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ABSTRACT

This publication contains released test items for grade 10 reading from the 2001 Washington Assessment of Student Learning (WASL). It is designed to assist teachers and administrators in the analysis of specific test items in order to identify patterns, trends, weaknesses, and strengths of student performance on the Essential Academic Learning Requirements (EALRs). This publication includes a released item booklet and an item analysis report. The released item booklet contains: WASL passages for reading and items from the 2001 Operational Test; a table for each item where school-level, district level, and state level data information can be transferred; information to indicate the learning target and strand information for each item; and item specific scoring guides, student work at representative score points, and annotated explanations for scores. The item analysis report includes: a list of all released items referenced to learning strands and learning targets; multiple choice items which include the percent of students who responded to each possible answer; and percentage of students who scored at each score point by school, district, and state for the constructed-response items. (PM)

WASL—Washington Assessment of Student Learning

A Component of the Washington State Assessment Program

Using Results to Improve Student Learning

Reading Grade 10

Released Items 2001

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October 10, 2001

Dear Washington State Educators:

It is with great pleasure that the Office of the Superintendent of Public Instruction (OSPI) offers this new publication containing released test items from the 2001 Washington Assessment of Student Learning (WASL). This publication is designed to assist teachers and administrators in the analysis of the results of specific test items in order to identify patterns, trends, weaknesses and strengths of student performance on the Essential Academic Learning Requirements (EALRs).

In this packet, you will find actual test items that were used on the Spring 2001 WASL test in reading and mathematics. There are three types of test questions:

- multiple choice questions where students earn one point by selecting the right answer from a few options
- short answer questions where students earn up to two points by answering a question using a few sentences or labeled illustrations
- extended response questions where students can earn up to four points by constructing a response that includes several elements including evidence from the text or labeled illustrations

The writing prompts are not included because you will be receiving the 2001 writing prompts along with annotated student work.

As a teacher, or as a district or building administrator, you will be able to analyze the actual test items and the data that accompanies them to learn more about students in your school and district. You will be able to compare the performance of your school to your district or the state. By analyzing the differences in the data and the relationship that each question has with the EALRs, you will be able to identify where performance is strong and weak in your school and district. We encourage you to provide opportunities for students, teachers, and parents to work with the item-specific scoring guides in reading and mathematics and the annotated student responses that illustrate each score point.

OSPI hopes that you will use the information to begin a thoughtful, impassioned dialogue about what we expect our students to know and be able to do and how well they need to do it. We expect that this material will initiate conversations among administrators, faculty, students, and parents to how this information can impact our teaching, our learning, and our communication. Plans to improve student learning should not be made based on these results alone. It is important to also include the results from other assessments used by the teacher, school, and/or district.

In October, OSPI will conduct regional training on the effective use of these materials.

Congratulations on our work to improve student learning in Washington. Let's continue our fine work as we move forward toward our goal of increasing all student achievement and to create thoughtful, competent citizens for the 21st Century. I encourage you to search our website for further resources (www.k12.wa.us).

Sincerely,

Terry Bergeson

Dr. Terry Bergeson
State Superintendent of
Public Instruction

How to Use this Released Item Booklet and the Item Analysis Report

Introduction:

You should have two documents: one, this Released Item Booklet and two, the Item Analysis Report. These two documents should be used together to help administrators and teachers understand released WASL items that reflect content-specific learning strands and targets which are derived Essential Academic Learning Requirements.

This **Released Item Booklet** includes the following information:

- WASL passages (for reading) and items from the 2001 Operational Test
- A table for each item where you can transfer the school-level, district-level, and state-level data information
- Information to indicate the learning target and strand information for each item
- Item-specific scoring guides, student work at representative score points, and annotated explanations for scores

The **Item Analysis Report** includes the following information:

- A list of all released items referenced to learning strands and learning targets
- Multiple choice items include the percent of students who responded to each possible answer. Correct answers have asterisks. Information is presented by the percent of students responding to each possible answer by school, by district, and by state.
- For constructed-response items, including short answers and extended response, information is presented by the percent of students who scored at each score point by school, by district, and by state.

How to Understand Your Data:

- First, transfer your data from the Item Analysis Report to the Released Item Booklet. Transfer all the information for each item into each table. By transferring the data, you will have all the information in one place.
- Second, examine the item types that represent the school's or the district's strengths or weaknesses. Does the school or district perform well on multiple choice items? Constructed-response items? What percent of students in a school or a district left constructed-response items blank or earned a zero?
- Third, examine the learning strands and targets represented by each item. Group together targets that represent strengths or weaknesses for a school or a district. Do the targets all fit underneath one particular strand or do they belong to several strands?
- Fourth, look for trends. Does a school perform markedly lower on a particular item in comparison to the district or the state? Does a school or a district perform markedly higher on a particular item in comparison to the state?

Introduction to Reading Released Items

Welcome to the Released Item Booklet for the WASL 2001 reading items. In this booklet you will find two passages, one literary and one informational, that were featured on the spring 2001 WASL test for reading. In addition to the passages, we have included the items that were used on the test in conjunction with the passages.

There are three types of test items: multiple choice questions where students earn one point by selecting the right answer from a few options; short answer questions where students earn up to two points by answering questions using a few sentences, and extended response questions where students can earn up to four points by constructing a response that includes several elements including textual evidence from the passage.

Please note that in releasing a literary passage and an informational passage for the 2001 WASL test for reading, OSPI is releasing approximately 40% of the reading WASL. Each year, the reading WASL is comprised of five passages—usually two literary passages and three informational passages. The passages that were not released this year will be used on future WASLs and will be released at a later date. However, we do plan to release two passages and their items every year to assist teachers and administrators in understanding the types of passages found on the WASL. These released items also provide invaluable opportunities for teachers and administrators to become familiar with the types of reading items derived from the reading EALRs while also becoming experienced with the item-specific scoring guides and annotated samples of student responses.

You may want to become familiar with the WASL test and item specifications (located on our website—www.k12.wa.us) as you study the passages, the items, your school or district's data, and the annotated student responses contained in this Released Item Booklet. Each item that is featured in this booklet represents a "learning target" which is a reading skill derived from the EALRs that can be captured in a paper and pencil assessment. Similar targets, or reading skills, are organized underneath larger reading strands, which are more general descriptions of a collection of similar reading skills.

As you begin to analyze your data, think about what would account for the performance of students on particular items. Although many of the items can represent strength and weaknesses across schools, districts, and the state, attempt to maintain the whole picture in your analysis. Staff at OSPI recommends that you examine the items themselves closely and ask yourselves, "What do we expect our students to know and be able to do in order to be successful on this item?"

In order to assist you in your efforts in understanding and using the Released Item Test Booklet, please do not hesitate to search our website for further resources or call our offices in Olympia for further information.

2001 Released Passages and Items

Tenth Grade Literary Passage

Directions: Read the poem and answer the questions.

Building

by Gwendolyn Brooks

When I see a brave building
straining high, and higher,
hard and bright and sassy in the seasons,
I think of the hands that put that strength together.
The little soft hands. Hands coming away from cold
to take a challenge and to mold this definition.

Amazingly, men and women
worked with design and judgment, steel and glass,
to enact this announcement.
Here it stands.

Who can construct such miracle can enact
any consolidation, any fusion.
All little people opening out of themselves,

forging the human spirit that can outwit
big Building boasting in the cityworld.

Reading

1 Which lines from the poem best help the reader to picture the type of building the speaker of the poem sees?

- ○ **A.** Lines 1–2
- ○ **B.** Lines 5–6
- ○ **C.** Lines 11–12
- ○ **D.** Lines 14–15

Item Information:

Correct Answer: A

Strand: Literary—analyzes, interprets, and synthesizes

Learning Target: Apply understanding of literary elements (genres; story elements such as plot, character, setting; stylistic devices) and graphic elements/illustrations

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A*
			B
			C
			D
			NR

2 Which phrase best states the author's purpose in writing this poem?

- ○ **A.** To explain how buildings are made
- ○ **B.** To comment on how crowded cities can be
- ○ **C.** To praise the people who create buildings
- ○ **D.** To paint a picture of life in the city

Item Information:

Correct Answer: C

Strand: Literary—thinks critically

Learning Target: Analyze author's purpose and evaluate effectiveness for different audiences (includes fact/opinion, author's point of view, tone, and use of persuasive details)

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A
			B
			C*
			D
			NR

3 Twice the poet uses the word *little*. Whom or what is she describing with this word? What point is she making by using it? Support your answer with information from the poem.

Item Information:

Score points: 2 (see pages 24-27 for examples of each score point)

Strand: Literary—thinks critically

Learning Target: Analyze author's purpose and evaluate effectiveness for different audiences (includes fact/opinion, author's point of view, tone, and use of persuasive details)

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Points
			0
			1
			2
			NR
			Mean:

4 Which sentence best tells the point the poet makes in lines 11–15?

- ○ **A.** Living in a large city makes people more aware of those around them.
- ○ **B.** If people can communicate their needs to one another, they can find a way to work together.
- ○ **C.** If people can work together to build buildings, they can accomplish anything.
- ○ **D.** Building large buildings is an act that makes one powerful and wise.

Item Information:

Correct Answer: C

Strand: Literary—comprehends important ideas and details

Learning Target: Demonstrate understanding of theme or message and supportive details

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A
			B
			C*
			D
			NR

5 Which phrase from the poem best shows alliteration?

- ○ **A.** Straining high, and higher
- ○ **B.** To enact this announcement
- ○ **C.** Any consolidation, any fusion
- ○ **D.** Big Building boasting in the cityworld

Item Information:

Correct Answer: D

Strand: Literary—analyzes, interprets, and synthesizes

Learning Target: Apply understanding of literary elements (genres; story elements such as plot, character, setting; stylistic devices) and graphic elements/illustrations

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A
			B
			C
			D*
			NR

6 Name an occasion on which this poem might be read. Explain your choice with information from the poem.

Item Information:

Score points: 2 (see pages 28-31 for examples of each score point)

Strand: Literary—thinks critically

Learning Target: Extend information beyond text (make generalizations beyond the text to a broader idea or concept, or apply information to other texts or situations, or give a response to a reading)

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Points
			0
			1
			2
			NR
			Mean:

11

Reading

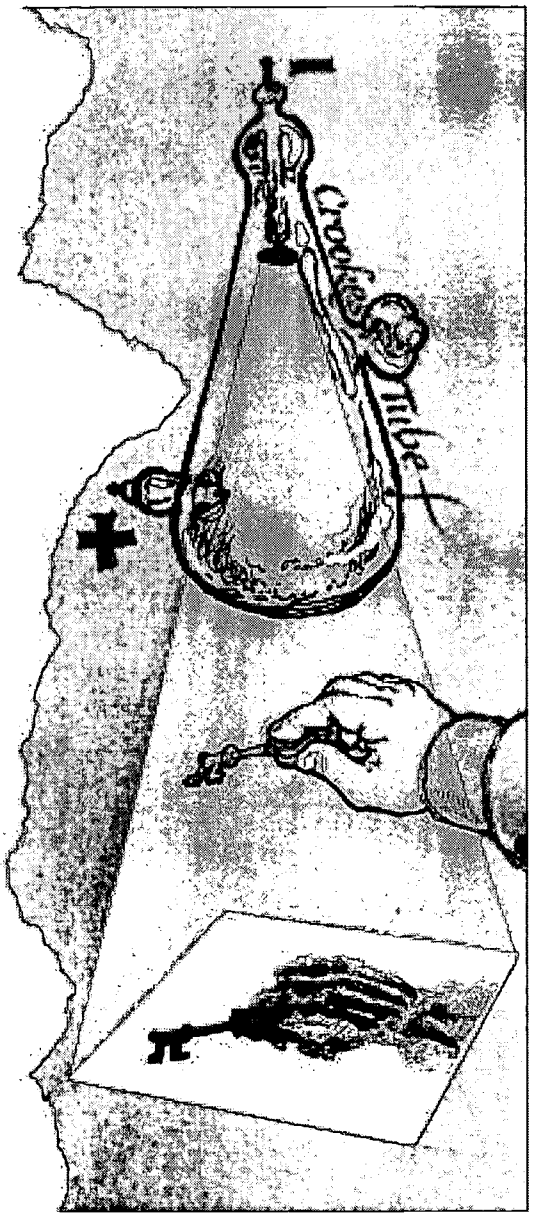
Tenth Grade Informational Passage

Directions: Read the selection and answer the questions.

The Discovery of X-Rays

by Carla Killough McClafferty

While Wilhelm Conrad Roentgen was professor of physics at the University of Würzburg, he made a fascinating discovery. On the evening of November 8, 1895, he was experimenting in a darkened room with a Crookes tube, a glass tube with all the air pumped out of it. While watching an electric current flow through the vacuum tube, he saw a glow emanating from a chemical-coated paper screen lying on his workbench.



The closer he brought the screen to the tube, the brighter it glowed. Roentgen put a book between the tube and the screen to see what would happen. The screen still glowed but not as brightly. He began to put anything he could find between the tube and the screen. He tried books, rubber, foil, a double deck of cards, wood, glass, and water to see how they affected the screen's glow. The screen varied in brightness with each item. He held a piece of metal between his fingers and was horrified to see the outline of his bones on the screen.

Roentgen hypothesized that the tube was producing invisible rays powerful enough to penetrate even human flesh. He was witnessing something that had never been seen before, a new form of energy. Since *x* is used in mathematics to symbolize an unknown, Roentgen called his discovery *x-rays*.

Roentgen told no one about what he had found. For seven weeks he experimented with x-rays until he was satisfied he knew their basic properties. Then he announced his discovery to the world.

Within a week, the news had been cabled all around the globe. People everywhere were amazed by the mysterious rays and wanted to know more about them. Doctors soon realized that x-rays could improve their practice. Using Roentgen's rays, they could see if a bone was broken or find the position of a bullet.

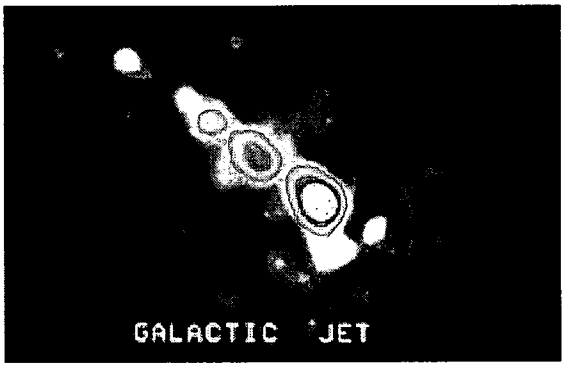
Wilhelm Roentgen received many honors and awards throughout his life, and in 1901 he was awarded the first Nobel prize for physics for his discovery. But he gave the Nobel prize money to the university and shunned the fame that seemed to seek him out. Roentgen continued to busy himself with academic pursuits and refused to exploit his status as discoverer of the x-ray. As a scientist, Roentgen believed that x-rays belonged to the whole world; therefore, he refused to patent his discovery.

X-Rays Today

Today, x-rays have many uses. In medicine, not only do doctors use x-rays to find bullets and broken bones, they use them to diagnose diseases and fight cancer. Airports use x-rays for security, and large pieces of steel and industrial equipment can be x-rayed to find microscopic cracks and internal faults that can't be detected any other way. Astronomers study x-ray emissions from distant points in space to learn about quasars, black holes, and the remnants of supernovas. Archeologists use the rays to see inside mummies without having to unwrap them, and art historians can x-ray paintings to see the techniques of long-dead artists.

A computer-enhanced x-ray showing a fractured forearm

Security check at Denver International Airport



X-ray image of Centaurus A, one of the brightest and largest known galaxies

7 Why did Roentgen call his creation an "x-ray"?

- ○ **A.** Because the light rays made the shape of an *x* on his lab table
- ○ **B.** Because he did not know the source of the light rays
- ○ **C.** Because the letter *x* stands for the gas xenon, the source of x-rays
- ○ **D.** Because he wanted the discovery to remain unknown

Item Information:

Correct Answer: B

Strand: Informational—comprehends important ideas and details

Learning Target: Demonstrate understanding of major ideas and supportive details

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A
			B*
			C
			D
			NR

8 At what point did Roentgen realize he made an important discovery?

- ○ **A.** When he won the Nobel Prize
- ○ **B.** Seven weeks after completing his lab work
- ○ **C.** As soon as he saw the outline of his bones on the screen
- ○ **D.** When doctors all over the world asked for his assistance

Item Information:

Correct Answer: C

Strand: Informational—comprehends important ideas and details

Learning Target: Make inferences or predictions

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A
			B
			C*
			D
			NR

9 In paragraph 3, what does it mean to say that Roentgen *hypothesized* about the power of x-rays from the Crooke's tube?

- ○ **A.** He analyzed it in his laboratory.
- ○ **B.** He explained it in detail.
- ○ **C.** He made an educated guess about it.
- ○ **D.** He tested it over and over again.

Item Information:

Correct Answer: C

Strand: Informational—comprehends important ideas and details

Learning Target: Interpret general and specialized vocabulary critical to the meaning of the text

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A
			B
			C*
			D
			NR

10 Which sentence best explains why Roentgen discovered x-rays?

- ○ **A.** During the war, doctors asked him to develop a way to diagnose broken bones.
- ○ **B.** He set out to create something unique for the newly created Nobel Prize for physics.
- ○ **C.** He discovered x-rays accidentally, while experimenting in his lab.
- ○ **D.** He was searching for an alternative form of energy that could help injured people.

Item Information:

Correct Answer: C

Strand: Informational—comprehends important ideas and details

Learning Target: Demonstrate understanding of major ideas and supportive details

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A
			B
			C*
			D
			NR

11 Summarize the events that led to Roentgen's discovery of x-rays. Be sure to include at least **three** main points in your summary.

Item Information:

Score points: 2 (see page 32-35 for examples of each score point)

Strand: Informational—comprehends important ideas and details

Learning Target: Summarize text

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Points
			0
			1
			2
			NR
			Mean:

12 Why does the author tell the reader that Roentgen waited seven weeks to tell the world of his discovery?

- ○ **A.** To show that Roentgen did not think the discovery was important
- ○ **B.** To show that Roentgen was a careful scientist
- ○ **C.** To show that Roentgen was distracted by other experiments
- ○ **D.** To show that Roentgen was waiting for recognition from the scientific community

Item Information:

Correct Answer: B

Strand: Informational—thinks critically

Learning Target: Analyze author's purpose and evaluate effectiveness for different audience (includes fact/opinion, author's point of view, tone, and use of persuasive devices, bias, and stereotypes)

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A
			B*
			C
			D
			NR

13 Think about the way in which Roentgen responded to honors bestowed on him in his lifetime. Give an example of his reaction to these honors. What does this say about his character?

Today, many hospitals call their x-ray departments "Roentgenology" labs, after Wilhelm Roentgen. How do you think he would respond to having departments named after him? Support your answer with information from the selection.

13 (continued)

Item Information:

Score points: 4 (see pages 36-41 for examples of each score point)

Strand: Informational—analyzes, interprets, and synthesizes

Learning Target: Compare/contrast elements of the text or make connections within the text

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Points
			0
			1
			2
			3
			4
			NR
			Mean:

14 What do the photographs in "X-Rays Today" show about x-rays?

- ○ **A.** The different benefits from using x-rays
- ○ **B.** The dangers of excessive x-rays
- ○ **C.** How to read and interpret x-rays
- ○ **D.** How x-rays produce an image

Item Information:

Correct Answer: A

Strand: Informational—analyzes, interprets, and synthesizes

Learning Target: Apply understanding of text features (titles, headings, and other information divisions, table of contents, indexes, glossaries, prefaces, appendicies, captions) and graphic features

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Responses (* = correct response)
			A*
			B
			C
			D
			NR

15 What modern uses of x-rays are discussed in "X-Rays Today"? How do they follow the same general principle that Roentgen first witnessed 100 years ago? Support your answer with information from the selection.

Item Information:

Score points: 2 (see pages 42-45 for examples of each score point)

Strand: Informational—thinks critically

Learning Target: Extend information beyond text (make generalizations beyond the text to a broader idea or concept, or apply information to other texts or situations, or give a response to reading)

Performance Data (Use this space to fill in student performance information for your school, district, and the state.):

Percent Distribution			
School	District	State	Points
			0
			1
			2
			NR
			Mean:

Item Specific Scoring Guides and Annotated Examples of Score Points

Scoring Guide for question number 3:

A **2-point response** uses text-based information to indicate that the word is used to describe the people (and/or their hands) involved in constructing buildings or accomplishing great things/something larger than themselves and uses text-based information to give an appropriate explanation for the point the poet makes by using this word.

Example: The poet is contrasting the size of people (small) with the size of the buildings (large) in order to emphasize human achievement.

A **1-point response** uses text-based information to indicate that the word is used to describe the people (and/or their hands) involved in constructing buildings or accomplishing great things/something larger than themselves **OR** uses text-based information to give an appropriate explanation for the point the poet makes by using this word.

A **0-point response** just indicates that the word is used to describe the people (and/or their hands) but includes no text-based support **OR** it shows no understanding of the text or task.

Annotated Example of a 2-point response for question number 3:

3 Twice the poet uses the word *little*. Who or what is she describing with this word? What point is she making by using it? Support your answer with information from the poem.

I believe she is saying the people that put together such an amazing and huge building are "Little" in comparason to it. She is trying to say that people can do great things no matter how small they are, they can accomplish large things. When it says "who can construct such miracle can enact" they are saying that anything can happen, you just have to "construct."

Annotations:
This student response earns two points. The response explains how people are "little" in comparison to the large buildings they construct by stating, *"the people that put together such an amazing and huge building are 'Little' in comparison."* It furthers fulfills the question by using appropriate text-based evidence when it says, *"'who can construct such miracles can enact' they are saying that anything can happen you just have to 'construct.'"*

Annotated Example of a 1-point response for question number 3:

3 Twice the poet uses the word *little*. Who or what is she describing with this word? What point is she making by using it? Support your answer with information from the poem.

When the author uses the word little she is describing the comparison between the people and the buildings. Like when she glorifies the buildings then talks about the soft, little hands.

Annotations:
This student response earns one point. The response addresses the description between the people and the building by saying, *"when the author uses the word little she is describing the comparison between the people and the building."* But, the response does not provide text-based evidence to support the explanation.

Annotated Example of a 0-point response for question number 3:

3 Twice the poet uses the word *little*. Who or what is she describing with this word? What point is she making by using it? Support your answer with information from the poem.

She's describing the word little as little people what there point of view is about buildings.

Annotations:
This student response earns zero points. The response does not draw the comparison between the people and the building, and it does not provide any explanation from the text or otherwise. When the response states, *"she's describing the word little as little people what there point of view is about buildings,"* it does not address the question.

Scoring Guide for question number 6:

A **2-point response** names an appropriate (celebratory, supportive) occasion or moment and uses text-based information to support the choice.

Example: You could read this at the dedication of a new building because it praises the people who create buildings.

A **1-point response** names an appropriate (celebratory, supportive) occasion or moment but does not use text-based information to support the choice.

Example: You could read this at the dedication of a new building because it is about buildings.

A **0-point response** does not name an occasion **OR** it only names an occasion without explaining the choice **OR** it shows no understanding of the text or task.

Annotated Example of a 2-point response for question number 6:

6 Name an occasion on which this poem might be read. Explain your choice with information from the poem.

This poem could be read at a wedding because it talks of people who work together and can accomplish something so great and so big. In line 11 and part of 12 it says who can construct such a miracle can enact any consolidation, any fusion. This is just saying that to who build some they are the miracle and not the built object. This poem would give hope to those who are having to get started on something.

Annotations:
This student response earns two points. It names an appropriate occasion (*"wedding"*) and explains the choice using text-based evidence. The response states, *"This poem could be read at a wedding because it talks of people who work together and can accomplish something so great and so big. In line 11 and part of 12 it says who can construct such a miracle can enact any consolidation, any fusion. This is just saying that to who build some they are the miracle and not the built object."*

Annotated Example of a 1-point response for question number 6:

6 Name an occasion on which this poem might be read. Explain your choice with information from the poem.

This poem could be read at an unvailing of a new skyscraper or appartmant building, because it talks about how great buildings are.

Annotations:
This student response earns one point. It names an appropriate occasion (*"unvailing of a new skyscraper"*), but it does not state text-based evidence for support. The statement *"because it talks about how great buildings are"* is not sufficient for credit.

Annotated Example of a 0-point response for question number 6:

6 Name an occasion on which this poem might be read. Explain your choice with information from the poem.

This poem might be read at some grand opening or a party at which the building had just been finished being built.

Annotations:
This student response earns zero points. It names an occasion, a *"grand opening or a party at which the building had just been finished being built,"* but it does not explain the choice or provide any text-based references for explanation.

Scoring Guide for question number 11:

A **2-point response** appropriately summarizes or paraphrases the events by including at least 3 of these 5 ideas:

- Roentgen was working in his lab, watching an electric current flow through a vacuum tube (OR Crookes tube).
- He noticed that a paper screen coated with a chemical glowed when he brought the tube near it.
- He then put several different kinds of objects, such as books, foil, cards, and so on, under the light source.
- Different objects affected the brightness.
- When he held a metal plate in his hand, he realized that the light rays could penetrate human flesh.

A **1-point response** partially summarizes or paraphrases 2 of the events by including 2 of the ideas listed above.

Annotated Example of a 2-point response for question number 11:

11 Summarize the events that led to Roentgen's discovery of x-rays.

On the night of Nov. 8, 1895, he experimented in a dark room with a Crookes tube. He watched an electric current flow through the vacuum tube where he saw a glow from a paper screen by his workbench. He then tried putting objects in between the screen and the tube, and each time the screen varied in brightness. He then held a piece of metal and saw the outline of his bones on the screen. He had found invisble rays powerful enough to penetrate flesh.

Annotations:
This student response earns two points. It names five of the five main steps that lead to Roentgen's discovery of X-Rays. (The scoring guide only requires students to name three of the five main steps for full credit.) The response lists these events: 1) *"experimenting with a Crookes tube,"* 2) *"watched electric current flow through the vacuum tube,"* 3) *"put objects in between the screen and the tube,"* 4) *"held a piece of metal and saw the outline of his bones"* and 5) *"had found invisible rays powerful enough to penetrate flesh."*

Annotated Example of a 1-point response for question number 11:

11 Summarize the events that led to Roentgen's discovery of x-rays.

The events that led to Roentgen's discovery of x-rays are first obtaining a vacuumed tube and watching it in a darkened room as an electric curent showed through it. He then placed objects between the rays it made and a screen. Then he knew he made a discovery.

Annotations:
This student response earns one point. It names two of the five events that lead to Roentgen's discovery of X-Rays. The response lists these events: 1) *"first obtaining a vacuumed tube and watching it in a darkened room"* and 2) *"He then placed objects between the rays it made and a screen."*

Annotated Example of a 0-point response for question number 11:

11 Summarize the events that led to Roentgen's discovery of x-rays.

He was doing something in his room and fell upon x-rays.

Annotations:
This student response earns zero points. It does not name any of the events that led to Roentgen's discovery of x-rays. The response states, *"He was doing something in his room and fell upon x-rays,"* which does not name any events.

Scoring Guide for question number 13:

A. **4-point response** includes the following elements:

- A text-based example of Roentgen's reaction to honors
- An explanation of what the reaction says about his character
- A prediction of how Roentgen would most likely react to having departments named after him
- Text-based support for the prediction.

Example: Roentgen was unwilling to accept the Nobel Prize money. This shows that he was a modest man who did not want to call attention to himself, but instead wanted people to benefit from his discovery.

Dr. Roentgen probably would be embarrassed by the attention of having something named after him. He refused any recognition for his work and instead felt that his discovery belonged to the world rather than just to him. Having something bear his name would bring undue emphasis to him rather than to the discovery itself.

A **3-point response** includes three of the four elements listed above.

A **2-point response** includes two of the four elements listed above.

A **1-point response** includes one of the four elements listed above.

Annotated Example of a 4-point response for question number 13:

13 Think about the way in which Roentgen responded to honors bestowed on him in his lifetime. Give an example of his reaction to these honors. What does this say about his character?

Roentgen was not very excited to recieve honors so he gave all his honors and credits to the university. He would not except these honors. This shows that his character was extremely shy and he was humble towards himself.

Today, many hospitals call their x-ray departments "Roentgenology" labs, after Wilhelm Roentgen. How do you think he would respond to having departments named after him? Support your answer with information from the selection.

He would probably be proud but he would probably want them called something else. He would not want them named after him because like in the selection he did not want to patent his discovery because he wanted the whole world to be able to use x-rays.

Annotations:
This student response earns four points. It provides answers to all of the sections of the question by using text-based evidence for support. It provides an example of how Roentgen reacted to being given honors and describes how his reaction exemplifies his character by stating, *"he gave all his honors and credits to the university, and this shows that his character was extremely shy and he was humble towards himself."* The response provides text-based evidence for how Roentgen would respond to hospitals naming their x-ray labs, "Roentgenology" labs, by stating *"He would not want them named after him because like in the selection he did not want to patent his discovery because he wanted the whole world to be able to use x-rays."*

Annotated Example of a 3-point response for question number 13:

13 Think about the way in which Roentgen responded to honors bestowed on him in his lifetime. Give an example of his reaction to these honors. What does this say about his character?

He doesn't take them because he is a scientist and he is just doing his job. He also gives the money from one of the honors to a University.

Today, many hospitals call their x-ray departments "Roentgenology" labs, after Wilhelm Roentgen. How do you think he would respond to having departments named after him? Support your answer with information from the selection.

He probably be honored but most likely would want them to change the name to something else just like when he shunned the fame from his Discovery.

Annotations:
This student response earns three points. It provides answers to three of the sections of the question by using text-based evidence for support. It provides an example of how Roentgen reacted to being given honors by stating, *"he doesn't take them because he is a scientist and he is just doing his job."* But, the response does not go on and describe how his reaction exemplifies his character. The response provides text-based evidence for how Roentgen would respond to hospitals naming their x-ray labs, "Roentgenology" labs, by stating *"He probably be honored but most likely would want them to change the name to something else just like when he shunned the fame from his Discovery."*

Annotated Example of a 2-point response for question number 13:

13 Think about the way in which Roentgen responded to honors bestowed on him in his lifetime. Give an example of his reaction to these honors. What does this say about his character?

He feels good about what he has done and accomplished but he is not a greaty man so he donated his money to the university. It says that he is a kind man, and not at all gready.

Today, many hospitals call their x-ray departments "Roentgenology" labs, after Wilhelm Roentgen. How do you think he would respond to having departments named after him? Support your answer with information from the selection.

I think he would be very happy, because he know that he has made something for everyone to use, and somehting these days that could save someone's life.

Annotations:
This student response earns two points. It provides answers to two of the sections of the question by using text-based evidence for support. It provides an example of how Roentgen reacted to being given honors by stating, *"He feels good about what he has done and accomplished but he is not a greaty man so he donated his money to the university."* Further, the response describes how his reaction exemplifies his character by stating, *"he is a kind man, and not at all gready."* The second half of the response does not provide text-based evidence for how Roentgen would respond to hospitals naming their x-ray labs, "Roentgenology" labs. Instead, it misreads the selection and erroneously says that Roentgen would be happy and proud if hospitals re-named their x-ray labs.

Annotated Example of a 1-point response for question number 13:

13 Think about the way in which Roentgen responded to honors bestowed on him in his lifetime. Give an example of his reaction to these honors. What does this say about his character?

Roentgen probably felt honord and gave the prize money to the university and shunned his fame so he could carry on his studies.

Today, many hospitals call their x-ray departments "Roentgenology" labs, after Wilhelm Roentgen. How do you think he would respond to having departments named after him? Support your answer with information from the selection.

I think he would be honord and want to keep on his studies because the people came to find more uses from his famous discovery.

Annotations:
This student response earns one points. It provides answers to one of the sections of the question by using text-based evidence for support. It provides an example of how Roentgen reacted to being given honors by stating, *"Roentgen probably felt honord and gave the prize money to the university and shunned his fame so he could carry on his studies."* However, the response does not describe how his reaction exemplifies his character. The second half of the response does not provide text-based evidence for how Roentgen would respond to hospitals naming their x-ray labs, "Roentgenology" labs. Instead, it misreads the selection and erroneously says that Roentgen would be honored if hospitals re-named their x-ray labs.

Annotated Example of a 0-point response for question number 13:

13 Think about the way in which Roentgen responded to honors bestowed on him in his lifetime. Give an example of his reaction to these honors. What does this say about his character?

He became a famous professor and he became well know in all over the world, by his expreMents discovery.

Today, many hospitals call their x-ray departments "Roentgenology" labs, after Wilhelm Roentgen. How do you think he would respond to having departments named after him? Support your answer with information from the selection.

Because he created the x-ray, so they could call the departments by his name.
Example: 1 Berger King
2 Macdonals

Annotations:
This student response earns zero points. It does not provide answers to any of the sections of the question by using text-based evidence for support. It does not provide an example of how Roentgen reacted to being given honors or acknowledge what this says about his character. The second half of the response does not provide text-based evidence for how Roentgen would respond to hospitals naming their x-ray labs, "Roentgenology" labs. Instead, it misreads the selection and erroneously says that Roentgen would be honored if hospitals re-named their x-ray labs.

Scoring Guide for question number 15:

A **2-point response** gives at least two text-based examples of the use of x-rays today and provides a generalization about the common principle behind all x-rays.

Example: Doctors use x-rays to locate broken bones and diseases. All of these are based on the idea of x-rays being able to penetrate an outer shield or surface to "see" what is inside. This is essentially what happened to Roentgen, when the first x-ray machine "looked through" his skin at his bones.

A **1-point response** gives 1 text-based example of the use of x-rays today and provides a generalization regarding the common principle behind all x-rays
OR gives 2 or more text-based examples without a generalization
OR provides only a generalization regarding the common principle behind all x-rays.

Annotated Example of a 2-point response for question number 15:

15 What modern uses of x-rays are discussed in "X-Rays Today"? How do they follow the same general principle that Roentgen first witnessed 100 years ago? Support your answer with information from the selection.

Some of the uses of x-rays in "x-rays Today" are the docor uses to find a broken bone or lost bullet but also the Astronomers use to study black holes quasers and the remnates of super novas. Also the x-ray helps Archeologists See inside mummy's without unrapping them. The x-rays today follow the same principle as Roentgen that the invisible rays are penitrating throug humen flesh & other materials to see the inside or unseen.

Annotations:
This student response earns two points. It gives three text-based examples of the uses of x-rays today (although only two were required) by stating, 1) *"doctor finding a broken bone or bullet,"* 2) *"astronomers use them to study black holes,"* and 3) *"x-rays help archeologists see inside mummy's without unwrapping them."* Further, it provides a generalization about the common principle behind all x-rays when it says *"invisible rays are penitrating throug human flesh and other materials to see inside or unseen."*

Annotated Example of a 1-point response for question number 15:

15 What modern uses of x-rays are discussed in "X-Rays Today"? How do they follow the same general principle that Roentgen first witnessed 100 years ago? Support your answer with information from the selection.

X-rays used today follow general principle that Roentgen first witnessed 100 years ago in the lab detecting diff glows and darkness of shapes. Today we do the same in the airports to find weaponds. it would show up on the screen darker and in shape of a gun or knife.

Annotations:
This student response earns one point. It gives only one text-based example of the uses of x-rays today by stating, *"today we do the same thing in airports to find weaponds."* It provides a generalization regarding the common principle behind all x-rays when it says, *"x-rays used today follow general principles that Roentgen first witnessed 100 years ago in the lab detecting diff glows and darkness of shapes."*

Annotated Example of a 0-point response for question number 15:

15 What modern uses of x-rays are discussed in "X-Rays Today"? How do they follow the same general principle that Roentgen first witnessed 100 years ago? Support your answer with information from the selection.

The x-rays today can find broken bones and other types of x-rays can look and observe organs ect...

Annotations:
This student response earns zero points. It does not provide any text-based examples of the uses of x-rays today. Although the response states, *"the x-rays today can find broken bones and other types of x-rays can look and observe organs,"* it does not draw on the specific examples cited in the text. Further, it does not demonstrate an understanding of the general principle behind the theory of x-ray usage.

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