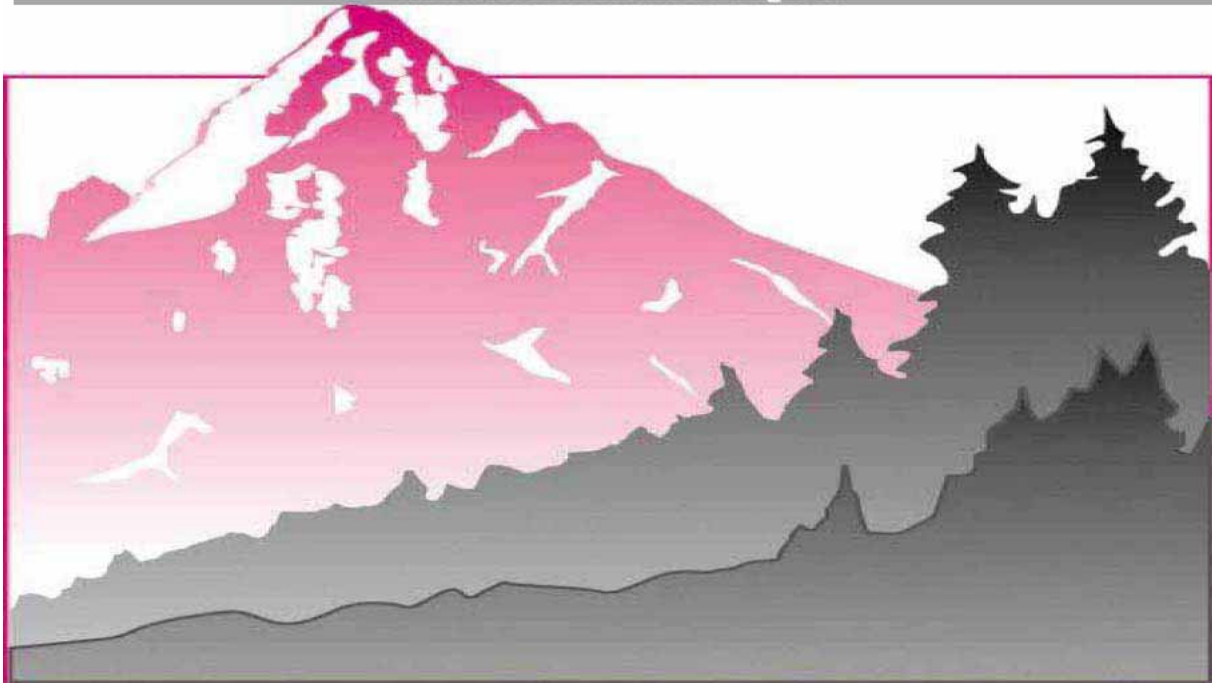


COLORADO

Student Assessment Program



2005-2006 CSAP DEMONSTRATION PACKET

Science Grade 5



Table of Contents

| | Pages |
|--|-------|
| Science Model Content Standards | 4 |
| Explanation of Science Assessment Frameworks | 5 |
| Fact sheet of CSAP Test Construction | 6 |
| Points to Ponder or Be Science Savvy with CSAP | 8 |
| Hints for the Student Taking the CSAP Science Test | 9 |
| How to Answer a Constructed Response Question | 10 |
| Resources from the Web | 11 |
| Depth of Knowledge Levels for Science | 12 |
| Grade 5: Teacher Directions & Student Worksheets | |
| Sample Items Grade 5: 11 sample items | 13 |

The purpose of this document is to inform Colorado teachers of the structure and focus of the new grades 5 and 10 Science CSAP tests and review the grade 8 Science CSAP test that has been administered since 2000. Examples of items that could be included on the 5th grade Science CSAP tests are provided in this document. The complete demo packet also contains examples from grades 8 and 10. The Unit of Student Assessment, Colorado Department of Education, prepared this packet.

A special thank you to the following science educators: Nancy Kellogg, Don Uhland and Linda Block-Gandy, for their assistance in developing the science demonstration packet, defining the necessary contents of this packet, and their continued dedication to all students in Colorado.

Jeanette Thompson: Science Consultant, Unit of Student Assessment
 Elizabeth Celva: Director, Unit of Student Assessment
 Colorado Department of Education

Colorado Model Content Standards - Science

Adopted 5-10-95; Amended 11-09-95

- Standard 1** Students understand the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations.
- Standard 2** **Physical Science:**
Students know and understand common properties, forms, and changes in matter and energy.
- Standard 3** **Life Science:**
Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment.
- Standard 4** **Earth and Space Science:**
Students know and understand the processes and interactions of Earth's systems and structure and dynamics of Earth and other objects in space.
- Standard 5** Students know and understand interrelationships among science, technology, and human activity and how they can affect the world.
- Standard 6** Students understand that science involves a particular way of knowing and understanding common connections among scientific disciplines.

The numerical order of the six science standards does not imply any particular judgment regarding their relative importance or teaching priorities. In fact, as the document emphasizes, Standards 1, 5 and 6 should be addressed through the subject matter in the content areas of physical, life and earth/space sciences (Standards 2, 3 and 4). Even though the six science content standards are identified separately, they represent interconnected understanding and knowledge of science.

Rationale statements and Benchmarks for Grades K-4, 5-8 and 9-12 may be found on the CDE website. www.cde.state.co.us

Explanation of Assessment Frameworks

Colorado Model Content Standards contain benchmark statements that define the knowledge and skills Colorado students should acquire in grade level ranges K-4, 5-8, and 9-12. These grade level ranges in science are measured in Colorado's schools using the Colorado Student Assessment Program (CSAP) at grades 5, 8 and 10.

Assessment Frameworks were developed by a group of experienced Colorado science educators to define what will be assessed on the state's paper and pencil, standardized, timed CSAP assessments.

On the CSAP Assessment Frameworks, each benchmark is further refined using example performance tasks and activities. These bulleted statements:

- help clarify the intent of the benchmark while building toward the important ideas and concepts encompassed in the standard.
- guide the development of appropriate questions for the CSAP:
 - ✓ multiple choice
 - ✓ constructed response
- demonstrate the application of varying depth of knowledge in performance tasks and activities reflected on the CSAP:
 - Level 1 – Recall and Reproduction
 - Level 2 – Skills and Concepts
 - Level 3 – Strategic Thinking
 - Level 4 – Extended Thinking (*This level requires extended time and is not included in a standardized assessment*).
- demonstrate growing sequential development of student understanding of science concepts from K-10th grade.
- support the development of school level classroom opportunities with multiple assessment options at appropriate levels of difficulty and in alignment with the expectations of the CSAP.
- compliment and encourage best practices in science education in the state of Colorado.

CSAP Frameworks for each grade and content area tested may be found on the CDE website. www.cde.state.co.us

Fact Sheet for Science CSAP – Grades 5, 8 and 10

Test Construction Information

July, 2005

Tests are designed to be given in three 55-minute sessions and each session has a similar composition of item types.

| | Grade 5 | Grades 8 and 10 |
|---|---------|-----------------|
| Number of Items | 70-75 | 80-83 |
| Number of Points | 88 | 98-100 |
| <ul style="list-style-type: none"> ▪ Number of multiple choice items <i>(multiple choice items value 1 point each)</i> | 52 | 60 |
| <ul style="list-style-type: none"> ▪ Number of constructed response items <i>(constructed response items value from 1-4 points each)</i> | 18 | 23 |
| Total test score points | 88 | 98-100 |

Weighting of Standards by Grade Level for Science CSAP

Notes: Standard 6 is combined with Standard 1 during test construction.
Standard 5 is combined with Standards 2, 3, and 4 during test construction.

| | Grade 5 | Grade 8 | Grade 10 |
|--|---------|---------|----------|
| Standard | %ScrPts | %ScrPts | %ScrPts |
| 1 <i>Scientific Inquiry and Investigations</i> | 30 | 30 | 30 |
| 6 <i>Connections Between Scientific Disciplines</i> | 4 | 4 | 4 |
| 2 <i>Physical Science</i> | 20 | 20 | 20 |
| 3 <i>Life Science</i> | 20 | 20 | 20 |
| 4 <i>Earth and Space Science</i> | 20 | 20 | 20 |
| 5 <i>Science and Technology relating to Human Activity</i> | 6 | 6 | 6 |

Test Scoring

- multiple choice are machine scored
- constructed response are scored by readers hired and trained by the test contractor under specific guidelines from CDE personnel and Colorado teachers
- performance category cut-points are set using the Bookmarking Process (description on CDE website)

Associated materials available on the CDE website www.cde.state.co.us

- Science CSAP Demonstration Packet (available September 2005)
- Assessment Frameworks
- CSAP Item Maps (Grade 8 available now, Grades 5 and 10 available fall 2006)
- Released Items (Grade 8 available now, Grades 5 and 10 available fall 2006)
- Technical Reports and Information

Subcontent Areas:

| Standard | Grade 5 | Grade 8 | Grade 10 |
|-----------------|--|--|---|
| 1 | Experimental Design & Investigation Results and Data Analysis | Experimental Design & Investigation Results and Data Analysis | Experimental Design & Investigation Results and Data Analysis Applied Inquiry |
| 2 | *No subcontent area designated | Physics Concepts Chemistry Concepts | Physics Concepts Chemistry Concepts |
| 3 | *No subcontent area designated | Life Processes Organisms and their Interactions | Life Processes Organisms and their Interactions |
| 4 | *No subcontent area designated | Geology & Astronomy Meteorology & Hydrology | Geology & Astronomy Meteorology & Hydrology |

*As a general science assessment, Grade 5 has items categorized within subcontent areas within Standard 1 only.

Points to Ponder about CSAP

or

Be Science Savvy with CSAP

Preparations for CSAP testing are ongoing throughout the school year. The following suggestions will assist you in integrating CSAP with classroom instruction.

1. The Colorado Content Science Standards and Assessment Frameworks are the road maps to success for your students taking the Science CSAP.
http://cde.state.co.us/index_assess.htm
2. The vocabulary used in the assessment frameworks is what the teacher may expect the students to understand and verbalize at the appropriate grade levels (5th, 8th & 10th).
3. Science should be taught in a deliberate way. Science standards represent high expectations for **all students** and science instruction should be provided in **all grades**.
4. The teacher is encouraged to:
 - utilize programs and resources that emphasize conceptual development and scientific inquiry
 - give students practice in being assessed using constructed response (CR) items and multiple choice (MC) items
 - include in your classroom standards-based assessment “Item Sets” which involve several items that relate to one standard and may include CR and MC items that incorporate graphs and tables around a topic
5. An on going variety of standards-based assessments should be embedded in the science program such as:
 - teacher observables
 - presentations on research/investigations
 - written explanations in journals/notebooks with teacher feedback
 - teacher prepared standard-based assessments
 - time limits set to give students practice working with time restrictions
6. An assessment objective may be assessed on the CSAP test even though it has not been previously assessed. The objectives are tested on a cyclical basis over time.
7. The Fact Sheet will help the teacher understand how CSAP was constructed. Constructed response items can be assigned more points than multiple choice items. It is important for students to answer both types of items to do well on the test. Encourage your students to answer all items and if time permits review their work.
8. To provide consistency throughout the 5th, 8th and 10th grade CSAP testing:
 - metric units of measurement will be used
 - food webs and food chains should have arrows that describe the path of energy flow through the food web/chain (e.g. grass → cricket → frog)
 - students should always use titles and labels even when not told explicitly to do so when constructing graphs, tables and charts
9. The demonstration items can be modified for different grade levels and expanded to include hands-on inquiry-based investigations.

Hints for Students Taking the CSAP Science Test

The Science CSAP is a standardized test. That means the test is given to all students at your grade level in the entire state of Colorado. It is given to every student exactly the same way with the same amount of time.

- ✓ Learn how to answer each kind of question. CSAP Science tests have two types of questions: multiple choice and constructed response. A constructed response may be a short response, extended response, or a response using tables, graphs, or pictures.
- ✓ Read each question carefully.
- ✓ Check each of your answers to make sure it is the best answer for the question asked.
- ✓ Answer the questions you are sure about first. If a question seems too difficult, skip it and go back to it later.
- ✓ Write your response in the space provided and do not write in the margins.
- ✓ Be sure to fill in the answer bubbles correctly. Do not make any stray marks around answer spaces. Only use a # 2 pencil so the scanner can read your answer.
- ✓ Think positively. Some questions may seem hard to you, but you may be able to figure out what to do if you reread the question carefully and think about what you already know.
- ✓ When you finish the test with time to spare, review your answers to make sure they are reasonable.
- ✓ **RELAX**. Some people get *nervous* about tests. Do your best work.
- ✓ These strategies are not just for CSAP. They will help you do better in all your work.

How to Answer a Constructed Response Question

A constructed response question may require a short answer or an extended response. It has a value of 1 to 4 score points and you can receive full or partial credit. You should try to answer these questions even if you are not sure of the correct answer. If a part of the answer is correct, you may get a portion of the points.

Strategies to help you succeed on the test:

- ✓ Allow more time to answer the constructed response. You are expected to take time to read and think about the question before you write your answer. A short answer response may take you 5 minutes and an extended response may take you longer.
- ✓ When the clock starts on a timed test, glance through the assessment before you begin to see how many items are in the session, how many items are constructed responses, and how much time you have.
- ✓ Read each question carefully and determine what the question asks you to answer.
- ✓ If you do not understand the question, read it again and try to answer one part at a time.
- ✓ Be sure to answer every part of the question.
- ✓ Use the information provided to answer the question.
- ✓ Write your explanations in clear, concise language. Use the space provided for the answer.
- ✓ Do your best to spell words correctly; but if it is not the exact spelling, you may still get credit for your answer.
- ✓ Reread your explanation to make sure it says what you want it to say.
- ✓ Always strive to do your best on every assessment in school whether it is a CSAP test, classroom test, driving test, or a college entrance exam.

Resources from the Web Released Items for Classroom Assessment

When you are planning your classroom assessments, work with your colleagues in developing assessments and/or choosing assessments aligned to your curriculum, instruction and grade level frameworks. It can be very helpful to find an item in the demonstration packet that is a good fit with your curriculum, instruction and lab investigations. If there is no item available in the demonstration packet, you may look at released items from other states, NAEP and TIMSS. By examining released items and sample items from many standardized assessments, you will be able to create a wide-range of formats that will enable you to choose:

- ✓ the level of difficulty,
- ✓ the level of content depth and knowledge, and
- ✓ the type of item (e.g., multiple choice or constructed response items that meet your needs for a classroom assessment).

Colorado Released Items and Assessment Frameworks

http://www.cde.state.co.us/index_assess.htm

National Assessment of Educational Progress (NAEP), grades 4, 8 & 12

http://nces.ed.gov/nationsreportcard/ITMRLS/NQT_Search.asp?NumSearchResults=1&SearchSubject=Science&SearchIndex=1&SearchStartIndex=1&QuestionsPerPage=20&SearchQuestionSet=0&

Trends in Mathematics and Science Study (TIMSS), grade 4 & 8

<http://timss.bc.edu/timss2003i/released.html>

Other states have sample or released items. Each state aligns the items to their state standards. It will be important to align your work with CSAP Assessment Frameworks. This is not a complete list but a few websites to get started.

Florida: grades 5, 8 & 10

<http://fln.education.net/assessment/sas/fcat/fcatsmpl.htm>

Washington: grades 5, 8 & 10

<http://www.k12.wa.us/assessment/WASL/ScienceAssessment.aspx>

Michigan: high school released items

http://www.michigan.gov/documents/2003SReleasedSciHST_94240_7.pdf

Michigan: Elementary, Middle and High School Items

http://www.michigan.gov/documents/science02-part2_96915_7.pdf

Massachusetts: released items grades 5, 8, 9 & 10

<http://www.doe.mass.edu/mcas/2005/release/>

Depth-of-Knowledge-Levels – SCIENCE *

The four levels represent a hierarchy based on complexity (rather than difficulty). This difference takes some time to ponder and refine. The hierarchy is based on two main factors: 1) sophistication and complexity, and 2) the likelihood that students at the grade level tested would have received prior instruction or would have had an opportunity to learn the content. Some performance tasks have a low depth-of-knowledge level because the knowledge required is commonly known and student with normal instruction at a grade level should have had the opportunity to learn how to routinely perform what is being asked.

Please note that, in science, “knowledge” can refer both to content knowledge and knowledge of scientific processes. This meaning of knowledge is consistent with the *National Science Education Standards* (NSES), which terms “Science as Inquiry” as its first Content Standard.

| Level 1 (Recall and Reproduction) | Level 2 (Skills and Concepts) | Level 3 (Strategic Thinking) | Level 4 (Extended Thinking) |
|--|--|---|---|
| <p>Requires the recall of information, such as a fact, definition, term, or a simple procedure, as well as performance of a simple science process or procedure. Level 1 only requires students to demonstrate a rote response, use a well-known formula, follow a set procedure (like a recipe), or perform a clearly defined series of steps.</p> <p>A “simple” procedure is well defined and typically involves only one step. Verbs such as “identify,” “recall,” “recognize,” “use,” “calculate,” and “measure” generally represent cognitive work at the recall and reproduction level. Simple word problems that can be directly translated into and solved by a formula are considered Level 1. Verbs such as “describe” and “explain” could be classified at different DOK levels, depending on the complexity of what is to be described and explained.</p> <p>A student answering a Level 1 item either knows the answer or does not: that is, the item does not need to be “figured out” or “solved.” In other words, if the knowledge necessary to answer an item automatically provides the answer to it, then the item is at Level 1. <u>If the knowledge needed to answer the item is not automatically provided in the stem</u>, the item is at least at Level 2. Some examples that represent, but do not constitute all of, Level 1 performance are:</p> <ul style="list-style-type: none"> ▪ Recall or recognize a fact, term, or property. ▪ Represent in words or diagrams a scientific concept or relationship. ▪ Provide or recognize a standard scientific representation for simple phenomenon. ▪ Perform a routine procedure, such as measuring length. | <p>Includes the engagement of some mental processing beyond recalling or reproducing a response. The content knowledge or process involved is more complex than in Level 1. Items require students to make some decisions as to how to approach the question or problem. Keywords that generally distinguish a Level 2 item include “classify,” “organize,” “estimate,” “make observations,” “collect and display data,” and “compare data.”</p> <p>These actions imply more than one step. For example, to compare data requires first identifying characteristics of the objects or phenomena and then grouping or ordering the objects. Level 2 activities include making observations and collecting data; classifying, organizing, and comparing data; and organizing and displaying data in tables, graphs, and charts. Some action verbs, such as “explain,” “describe,” or “interpret,” could be classified at different DOK levels, depending on the complexity of the action.</p> <p>For example, interpreting information from a simple graph, requiring reading information from the graph, is a Level 2. An item that requires interpretation from a complex graph, such as making decisions regarding features of the graph that need to be considered and how information from the graph can be aggregated, is at Level 3. Some examples that represent, but do not constitute all of, Level 2 performance, are:</p> <ul style="list-style-type: none"> • Specify and explain the relationship between facts, terms, properties, or variables. • Describe and explain examples and non-examples of science concepts. • Select a procedure according to specified criteria and perform it. • Formulate a routine problem, given data and conditions. • Organize, represent, and interpret data. | <p>Requires reasoning, planning, using evidence, and a higher level of thinking than the previous two levels. The cognitive demands at Level 3 are complex and abstract. The complexity does not result only from the fact that there could be multiple answers, a possibility for both Levels 1 and 2, but because the multi-step task requires more demanding reasoning.</p> <p>In most instances, requiring students to explain their thinking is at Level 3; requiring a very simple explanation or a word or two should be at Level 2. An activity that has more than one possible answer and requires students to justify the response they give would most likely be a Level 3. Experimental designs in Level 3 typically involve more than one dependent variable.</p> <p>Other Level 3 activities include drawing conclusions from observations; citing evidence and developing a logical argument for concepts; explaining phenomena in terms of concepts; and using concepts to solve non-routine problems. Some examples that represent, but do not constitute all of Level 3 performance, are:</p> <ul style="list-style-type: none"> • Identify research questions and design investigations for a scientific problem. • Solve non-routine problems. • Develop a scientific model for a complex situation. • Form conclusions from experimental data. | <p>Involves high cognitive demands and complexity. Students are required to make several connections—relate ideas within the content area or among content areas—and have to select or devise one approach among many alternatives to solve the problem. Many on-demand assessment instruments will not include any assessment activities that could be classified as Level 4.</p> <p>However, standards, goals, and objectives can be stated in such a way as to expect students to perform extended thinking. “Develop generalizations of the results obtained and the strategies used and apply them to new problem situations,” is an example of a grade 8 objective that is a Level 4. Many, but not all, performance assessments and open-ended assessment activities requiring significant thought will be Level 4.</p> <p>Level 4 requires complex reasoning, experimental design and planning, and probably will require an extended period of time either for the science investigation required by an objective, or for carrying out the multiple steps of an assessment item. However, the extended time period is not a distinguishing factor if the required work is only repetitive and does not require applying significant conceptual understanding and higher-order thinking.</p> <p>For example, if a student has to take the water temperature from a river each day for a month and then construct a graph, this would be classified as a Level 2 activity. However, if the student conducts a river study that requires taking into consideration a number of variables, this would be a Level 4. Some examples that represent, but do not constitute all of, a Level 4 performance are:</p> <ul style="list-style-type: none"> • Based on data provided from a complex experiment that is novel to the student, deduct the fundamental relationship between several controlled variables. • Conduct an investigation, from specifying a problem to designing and carrying out an experiment, to analyzing its data and forming conclusions. |

* Webb, N. *University of Wisconsin (2002; Revised 2005). Used with permission.*



5th Grade CSAP Demonstration Items

Helpful resources:

Science Assessment Frameworks, Grade 5

http://cde.state.co.us/index_assess.htm

Definition of Terms used in Item Description:

Depth of Knowledge Definitions*: Level of Complexity

Level 1 – Recall and Reproduction

Level 2 – Concepts

Level 3 – Strategic Thinking

Level 4 – Extended Thinking

**Refer to page 12 of this Demonstration Packet for complete definition*

Level of Difficulty:

E – Easy

M – Moderate

H – Hard

1

**A student put the same amount of water into two bowls.
He covered one bowl with plastic wrap and left the other bowl uncovered.
He placed both bowls on the same windowsill.
The bowls were left in the sun for several hours.**

What **most likely** happened to the amount of water in the covered bowl?
Explain your answer.

What **most likely** happened to the amount of water in the uncovered bowl?
Explain your answer.

Standard 1 / Assessment Objective 1.1.b

Depth of Knowledge: 2

Difficulty Level: M

Type: Constructed Response

Elements of Correct Answers:

-
- The amount of water stayed the same.
- AND**
- The water could not evaporate from the covered bowl/Water droplets formed/condensation was found on the cover of the covered bowl.
-
- The amount of water went down/decreased.
- AND**
- Water evaporated from the uncovered bowl.

Note: Student can respond with a different plausible prediction and explanation and receive full credit.

Two-Point Rubric:

2 points two key elements
1 point one key elements
0 points incorrect or no response

CSAP
Science

1

A student put the same amount of water into two bowls.

He covered one bowl with plastic wrap and left the other bowl uncovered.

He placed both bowls on the same windowsill.

The bowls were left in the sun for several hours.

What **most likely** happened to the amount of water in the covered bowl?
Explain your answer.

What **most likely** happened to the amount of water in the uncovered bowl?
Explain your answer.

Standard 1 / Assessment Objective 1.1.b

Depth of Knowledge: 2

Difficulty Level: M

Type: Constructed Response

2

A student places a magnet next to a metal fork and records what happens. Next, he places the same magnet next to a plastic fork and records what happens.

Which question is the student **most likely** exploring with this investigation?

- How do different materials react to magnets?
- Do items other than magnets have magnetic power?
- What causes magnets to be attracted to metal objects?
- Does the size of a magnet affect its magnetic power?

Standard 1 / Assessment Objective 1.1.a

Depth of Knowledge: 2

Difficulty Level: M

Type: Multiple Choice

CSAP
Science

2

A student places a magnet next to a metal fork and records what happens. Next, he places the same magnet next to a plastic fork and records what happens.

Which question is the student **most likely** exploring with this investigation?

- How do different materials react to magnets?
- Do items other than magnets have magnetic power?
- What causes magnets to be attracted to metal objects?
- Does the size of the magnet affect its magnetic power?

Standard 1 / Assessment Objective 1.1.a

Depth of Knowledge: 2

Difficulty Level: M

Type: Multiple Choice

3

Three pieces of clay are launched from a spoon launcher. Each piece of clay is a different size. Study the table below which shows the distances the pieces of clay traveled.

**Distances Pieces of Clay Traveled
(centimeters)**

| Clay Sizes | Trial 1 | Trial 2 | Trial 3 | Average Distance Traveled |
|---------------|---------|---------|---------|---------------------------|
| Small | 76 cm | 80 cm | 84 cm | 80 cm |
| Medium | 50 cm | 42 cm | 46 cm | 46 cm |
| Large | 8 cm | 16 cm | 12 cm | 12 cm |

Write **one** conclusion that is supported by the results shown in the table.

Standard 1 / Assessment Objective 1.3.a

Depth of Knowledge: 2

Difficulty Level: M

Type: Constructed Response

Elements of Correct Answers:

One of the following:

- Larger pieces of clay travel shorter distances.
- Smaller pieces of clay travel longer distances.
- Medium size pieces of clay travel longer distances than large pieces of clay but shorter distances than small pieces of clay.

One-Point Rubric:

1 point one key element
0 points incorrect or no response

CSAP

Science

3

Three pieces of clay are launched from a spoon launcher. Each piece of clay is a different size. Study the table below which shows the distances the pieces of clay traveled.

Distances Pieces of Clay Traveled
(centimeters)

| Clay Sizes | Trial 1 | Trial 2 | Trial 3 | Average Distance Traveled |
|---------------|---------|---------|---------|---------------------------|
| Small | 76 cm | 80 cm | 84 cm | 80 cm |
| Medium | 50 cm | 42 cm | 46 cm | 46 cm |
| Large | 8 cm | 16 cm | 12 cm | 12 cm |

Write **one** conclusion that is supported by the results shown in the table.

4

Water can provide energy that may be changed into electricity.
Which kind of water could be used to provide electricity?

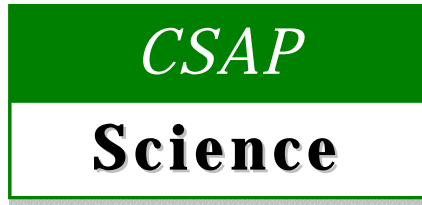
- pure
- moving
- deep
- cold

Standard 2 / Assessment Objective: 2.2.1.a

Depth of Knowledge: 1

Difficulty Level: M

Type: Multiple Choice

The logo consists of a green rectangular box with the word "CSAP" in white, italicized serif font. Below it is a white rectangular box with the word "Science" in black, bold, sans-serif font. The entire logo is enclosed in a thin black border.

4

Water can provide energy that may be changed into electricity.
Which kind of water could be used to provide electricity?

- pure
- moving
- deep
- cold

Standard 2 / Assessment Objective: 2.2.1.a

Depth of Knowledge: 1

Difficulty Level: M

Type: Multiple Choice

5

Complete the table below to show whether each characteristic belongs to a plant or animal. Place an **X** in the appropriate box beside each characteristic.

| Characteristic | Part of a Plant | Part of an Animal |
|----------------|-----------------|-------------------|
| feathers | | X |
| seeds | X | |
| fur | | X |
| leaf | X | |
| backbone | | X |
| stem | X | |
| root | X | |
| beak | | X |

Standard 3 / Assessment Objective 3.1.2.b

Depth of Knowledge: 1

Difficulty Level: M

Type: Constructed Response

Two-point Rubric:

| | |
|----------|--|
| 2 points | all 8 characteristics labeled correctly |
| 1 point | 5 or more characteristics labeled correctly |
| 0 points | 4 or fewer characteristics labeled correctly |

CSAP

Science

5

Complete the table below to show whether each characteristic belongs to a plant or animal. Place an **X** in the appropriate box beside each characteristic.

| Characteristic | Part of a Plant | Part of an Animal |
|----------------|-----------------|-------------------|
| feathers | | |
| seeds | | |
| fur | | |
| leaf | | |
| backbone | | |
| stem | | |
| root | | |
| beak | | |

Standard 3 / Assessment Objective 3.1.2.b

Depth of Knowledge: 1

Difficulty Level: M

Type: Constructed Response

6

The yucca moth of the Arizona desert lays its eggs inside the flower of the yucca plant. When the eggs hatch, the moth larvae eat some of the plant seeds. When the moth flies away from the plant, it takes pollen from the yucca flower with it.

How does the yucca moth help the yucca plant?

- lays eggs
- eats seeds
- hatches larvae
- spreads pollen

Standard 3 / Assessment Objective 3.1.4.c

Depth of Knowledge: 1

Difficulty Level: M

Type: Multiple Choice

CSAP**Science****6**

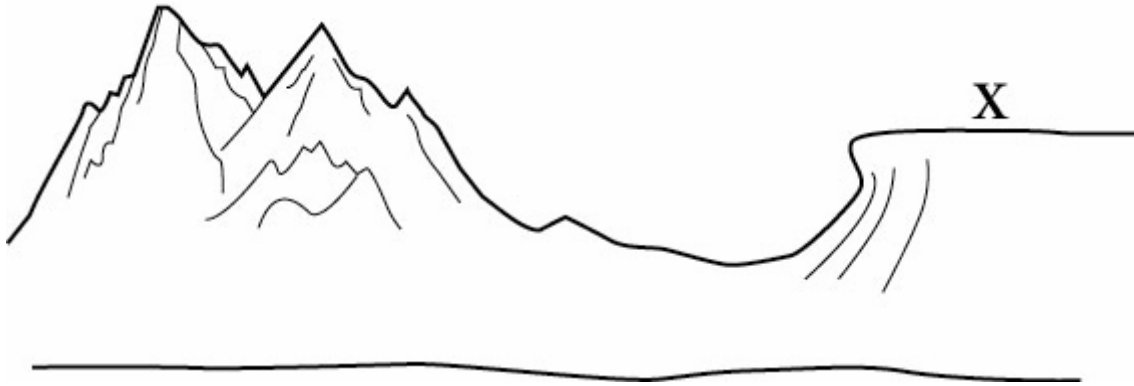
The yucca moth of the Arizona desert lays its eggs inside the flower of the yucca plant. When the eggs hatch, the moth larvae eat some of the plant seeds. When the moth flies away from the plant, it takes pollen from the yucca flower with it.

How does the yucca moth help the yucca plant?

- lays eggs
- eats seeds
- hatches larvae
- spreads pollen

7

Study the picture below.



What surface feature is shown at **X** ?

- foothill
- mountain
- plain
- plateau

Standard 4 / Assessment Objective 4.1.3.a

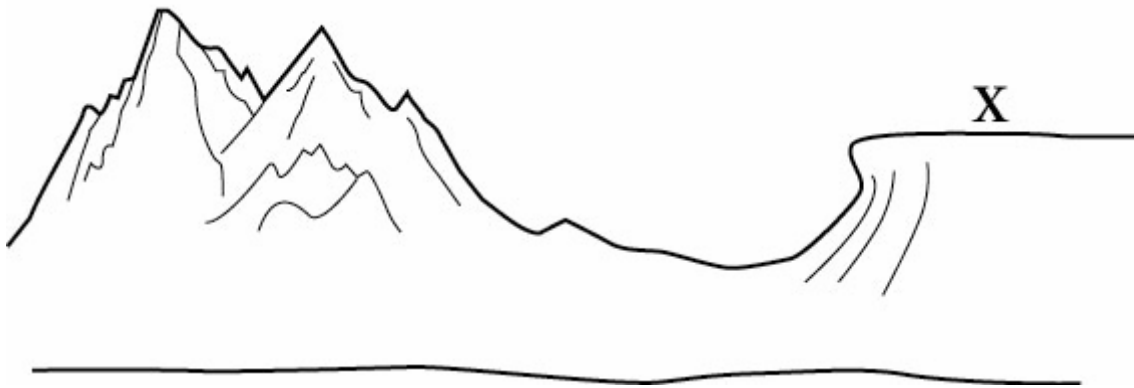
Depth of Knowledge: 1

Difficulty Level: E

Type: Multiple Choice

CSAP**Science****7**

Study the picture below.

What surface feature is shown at **X** ?

- foothill
- mountain
- plain
- plateau

Standard 4 / Assessment Objective 4.1.3.a

Depth of Knowledge: 1

Difficulty Level: E

Type: Multiple Choice

8

Look at the bodies of water listed in the table below. Put an **X** in the box beside each body of water to show whether it is saltwater or freshwater. The first one has been done for you.

| | Freshwater | Saltwater |
|---------------|------------|-----------|
| mountain lake | X | |
| pond | X | |
| ocean | | X |
| river | X | |
| reservoir | X | |

Standard 4 / Assessment Objective 4.3.1.b

Depth of Knowledge: 1

Difficulty Level: E

Type: Constructed Response

Two-point Rubric:

| | |
|----------|---|
| 2 points | four bodies of water in correct categories |
| 1 point | three bodies of water in correct categories |
| 0 points | less than three bodies of water are in correct categories |

CSAP
Science

8

Look at the bodies of water listed in the table below. Put an **X** in the box beside each body of water to show whether it is saltwater or freshwater. The first one has been done for you.

| | Freshwater | Saltwater |
|---------------|------------|-----------|
| mountain lake | X | |
| pond | | |
| ocean | | |
| river | | |
| reservoir | | |

Standard 4 / Assessment Objective 4.3.1.b

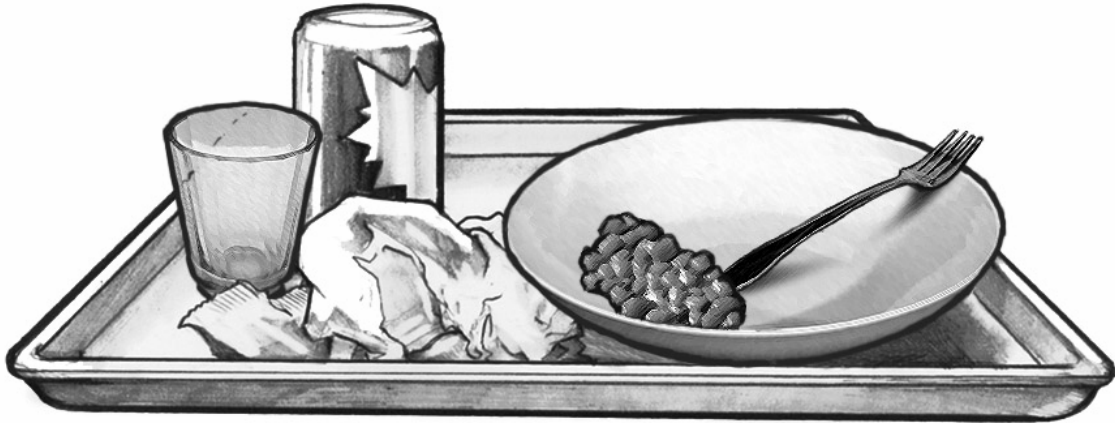
Depth of Knowledge: 1

Difficulty Level: E

Type: Constructed Response

9

Look at the lunch tray below.



Which item on the lunch tray is usually recycled?

- juice glass
- metal fork
- soda can
- lunch plate

Standard 5 / Assessment Objective 5.1.c

Depth of Knowledge: 1

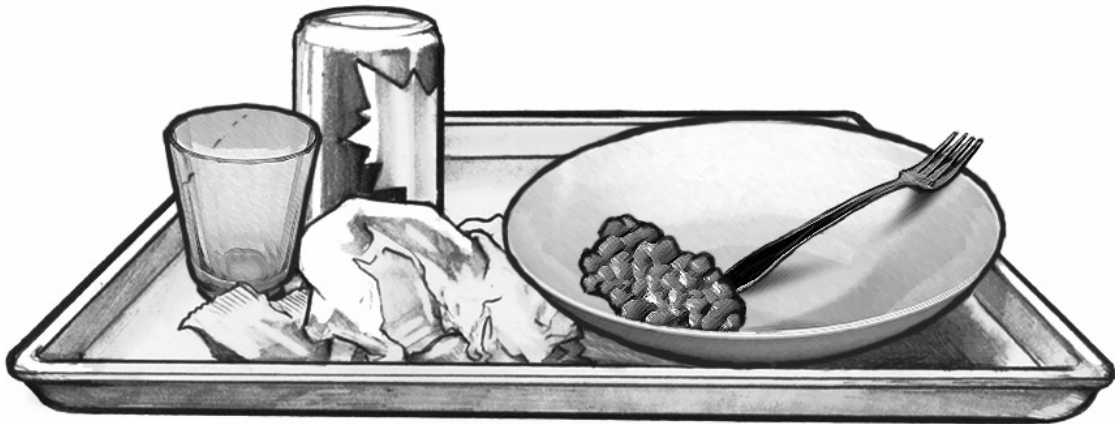
Difficulty Level: E

Type: Multiple Choice

CSAP
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9

Look at the lunch tray below.



Which item on the lunch tray is usually recycled?

- juice glass
- metal fork
- soda can
- lunch plate

Standard 5 / Assessment Objective 5.1.c

Depth of Knowledge: 1

Difficulty Level: E

Type: Multiple Choice

10

Two students each set up an experiment to compare the reaction times of boys and girls. For the experiment, they each dropped a ball and measured how fast different students caught it. Below are the results the students found:

| Experiment | Results |
|-------------------|--|
| Student 1 | The boys caught the ball faster. |
| Student 2 | The girls caught the ball faster. |

Since the results are very different, what is the next logical step?

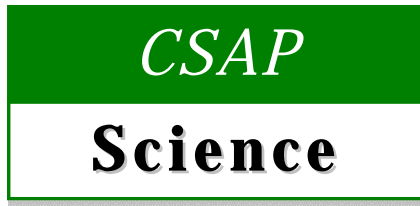
- throw out the results because they are incorrect
- look for differences in the ways the experiment was done
- conclude that neither boys nor girls have fast reaction times
- conclude that girls and boys actually have the same reaction times

Standard 6 / Assessment Objective 6.1.a

Depth of Knowledge: 2

Difficulty Level: M

Type: Multiple Choice

The logo for CSAP Science consists of a green rectangular box with the word "CSAP" in white, italicized serif font. Below this is a white rectangular box with the word "Science" in black, bold, sans-serif font.**10**

Two students each set up an experiment to compare the reaction times of boys and girls. For the experiment, they each dropped a ball and measured how fast different students caught it. Below are the results the students found:

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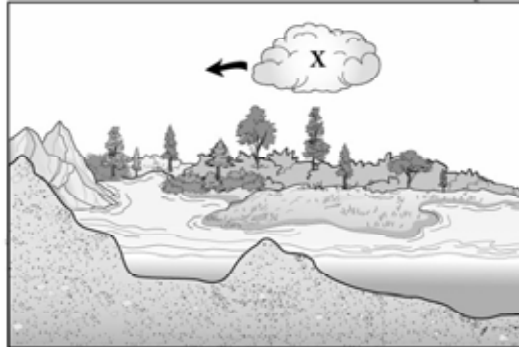
Standard 6 / Assessment Objective 6.1.a

Depth of Knowledge: 2

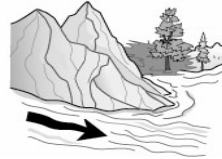
Difficulty Level: M

Type: Multiple Choice

11 A diagram of the water cycle is shown below.



Which stage of the water cycle follows **X** in the diagram?



Standard 6 / Assessment Objective 6.3.b

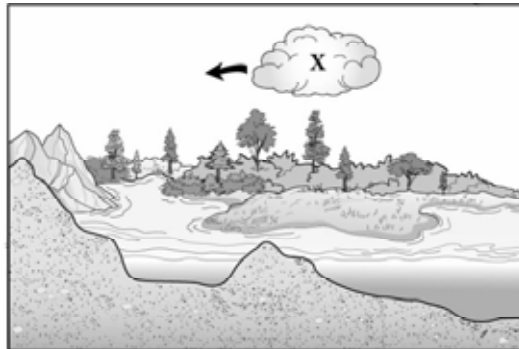
Depth of Knowledge: 1

Difficulty Level: M

Type: Multiple Choice

CSAP
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11 A diagram of the water cycle is shown below.



Which stage of the water cycle follows X in the diagram?



Standard 6 / Assessment Objective 6.3.b

Depth of Knowledge: 1

Difficulty Level: M

Type: Multiple Choice

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