



Washington Office of Superintendent of
PUBLIC INSTRUCTION

Science Assessment Development

WCAS Accommodated Paper-Pencil Training Test Lesson Plans

Grade 11

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Introduction

Federal and state legislation requires all students to participate in state testing. Students eligible to receive special education or 504 services are permitted access to accessibility features when documented in the student's Individualized Education Plan (IEP) or 504 Plan within the parameters allowed by the assessment constructs.

Washington Comprehensive Assessment of Science (WCAS) Accommodated Paper Booklets are available for students with a documented need in their IEP or 504 Plan. Accommodated paper booklets include standard print, large print, Spanish, and Braille.

Students may benefit from opportunities to explore and practice with the layout of the test and the tools available to them. This document contains guidance and activities to help students practice with the item types and features of the **Grade 11 WCAS Accommodated Paper-Pencil Training Test Booklet**. A standard print version of the booklet is available on the [Washington Comprehensive Assessment Portal \(WCAP\)](#).

The WCAS Accommodated Paper-Pencil Training Test Booklets include the same standalone questions and item clusters as the WCAS Online Training Tests. However, some modifications may have been made to maximize the accessibility of the item in the accommodated booklet, while adhering to the intent of the item in the online testing system. The modifications are described in this lesson plan. The [WCAS Online Training Tests](#) can be accessed on the [Washington Comprehensive Assessment Portal \(WCAP\)](#) for comparison.

Classroom time spent on this training test lesson should be carefully limited so the focus remains on instruction aligned to the concepts and skills in the [Washington State 2013 K–12 Science Learning Standards](#) (hereafter referred to as "the standards"). Students should use the WCAS Accommodated Paper-Pencil Training Tests just enough to be able to demonstrate their understanding of science concepts and skills on the WCAS Summative Tests without being hindered by lack of familiarity with using an accommodated paper booklet.

For more information on state testing accommodations, see the [Guidelines on Tools, Supports and Accommodations for State Assessments \(GTSA\)](#) and the [Test Coordinator's Manual \(TCM\)](#).

Considerations

- All students should have the opportunity to access WCAS Training Tests before taking the summative WCAS at the end of the school year (hereafter referred to as "the summative test").
- Teachers are encouraged to answer students' inquiries and give support while students are working in the Training Test.
 - **NOTE:** During the summative test, test administrators (TA) must follow the *TA Script of Student Test Directions* verbatim.
- Emphasize that students should not be concerned with the science content or correct answers but should concentrate on how to enter responses in the accommodated paper-pencil booklet and how to use other tools, supports, and/or accommodations available to them.
- The activities in the lesson are not a checklist. There is no expectation that students complete all suggested activities. The activities do not describe all possible ways students could engage with the questions or tools.
- The activities in the lesson may be modified and/or shared with any interested teacher, parent, or student.

Questions or comments? Email us at science@k12.wa.us.

Features of the WCAS

Student to TA Ratio

During live summative testing, WCAS accommodated paper booklets should be administered to small groups of students to ensure the validity, reliability, and fairness of student results. The student to Test Administrator (TA) ratio should be no greater than 3 students to 1 TA. This ensures that the TA is able to provide all of the supports described in a student's IEP or 504 Plan.

The 3 students to 1 TA ratio does not need to be maintained when practicing with the training tests.

Information Sections

The WCAS includes standalone items and item clusters (information sections and related questions). Some item clusters include more than one information section. Each information section is given before the questions most closely associated to that information. However, students may refer back to previous information sections as needed.

Locking Questions

Some item clusters include locking questions. The locking of questions allows subsequent items or information sections to update the student with correct information and limits clueing among questions in a cluster. Students cannot change an answer to a locking question once they have moved on to the next question.

In the online testing system, students are given a warning about locking questions before they move forward in the test. The online testing system also prevents students from changing an answer if they return to a previously answered locking question. To account for this functionality in the accommodated paper-pencil booklets, locking questions have a red box at the bottom of the page which states:

THIS QUESTION WILL BE LOCKED AFTER COMPLETION.

You must answer this question before moving on to the next question.
After you move to the next question, you cannot change your answer to this question.

During live summative testing, TAs must monitor students closely to ensure that they do not change their answers after they move on in their test booklet. Students can re-read the question, and their answer, but they cannot change their answers for any part of a locking question after they have moved to the next question in the booklet.

Multipart Questions

Some questions are divided into multiple parts. Typically, this includes two parts (Part A and Part B). Multipart questions can include different item types (e.g., multiple choice followed by an edit task inline choice). Question parts work together to strengthen alignment to a standard. For example, a question could ask a student to evaluate a claim in Part A, and then in Part B, ask the student to identify how a particular trend in data or piece of evidence supports their evaluation of that claim.

Preparing for the Training Test Lesson

In addition to the Grade 11 WCAS Accommodated Paper-Pencil Training Test Booklet, each student should have:

- a paper copy of the Grade 11 WCAS Training Test Glossary of Non-Science Terms which is available on the [WCAP Portal](#).
- access to a scientific calculator, see the [Calculator and Electronic Device Policy](#) for more information;
- scratch and/or graph paper; and
- a paper copy of the WCAS Periodic Table, available on the [WCAP Portal](#).

Some students use additional non-embedded tools, designated supports, and/or accommodations during state testing. Those tools, supports, and accommodations should be available when practicing with the Accommodated Paper-Pencil Training Test booklets.

The lesson plan that follows gives general suggestions for how students can interact with each information section and item. Teachers should include opportunities for students to practice with non-embedded tools, designated supports, and/or accommodations that they use during the course of a school day and that are allowed on the summative WCAS into the lesson plan, where applicable for their students.

For more information, please see the [Guidelines on Tools, Supports, and Accommodations for State Assessments](#).

Grade 11 Training Test Overview

Table 1 provides the metadata for each of the questions on the **Grade 11 Training Test** including item type, locking information, answer key, score point, and alignment information.

Details about each item type and a full set of item specifications are available in the [Grade 11 Test Design and Item Specifications](#) document on the [Science Assessment webpage](#). Please refer to those documents for more information about the design of the summative test. If the Key column states "Rubric", then more details about the correct answer will be provided on the following pages

Table 1: Grade 11 Training Test Metadata

#	Title	Item Type	Lock	Key	Score Point	Performance Expectation	Item Specification	Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
1 A/B	Hydrogen Equation standalone	Table Input/ Multiple Choice	No	Rubric/ D	1	HS-PS1-7	HS-PS1-7.1	Using Mathematics and Computational Thinking	PS1.B	Energy and Matter
2 A/B	Cellular Respiration Inputs and Outputs standalone	Grid/ Multiple Choice	No	Rubric/ D	2	HS-LS1-7	HS-LS1-7.1	Developing and Using Models	LS1.C	Energy and Matter
3 A/B	Juan de Fuca Model standalone	Edit Task Inline Choice/ Multiple Select	No	Rubric/ C, D	1	HS-ESS1-5	HS-ESS1-5.1	Engaging in Argument from Evidence	ESS2.B	Patterns
4	Competing Forces cluster	Multiple Choice	Yes	A	1	HS-PS2-4	HS-PS2-4.1	Using Mathematics and Computational Thinking	PS2.B	Patterns
5	Competing Forces cluster	Edit Task Inline Choice	No	Rubric	1	HS-PS2-4	HS-PS2-4.1	Using Mathematics and Computational Thinking	PS2.B	Patterns
6 A/B	Competing Forces cluster	Multiple Choice/ Multiple Choice	No	C/A	2	HS-PS2-4	HS-PS2-4.1	Using Mathematics and Computational Thinking	PS2.B	Patterns
7 A/B	Competing Forces cluster	Multiple Choice/ Multiple Choice	No	B/D	2	HS-PS2-4	HS-PS2-4.2	Using Mathematics and Computational Thinking	PS2.B	~
8	Coral Bleaching cluster	Multiple Choice	Yes	D	1	HS-LS2-6	HS-LS2-6.1	Engaging in Argument from Evidence	LS2.C	Stability and Change
9	Coral Bleaching cluster	Multiple Choice	Yes	A	1	HS-LS2-6	HS-LS2-6.1	Engaging in Argument from Evidence	LS2.C	Stability and Change
10 A/B	Coral Bleaching cluster	Grid/ Edit Task Inline Choice	Yes	Rubric/ Rubric	2	HS-ESS2-2	HS-ESS2-2.1	Analyzing and Interpreting Data	ESS2.A, ESS2.D	Stability and Change
11	Coral Bleaching cluster	Matching	No	Rubric	1	HS-ESS2-2	HS-ESS2-2.3	~	ESS2.A, ESS2.D	Stability and Change
12	Coral Bleaching cluster	Short Answer	No	Rubric	1	HS-LS2-6	HS-LS2-6.1	Engaging in Argument from Evidence	LS2.C	Stability and Change

Grade 11 Training Test Lesson

Cover Page

The text on the front cover is repeated here as a reminder of the purpose of the Training Test: "This training test paper-pencil booklet is intended to provide students who are administered paper-pencil versions of the Washington Comprehensive Assessment of Science (WCAS) with the opportunity to become familiar with the format of the assessment."

Do Not Write on This Page

Page 3

These pages are included to ensure the correct layout in the progression of items in the WCAS accommodated paper-pencil booklets.

Have students:

Notice the GO ON arrow in the bottom-right hand corner of the page.

Teacher notes:

This symbol means that there are more questions to answer in the test.

Question 1: Table Input/Multiple Choice

Pages 4 & 5

This question is a **multipart** question. Multipart questions can include different item types for each part (e.g., multiple choice followed by an edit task inline choice).

Have students:

Note that this item appears on two pages.

Read the first line of the question: "The following question has two parts. First, answer part A. Then, answer part B."

Read the entire question carefully to determine where each part of the question begins and ends.

Teacher notes:

Multipart Items may appear on one, two, or sometimes even three pages.

This line of text is important to notice, since it tells students how many parts are related to each other. Some questions may also have a part C.

*Bold text stating "**Part A**" and "**Part B**" is there to guide them. A complete response must provide answers to all parts.*

Part A is a **table input** item. Table input items provide students with a table that has one or more values missing. In the online system, students type their responses into table cells. In the paper booklet, students write their answers into the cells.

Have students:

Find the word "shows" in the question AND in the Glossary of Non-Science Terms.

Read the question carefully and respond to Part A by writing the mass in the table.

Teacher notes:

The word "shows" is defined as "gives information". There are several definitions for the word shows. Because "gives information" is not the most common definition, the word is included in the Glossary of Non-Science terms.

Students can use scratch paper to work out the answer, make notes, etc. Only responses written into the cells will be scored for the summative test, so students should practice that here.

Part B is a **multiple choice item**. Multiple choice items include a question followed by four options. In the online system, the student uses a mouse, touchpad, or touchscreen to select a lettered circle in front of one option. In the paper booklet, the student fills in a lettered circle in front of the option.

Have students:

Read the question and respond to Part B by filling in one circle.

Teacher notes:

If a student wishes to change their answer, be sure they erase the mark completely and fill in a different circle.

Correct Answer – 1 point

Part A: 606

Part B: Option D

Question 2: Grid/Multiple Choice

Pages 6, 7, & 8

Part A is a **grid** item. In the online system, students use a mouse, touch pad, or touchscreen to drag and drop images into pre-placed answer spaces to make a model. In this modified item, students fill in a circle in each row of a table to identify the locations in a lettered model where inputs or outputs belong. The directions clarify how many circles can be filled in per row or column of the table.

Have students:

Notice the model is in color.

Read the question carefully and respond to Part A by filling in one circle in each row.

Teacher notes:

Colored graphics in the WCAS are chosen to ensure the content is discernible for the widest range of viewers, including those with common types of colorblindness. If a student struggles to see the graphic clearly, you can explore additional tools, designated supports, or accommodations.

Encourage students to read directions very carefully so they know exactly how to answer a question.

*Point out the sentence: "Fill in **one** circle for each letter." The bolded word in the directions helps students fill in the correct number of circles for the item.*

Part B is a **multiple choice** item.

Have students:

Read the question carefully and respond by filling in one circle.

Teacher notes:

If a student wishes to change their answer, be sure they erase the mark completely and fill in a different circle.

Correct Answer – 1 point for Part A, 1 point for Part B

Part A:

Inputs (Letters V, W): Sugar (C₆H₁₂O₆), Oxygen (O₂) in any order

Outputs (Letters X, Y, Z): Water (H₂O), Energy, Carbon dioxide (CO₂) in any order

Part B: Option D

Question 3: Edit Task Inline Choice/Multiple Select

Pages 10, 11, & 12

Part A is an **edit task inline choice** item. Edit task inline choice items provide partially completed sentences that students complete by selecting words, phrases, letters, or numbers from a set of options. In the online system, students use a mouse, touch pad, or touchscreen to select options from each drop-down list in the question. In the paper booklet, students fill in a circle in each box in the question.

Have students:

Find the word “shows” in the question AND in the Glossary of Non-Science Terms.

Find the bolded words in the question.

Read the question carefully and respond to part A by filling in one circle in each of the two boxes.

Teacher notes:

The word “shows” is defined as “gives information”. There are several definitions for the word shows. Because “gives information” is not the most common definition, the word is included in the Glossary of Non-Science terms.

*In this item, “**each**” is bolded to remind students that each box needs to have one circle filled in.*

Have students read the completed sentence aloud after filling in one circle for each box to demonstrate how this item type works.

Part B is a **multiple select** item. Multiple select items include a direction followed by five or more options. The directions indicate how many options a student should select to complete the question. In the online system, the student uses a mouse, touchpad, or touchscreen to select an empty box in front of an option. In the paper booklet, the student fills in an empty circle in front of an option.

Have students:

Note the circles do not have letters inside them.

Find the bolded words in the question.

Read the question carefully and respond to Part B by filling in two circles.

Teacher notes:

This is a clue that more than one answer option will be selected.

Remind students that the directions to some questions will tell them exactly how many options to choose.

If a student wishes to change their answer, be sure they erase the mark completely and fill in a different circle.

Correct Answer – 1 point

Part A:

As the distance from the Juan de Fuca Ridge increases, the age of the oceanic crust in the Juan de Fuca Plate increases.

OR

As the distance from the Juan de Fuca Ridge decreases, the age of the oceanic crust in the Juan de Fuca Plate decreases.

Part B: Option 3 and Option 4

Questions 4–7: Competing Forces Cluster

The first item cluster starts on pages 14 and 15. This cluster has only one information section. In the online system students watch an animation of a demonstration. In the paper booklet, four sequential diagrams describe the animation. Students should read the information carefully before answering the associated questions. The cluster includes locking items.

Have students:

Read the directions: “Read the information and answer the questions.”

Find the word “interaction” in Section 1 AND on the Glossary of Non-Science Terms.

Read the information carefully, then GO ON to the questions in the cluster.

Teacher notes:

All text and diagrams should be read very carefully before answering any questions.

The word “interaction” is defined as “coming together and having an effect on each other”. This word is included in the Glossary of Non-Science Terms as it is above a grade 9 reading level.

Students can use scratch paper to organize their thoughts and make notes while reading the information.

Students can return to the information while answering questions.

Question 4: Multiple Choice (locking question)

Page 16

Question 4 is a **multiple choice** item. Question 4 is also a **locking** question. The locking of questions allows subsequent items or information sections to update the student with correct information and limits clueing among questions within a cluster.

Students must answer a locking question before moving to a different question. After moving to a different question, students can return to locked questions and see their answer, but they cannot change their answer.

Have students:

Carefully read the red text in the box at the bottom of page 16.

Read the question and respond by filling in one circle.

Teacher notes:

Explain to students that they must answer the question before moving to a different question. They cannot change their answer to this question after they move to a different question.

Remind students that they can refer back to the information section when answering questions.

Correct Answer – 1 point

Option A

Question 5: Edit Task Inline Choice

Page 18

Question 5 is an **edit task inline choice** item. In the online system, students use a mouse, touch pad, or touchscreen to select options from drop-down lists in the table cells. In the paper booklet, students fill in circles in the table cells.

Have students:

Read the question carefully and respond by filling in one circle in each cell.

Teacher notes:

*Point out the last sentence: "Fill in **one** circle in each cell."
The bolded word in the directions helps students fill in the correct number of circles for the edit task inline choice item.*

Correct Answer – 1 point

Negative: attract, positive, negative

Positive: repel, negative, negative

OR

Negative: attract, negative, positive

Positive: repel, negative, negative

OR

Negative: attract, positive, negative

Positive: repel, positive, positive

OR

Negative: attract, negative, positive

Positive: repel, positive, positive

Question 6: Multiple Choice/Multiple Choice

Page 19

This question is a **multipart** question.

Have students:

Read the question and respond to Part A by filling in one circle

Read the question and respond to Part B by filling in one circle.

Teacher notes:

Remind students that they can refer back to the information section when answering questions.

Remind students that they can use scratch paper and/or a scientific calculator to help determine their answer.

Correct Answer – 1 point for Part A, 1 point for Part B

Part A: Option C

Part B: Option A

Question 7: Multiple Choice/Multiple Choice

Pages 20 & 21

This question is a **multipart** question.

Have students:

Read the question and respond to Part A by filling in one circle.

Read the question and respond to Part B by filling in one circle.

Teacher notes:

Remind students that they can refer back to the information section when answering questions.

Correct Answer – 1 point for Part A, 1 point for Part B

Part A: Option B

Part B: Option D

Questions 8–12: *Coral Bleaching Cluster*

The second item cluster starts on page 22. This cluster has two information sections. The first section has a diagram. Students should read the information carefully before answering the associated questions. The cluster includes locking questions.

Question 8: Multiple Choice (locking question)

Page 23

Students must answer a locking question before moving to a different question. After moving to a different question, students can return to locked questions and see their answer, but they cannot change their answer.

Have students:

Carefully read the red text in the box at the bottom of page 23.

Read the question and respond by filling in one circle.

Teacher notes:

Explain to students that they must answer the question before moving to a different question. They cannot change their answer to this question after they move to a different question.

Remind students that they can refer back to the information in Section 1 when answering questions.

Correct Answer – 1 point

Option D

Question 9: Multiple Choice (locking question)

Page 23

Note that there is a new information section (Section 2) on pages 24 & 25. Some clusters include more than one information section. Each information section is delivered along with the questions most closely associated to that information. Students should carefully read the text and graphs in Section 2 before working with Question 9. The information in Section 1 is also available for the student to reference if needed.

Remember, students must answer a locking question before moving to a different question. After moving to a different question, students can return to locked questions and see their answer, but they cannot change their answer.

Have students:

Find the word "fluctuate" in the question AND on the Glossary of Non-Science Terms.

Read the question and respond by filling in one circle.

Teacher notes:

The word "fluctuate" is defined as "change". This word is included in the Glossary of Non-Science Terms as it is above a grade 9 reading level.

Remind students that they can refer back to the information in Section 1 and Section 2 when answering questions.

Correct Answer – 1 point

Option D

Question 10: Grid/Edit Task Inline Choice (locking question)

Pages 28, 29, & 30

Students must finish both Part A and Part B before moving to another question. They cannot change the answer to either part after moving to a different question. Remember, after moving to a different question, students can return to locked questions and see their answer, but they cannot change their answer.

Part A is a **grid item**. In the online system, students use a mouse, touch pad, or touchscreen to drag and drop sentences into pre-placed answer spaces to make a model. In this modified item, students fill in a circle in each row of a table to identify the locations in a lettered model where statements belong. The directions clarify how many circles can be filled in per row of the table.

Have students:

Read the question and respond to Part A by filling in one circle in each row.

Teacher notes:

*Point out the sentence: "Fill in **one** circle for each row." The bolded word in the directions helps students fill in the correct number of circles for the matching item.*

Part B is an **edit task inline choice** item

Have students:

Find the bolded words in the question.

Teacher notes:

*In this item, "**each**" is bolded to remind students that each box needs to have one circle filled in.*

Read the question carefully and respond by filling in one circle in each of the three boxes.

Have students read the completed sentence aloud after filling in one circle for each box to demonstrate how this item type works.

Correct Answer – 1 point for Part A, 1 point for Part B

Part A:

The amount of thermal energy transferred to the atmosphere increases: Letter Z

Seawater temperature increases: Letter X

The amount of solar radiation absorbed increases: Letter Y

Part B:

The model represents positive feedback, because as the air temperature increases over time, the amount of sea ice melting will increase over time, causing the ecosystem to destabilize.

Question 11: Matching

Page 32

Matching items provide students with a table and ask the students to fill in circles within the cells of the table to make identifications, classifications, or predictions. The directions may clarify how many circles can be filled in per row or column. In the online system, the student uses a mouse, touchpad, or touchscreen to select cells in the table. In the paper booklet, the student fills in circles in cells

Have students:

Read the question carefully and respond by filling in one circle in each row.

Teacher notes:

*Point out the last sentence: "Fill in **one** circle for each row."
The bolded word in the directions helps students fill in the correct number of circles for the matching item.*

Correct Answer – 1 point

Planting a new forest: Slow Down

Walking to school instead of driving to school: Slow Down

Increasing the number of trucks driving on roads: Speed Up

Replacing a coal power plant with a solar power plant: Slow Down

Question 12: Short Answer

Page 33

Short answer items ask students to construct a written response to a question. In the online system, students type their answers into a response box. In the paper booklet, students write their answers on lines in a response box. Remind students they may look back at information in Sections 1 and 2.

Have students:

Read the question carefully and respond by writing a response to the prompt in the area with lines.

Teacher notes:

Notice how the prompt before the writing space has bulleted statements that describe what is expected in the student's response. Addressing both bullets is required to earn full credit.

Students can use scratch paper to organize their thoughts, make notes, etc. Only responses written into the response box will be scored for the summative test, so students should practice that here.

A student does not need to fill all of the lines in the response box.

Correct Answer – 1 point

A student should write something like:

The coral reef ecosystem corals will lose all their algae and starve. This will cause other organisms that live on the reef not to have a habitat.

OR

The reef will not be able to recover from repeated bleaching events. There will be nothing for the fish to eat.

OR

There will be only white corals on the reef, and many organisms won't be able to camouflage themselves.

STOP You have reached the end of the test.

Page 36

This page tells students that they have finished with the test. This is an opportunity to review their work. Remember, students can return to locked questions and see their answer, but they cannot change their answer.

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