wherever it occurs in the work.

SCORE	DESCRIPTION	NOTES
4	The student demonstrates exemplary understanding of the mathematical concepts that are central to the task.	
3	The student demonstrates significant understanding of the mathematical concepts that are central to the task.	
2	The student demonstrates some understanding of the mathematical concepts that are central to the task.	
1	The student demonstrates very little or no understanding of the mathematical concepts that are central to the task, i.e., does not go beyond mechanical application of an algorithm.	

Standard 3: Elaborated Written Communication

Student performance demonstrates an elaboration of his or her understanding or explanations through extended writing.

Elaboration consists of two major parts: a conclusion, generalization, or argument AND support for it, in the form of example, summary, illustration, detail, or reason. Elaboration is coherent when the examples, summaries, illustrations, details, or reasons do indeed provide appropriate, consistent support for the conclusions, generalizations, or arguments.

Consider the extent to which the student presents a clear and convincing explanation or argument. Possible indicators of elaborated written communication are diagrams, drawings, or symbolic representations as well as prose. To score high on this standard the student must communicate in writing an accurate and convincing explanation or argument.

The score should not be based on the proportion of student work central to the task that contains explanation/argument/representation but on the quality of the mathematical communication, wherever it may be in the work.

SCORE	DESCRIPTION	NOTES
4	Mathematical explanations or arguments are clear, convincing, and accurate, with no significant mathematical errors. Communication is exemplary.	
3	Mathematical explanations or arguments are present. They are reasonably clear and accurate, but less convincing.	
2	Mathematical explanations, arguments, or representations are present. However, they may not be finished, may omit a significant part of an argument/explanation, or may contain significant mathematical errors. Generally complete, appropriate, and correct work or representations (e.g., a graph, equation, number sentence) should be scored a 2 if no other part of the student's work on the task warrants a higher score.	
1	Mathematical explanations, arguments, or representations are absent or, if present, are seriously incomplete, inappropriate, or incorrect. This may be because the task did not ask for argument or explanation, e.g., fill-in-the-blank or multiple-choice questions, or reproducing a simple definition in words or pictures.	

Standards and Scoring Criteria for Science Tasks

GENERAL RULES

The main point here is to estimate the extent to which successful completion of the task requires the kind of cognitive work indicated by each of the three standards: Construction of Knowledge, Elaborated Written Communication, and Connections to Students' Lives. Each standard will be scored according to different rules, but the following apply to all three standards.

- If a task has different parts that imply different expectations (e.g., worksheet/short answer questions and a question asking for explanations of some conclusions), the score should reflect the teacher's apparent dominant or overall expectations. Overall expectations are indicated by the proportion of time or effort spent on different parts of the task and criteria for evaluation, if stated by the teacher.
- Take into account what students can reasonably be expected to do at the grade level.
- When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the task meets minimal criteria for the higher score.
- If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the introductory paragraphs of the standard.

SCORING CRITERIA

Standard 1: Construction of Knowledge

The task asks students to organize and interpret information in addressing a scientific concept, problem, or issue.

Consider the extent to which the task asks the student to organize and interpret information, rather than to retrieve or to reproduce fragments of knowledge or to repeatedly apply previously learned information and procedures.

Possible indicators of scientific organization are tasks that ask students to chart and graph data or to solve multi-step problems. Possible indicators of scientific interpretation are tasks that ask students to consider alternative solutions or strategies, to create their own scientific problems, to develop scientific hypotheses, or to invent their own solution methods.

These indicators can be inferred either through explicit instructions from the teacher or through a task that cannot be successfully completed without students doing these things.

SCORE	DESCRIPTION	NOTES
3	The task's dominant expectation is for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	
2	There is some expectation for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	
1	There is very little or no expectation for students to interpret, analyze, synthesize, or evaluate information. Its dominant expectation is for students to retrieve or reproduce fragments of knowledge or to repeatedly apply previously learned information and procedures.	

Standard 2: Elaborated Written Communication

The task asks students to elaborate on their understanding, explanations, or conclusions through extended writing.

Consider the extent to which the task requires students to elaborate on their ideas and conclusions through extended writing in science. Possible indicators of extended writing are tasks that ask students to generate prose (e.g., write a paragraph), graphs, tables, equations, diagrams, or sketches.

SCORE	DESCRIPTION	NOTES
4	Analysis / Persuasion / Theory. Explicit call for generalization AND support. The task requires the student to show his/her solution path, AND to explain the solution path with evidence such as models or examples.	
3	Report / Summary. Call for generalization OR support. The task asks students, using narrative or expository writing, either to draw conclusions or make generalizations or arguments, OR to offer examples, summaries, illustrations, details, or reasons, but not both.	
2	Short-answer exercises. The task or its parts can be answered with only one or two sentences, clauses, or phrasal fragments that complete a thought. Students may be asked to show some work or give some examples, but this is not emphasized and not much detail is requested.	
1	Fill-in-the-blank or multiple choice exercises. The task requires no extended writing, only giving solutions or definitions.	

Standard 3: Connection to Students' Lives

The task asks students to address a concept, problem, or issue that is similar to one that they have encountered or are likely to encounter outside of school.

Consider the extent to which the task presents students with a scientific question, issue, or problem that they have actually encountered or are likely to encounter in their daily lives. Developing hypotheses about a local environmental problem would qualify as a real world problem but diagramming a molecule would not.

Certain kinds of school knowledge may be considered valuable in social, civic, or vocational situations beyond the classroom (e.g., knowing the water cycle). However, task demands for “basic” knowledge will not be counted here unless the task requires applying such knowledge to a specific scientific problem likely to be encountered beyond the classroom.

SCORE	DESCRIPTION	NOTES
3	The question, issue, or problem clearly resembles one that students have encountered or are likely to encounter in their lives. The task asks students to connect the topic to experiences, observations, feelings, or situations significant in their lives.	
2	The question, issue, or problem bears some resemblance to one that students have encountered or are likely to encounter in their lives, but the connections are not immediately apparent. The task offers the opportunity for students to connect the topic to experiences, observations, feelings, or situations significant in their lives, but does not explicitly call for them to do so.	
1	The problem has virtually no resemblance to questions, issues, or problems that students have encountered or are likely to encounter in their lives. The task offers very minimal or no opportunity for students to connect the topic to experiences, observations, feelings, or situations significant in their lives.	

Standards and Scoring Criteria for Student Work in Science

GENERAL RULES

The task is to estimate the extent to which the student's performance illustrates the kind of cognitive work indicated by each of the three standards: Scientific Analysis, Disciplinary Concepts, and Elaborated Written Communication. Each standard will be scored according to different rules, but the following apply to all three standards:

- Scores should be based only on evidence in the student's performance relevant to the criteria. Do not consider things such as following directions, correct spelling, neatness, etc. unless they are relevant to the criteria.
- Scores may be limited by tasks that fail to call for scientific analysis, disciplinary conceptual understanding, or elaborated written communication, but the scores must be based only upon the work shown.
- Take into account what students can reasonably be expected to do at the grade level. However, scores should still be assigned according to criteria in the standards, not relative to other papers that have been scored.
- When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the paper meets minimal criteria for the higher score.
- If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the introductory paragraphs of the standard.
- Completion of the task is not necessary to score high.

SCORING CRITERIA

Standard 1: Scientific Analysis

Student performance demonstrates thinking about scientific content by using scientific analysis.

Consider the extent to which the student demonstrates thinking that goes beyond mechanically retrieving or reproducing fragments of knowledge or repeatedly applying previously learned information and procedures.

Possible indicators of scientific analysis are organizing, synthesizing, interpreting, hypothesizing, describing patterns, making models or simulations, constructing scientific arguments, or inventing procedures.

The standard of scientific analysis calls attention to the fact that the content or focus of the analysis should be science. There are two guiding questions here.

- First, has the student demonstrated scientific analysis? To answer this, consider whether the student has organized, interpreted, synthesized, hypothesized, invented, etc., or whether the student has only recorded, reproduced, or mechanically applied rules or definitions. If work is not shown, correct answers can be taken as an indication of analysis if it is clear that the question would require analysis to answer it correctly.
- Second, how often has the student demonstrated scientific analysis? To answer this, consider the proportion of the student's work in which scientific analysis is involved.

To score 3 or 4, there should be no significant errors in the student's work.

If the student showed only the answer(s) to the task and it is incorrect, score it 1. If the student showed only the answer(s) to the task and it is correct, decide how much analysis is involved to produce a correct answer, and score according to the rules above. It is not necessary for the analysis to be at a high conceptual level to score a 3 or 4. In scoring analysis, the proportion of work that illustrates analysis is more important than the number of statements indicating analysis.

SCORE	DESCRIPTION	NOTES
4	Scientific analysis was involved throughout the student's work.	
3	Scientific analysis was involved in a significant portion of the student's work.	
2	Scientific analysis was involved in some portion of the student's work.	
1	Scientific analysis constituted no part of the student's work.	

Standard 2: Disciplinary Concepts

Student performance demonstrates understanding of important scientific concepts central to the task.

Consider the extent to which the student demonstrates use and understanding of scientific concepts. Low scores may be due to a task that fails to call for understanding of scientific concepts.

Possible indicators of understanding important scientific concepts central to the task are expanding upon definitions, representing concepts in alternate ways or contexts, or making connections to other scientific concepts, to other disciplines, or to real-world situations.

A guiding question for using this standard is, "Does the student show understanding of the fundamental ideas relevant to the science used in the task?" Correct use of scien-

tific procedures or algorithms does not necessarily indicate conceptual understanding of the material.

Even if no work is shown the work may still receive a 3 or 4. Correct answers can be taken as an indication of the level of conceptual understanding if it is clear to the scorer that the task or question requires conceptual understanding in order to be completed successfully. In this case, the scorer must determine the level of understanding and score it appropriately.

The score should not be based on the proportion of student work central to the task that shows conceptual understanding but on the quality of the understanding wherever it occurs in the work.

SCORE	DESCRIPTION	NOTES
4	The student demonstrates exemplary understanding of the scientific concepts that are central to the task.	
3	The student demonstrates significant understanding of the scientific concepts that are central to the task.	
2	The student demonstrates some understanding of the scientific concepts that are central to the task.	
1	The student demonstrates very little or no understanding of the scientific concepts that are central to the task, i.e., does not go beyond mechanical application of a procedure.	

Standard 3: Elaborated Written Communication

Student performance demonstrates an elaboration of his or her understanding or explanations through extended writing.

Elaboration consists of two major parts: a conclusion, generalization, or argument AND support for it, in the form of example, summary, illustration, detail, or reason. Elaboration is coherent when the examples, summaries, illustrations, details, or reasons do indeed provide appropriate, consistent support for the conclusions, generalizations, or arguments.

Consider the extent to which the student presents a clear and convincing explanation or argument. Possible indicators of elaborated written communication are diagrams, drawings, or graphic representations as well as prose. To score high on this standard the student must communicate in writing an accurate and convincing explanation or argument.

The score should not be based on the proportion of student work central to the task that contains explanation/argument/representation but on the quality of the scientific communication, wherever it may be in the work.

SCORE	DESCRIPTION	NOTES
4	<p>Scientific explanations or arguments are clear, convincing, and accurate, with no significant errors. Communication is exemplary.</p>	
3	<p>Scientific explanations or arguments are present. They are reasonably clear and accurate, but less convincing.</p>	
2	<p>Scientific explanations, arguments, or representations are present. However, they may not be finished, may omit a significant part of an argument/explanation, or may contain significant errors. Generally complete, appropriate, and correct work or representations (e.g., a graph or diagram) should be scored a 2 if no other part of the student's work on the task warrants a higher score.</p>	
1	<p>Scientific explanations, arguments, or representations are absent or, if present, are seriously incomplete, inappropriate, or incorrect. This may be because the task did not ask for argument or explanation, e.g., fill-in-the-blank or multiple-choice questions, or reproducing a simple definition in words or pictures.</p>	

Standards and Scoring Criteria for Social Studies Tasks

GENERAL RULES

The main point here is to estimate the extent to which successful completion of the task requires the kind of cognitive work indicated by each of the three standards: Construction of Knowledge, Elaborated Written Communication, and Connections to Students' Lives. Each standard will be scored according to different rules, but the following apply to all three standards.

- If a task has different parts that imply different expectations (e.g., worksheet/short answer questions and a question asking for explanations of some conclusions), the score should reflect the teacher's apparent dominant or overall expectations. Overall expectations are indicated by the proportion of time or effort spent on different parts of the task and criteria for evaluation, if stated by the teacher.
- Take into account what students can reasonably be expected to do at the grade level.
- When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the task meets minimal criteria for the higher score.
- If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the introductory paragraphs of the standard.

SCORING CRITERIA

Standard 1: Construction of Knowledge

The task asks students to organize and interpret information in addressing a concept, problem, or issue.

Consider the extent to which the task asks the student to organize, interpret, evaluate, or synthesize complex information, rather than to retrieve or to reproduce isolated fragments of knowledge or to repeatedly apply previously learned procedures. To score

high the task should call for interpretation of nuances of a topic that go deeper than surface exposure or familiarity. Possible indicators of interpretation are tasks that ask students to consider alternative solutions, strategies, perspectives, and points of view.

These indicators can be inferred either through explicit instructions from the teacher or through a task that cannot be successfully completed without students doing these things.

SCORE	DESCRIPTION	NOTES
3	The task's dominant expectation is for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	
2	There is some expectation for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	
1	There is very little or no expectation for students to interpret, analyze, synthesize, or evaluate information. The dominant expectation is that students will merely reproduce information gained by reading, listening, or observing.	

Standard 2: Elaborated Written Communication

The task asks students to elaborate on their understanding, explanations, or conclusions on important social studies concepts through extended writing.

Consider the extent to which the task requires students to elaborate on their ideas and conclusions through extended writing.

SCORE	DESCRIPTION	NOTES
4	Analysis / Persuasion / Theory. Explicit call for generalization AND support. The task requires explanations of generalizations, classifications, and relationships relevant to a situation, problem, or theme, AND requires the student to substantiate them with examples, summaries, illustrations, details, or reasons. Examples include attempts to argue, convince, or persuade and to develop and test hypotheses.	
3	Report / Summary. Call for generalization OR support. The task asks students, using narrative or expository writing, either to draw conclusions or make generalizations or arguments, OR to offer examples, summaries, illustrations, details, or reasons, but not both.	
2	Short-answer exercises. The task or its parts can be answered with only one or two sentences, clauses, or phrasal fragments that complete a thought.	
1	Fill-in-the-blank or multiple choice exercises.	

Standard 3: Connection to Students' Lives

The task asks students to address a concept, problem, or issue that is similar to one that they have encountered or are likely to encounter in daily life outside of school.

Consider the extent to which the task presents students with a question, issue, or problem that they have actually encountered or are likely to encounter in their daily lives. Defending one's position on compulsory community service for students could qualify as a real world problem, but describing the origins of World War II generally would not.

Certain kinds of school knowledge may be considered valuable in social, civic, or vocational situations beyond the classroom (e.g., knowing how a bill becomes a law). However, task demands for "basic" knowledge will not be counted here unless the task requires applying such knowledge to a specific problem likely to be encountered beyond the classroom.

SCORE	DESCRIPTION	NOTES
3	The question, issue, or problem clearly resembles one that students have encountered or are likely to encounter in their lives. The task asks students to connect the topic to experiences, observations, feelings, or situations significant in their lives.	
2	The question, issue, or problem bears some resemblance to one that students have encountered or are likely to encounter in their lives, but the connections are not immediately apparent. The task offers the opportunity for students to connect the topic to experiences, observations, feelings, or situations significant in their lives, but does not explicitly call for them to do so.	
1	The problem has virtually no resemblance to questions, issues, or problems that students have encountered or are likely to encounter in their lives. The task offers very minimal or no opportunity for students to connect the topic to experiences, observations, feelings, or situations significant in their lives.	

Standards and Scoring Criteria for Student Work in Social Studies

GENERAL RULES

The task is to estimate the extent to which the student's performance illustrates the kind of cognitive work indicated by each of the three standards: Analysis, Disciplinary Concepts, and Elaborated Written Communication. Each standard will be scored according to different rules, but the following apply to all three standards:

- Scores should be based only on evidence in the student's performance relevant to the criteria. Do not consider things such as following directions, correct spelling, neatness, etc. unless they are relevant to the criteria.
- Scores may be limited by tasks which fail to call for social studies analysis, disciplinary conceptual understanding, or elaborated written communication, but the scores must be based only upon the work shown.
- Take into account what students can reasonably be expected to do at the grade level. However, scores should still be assigned according to criteria in the standards, not relative to other papers that have been scored.
- When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the paper meets minimal criteria for the higher score.
- If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the introductory paragraphs of the standard.
- Completion of the task is not necessary to score high.

SCORING CRITERIA**Standard 1: Social Studies Analysis**

Student performance demonstrates thinking with social studies content by organizing, synthesizing, interpreting, evaluating, and hypothesizing to produce comparisons/contrasts, arguments, application of new information to new contexts, and consideration of alternative viewpoints.

This essential question is whether students demonstrate construction of knowledge through thinking and the organization of information, versus reproduction of knowledge by restating what has been previously given to them. In scoring analysis, the proportion of work that illustrates analysis is more important than the number of statements indicating analysis.

SCORE	DESCRIPTION	NOTES
4	Substantial evidence of analysis. Almost all of the student's work includes analysis.	
3	Moderate evidence of analysis. A moderate portion of the student's work includes analysis.	
2	Some evidence of analysis. A small, but not central portion of the student's work includes analysis.	
1	No evidence of analysis. No portion of the student's work shows analysis; OR virtually all analysis offered is unsuccessful or in error.	

Standard 2: Disciplinary Concepts

Student performance demonstrates an understanding of ideas, concepts, theories, and principles from the social studies disciplines and civic life by using them to interpret and explain specific, concrete information or events.

Consider the extent to which the student demonstrates use and understanding of social studies concepts. Low scores may be due to a task that fails to call for understanding of social studies concepts.

Possible indicators of understanding important social studies concepts central to the task are expanding upon definitions, representing concepts in alternate ways or contexts, or making connections to other social studies concepts, to other disciplines, or to real-world situations.

A guiding question for using this standard is, “Does the student show understanding of the fundamental ideas relevant to the social studies used in the task?”

Correct answers can be taken as an indication of the level of conceptual understanding if it is clear to the scorer that the task or question requires conceptual understanding in order to be completed successfully. In this case, the scorer must determine the level of understanding and score it appropriately.

The score should not be based on the proportion of student work central to the task that shows conceptual understanding but on the quality of the understanding wherever it occurs in the work.

SCORE	DESCRIPTION	NOTES
4	The student has used social studies concepts to organize, explain, interpret, summarize, and extend the meaning and significance of otherwise discrete pieces of information. The use of ideas or application of concepts illustrates exemplary understanding.	
3	The student has included social studies concepts to organize, explain, interpret, summarize, and extend the meaning and significance of otherwise discrete pieces of information. The use of the ideas is somewhat limited and/or shows some flaws in understanding.	
2	Social studies concepts are included, but their use is significantly limited and/or shows significant flaws in their understanding.	
1	The work includes virtually no social studies concepts or they are included but are used in inappropriate ways.	

Standard 3: Elaborated Written Communication

Student performance demonstrates an elaboration of his or her understanding or explanations through extended writing.

Elaboration consists of two major parts: a conclusion, generalization, or argument AND support for it, in the form of example, summary, illustration, detail, or reason. Elaboration is coherent when the examples, summaries, illustrations, details, or reasons do indeed provide appropriate, consistent support for the conclusions, generalizations, or arguments.

Consider the extent to which the student presents a clear and convincing explanation or argument. Possible indicators of elaborated written communication are richness in details, qualifications, and argument, as well as elaborated consideration of alternative points of view. To score high on this standard the student must communicate in writing an accurate and convincing explanation or argument.

The score should not be based on the proportion of student work central to the task that contains explanation/argument/representation but on the quality of the elaborated communication, wherever it may be in the work.

SCORE	DESCRIPTION	NOTES
4	Explanations or arguments are clear, convincing, and accurate, with no significant errors. Communication is exemplary.	
3	Explanations or arguments are present. They are reasonably clear and accurate, but less convincing.	
2	Explanations or arguments are present. However, they may not be finished, may omit a significant part of an argument/explanation, or may contain significant errors. Generally complete, appropriate, and correct work or representations (e.g., a graph or diagram) should be scored a 2 if no other part of the student's work on the task warrants a higher score.	
1	Explanations, arguments, or representations are absent or, if present, are seriously incomplete, inappropriate, or incorrect. This may be because the task did not ask for argument or explanation, e.g., fill-in-the-blank or multiple-choice questions, or reproducing a simple definition in words or pictures.	

NOTES

