Professional Development and the 2014 GED® Test
Bonnie Goonen and Susan Pittman-Shetler – July 17 & 19, 2012
Session objectives

• To become familiar with the item sampler and key skills required for student success on the 2014 GED® test

• To provide participants with information about professional development resources that will be available beginning in the fall of 2012
It’s more than just taking a test

• Recognizing the challenges
  – Identifying key skills
  – Understanding the implications
    • Curriculum
    • Teachers
    • Students

• Planning for the future
  – Providing information
  – Accessing resources
Recognizing the challenges

• Rigorous content
  – Career- and college-readiness skills

• Depth of Knowledge (DOK) model
  – Cognitive complexity
Webb’s Depth of Knowledge (DOK)

- A framework for analyzing educational materials based on the cognitive demands required to produce a response
  - Cognitive requirements
    - Applying
    - Analyzing
    - Creating
  - Cognitive steps determine complexity
Webb’s Depth of Knowledge (DOK)
What does it mean?

- DOK Level 1 – recall or recognize a fact, term or property
- DOK Level 2 – solve routine, multiple-step problems
- DOK Level 3 – formulate mathematical model for complex situation
Then . . . And now

2002 Essay Prompt

What is one important goal you would like to achieve in the next few years?

In your essay, identify that one goal and explain how you plan to achieve it. Use your personal observations, experience, and knowledge to support your essay.

2014 Extended Response

While Dr. Silverton’s speech outlines the benefits of cloud seeding, the editorial identifies drawbacks of this process.

In your response, analyze both the speech and the editorial to determine which position is best supported. Use relevant and specific evidence from both sources to support your response.
Evidence-Based Writing

While Dr. Silverton’s speech outlines the benefits of cloud seeding, the editorial identifies drawbacks of this process.

In your response, analyze both the speech and the editorial to determine which position is best supported. Use relevant and specific evidence from both sources to support your response.

Type your response in the box. This task may require approximately 45 minutes to complete.

Seeds of Change: How Humans Can Benefit from Influencing the Weather

Dr. Kathleen Silverton, meteorologist, speaking at a town hall meeting in Edwardsville, Iowa, July 17, 2010

1. It might seem more like science fiction than science, but a process called cloud seeding really can increase rainfall. Since 1946, scientists have been researching technology to change precipitation.

2. We are faced with water shortages, droughts, and increasing human populations. In response, many communities in the United States rely upon cloud seeding to increase rain and snowfall. Cloud seeding involves spreading silver iodide into existing clouds. The silver causes moisture to condense more effectively, making bigger clouds and more rain.

3. Studies conducted by the Weather Modification Association and the American Meteorological Institute have shown increases in precipitation ranging from five to 100 percent! Coastal ranges have seen the highest increases.
What students will need to do

**Reading**
- Draw specific comparisons between two texts
- Distinguish between valid arguments and faulty reasoning
- Distinguish between supported and unsupported claims
- Make inferences based on assumptions made by the author

**Writing**
- Draw relevant and sufficient evidence from the text(s)
- Produce a response that
  - Includes specific evidence
  - Uses an effective organizational structure
  - Uses appropriate vocabulary
  - Applies standard conventions of English

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Ms. Nguyen is a real estate agent. One of her clients is considering buying a house in the Silver Lakes area, where 6 houses have recently sold for the following amounts: $160,000; $150,000; $185,000; $180,000; $145,000; $190,000. What should Ms. Nguyen report as the Median price of these houses?

(1) $160,000
(2) $170,000
(3) $180,000
(4) $190,000
(5) Not enough information is given.

Note: Method for determining median was provided in the test booklet.
A speech pathologist collects data from 10 people for an experiment. Each person answers 6 questions. The speech pathologist records the number of questions that each person correctly answered and puts each person's data in the line plot. The median of the data is 3.5, and the mode of the data is 2. Complete the line plot so that the plot matches the pathologist's data.

Click on the red X and drag it onto the graph as many times as necessary to represent the data.
What students will need to do

Mathematical Reasoning

• Calculate measures of central tendency
• Distinguish between median and mode
• Complete a line plot given
  – summary statistics
  – a partial data set
The Item Sampler

A Tool for Educators

- Understand the item types used in each test
- View the content in context
- Identify the assessment target for each item
- Understand the rationale for the correct answer
- Understand the rationale for the incorrect answers
The Item Samplers

Four Item Samplers

• Reasoning through Language Arts
• Mathematical Reasoning
• Science
• Social Studies

http://www.GEDTestingservice.com/educators/new-assessment
Excerpt from *Anne of Green Gables* by L. M. Montgomery

1. Marilla came briskly forward as Matthew opened the door. But when her eyes fell on the odd little figure in the stiff, ugly dress, with the long braids of red hair and the eager, luminous eyes, she stopped short in amazement.

2. “Matthew Cuthbert, who’s that?” she exclaimed. “Where is the boy?”

3. “There wasn’t any boy,” said Matthew wretchedly. “There was only her.”
Literacy Indicator R.3.2: Make inferences about plot/sequence of events, characters/people, settings, or ideas in texts.

Answer Rationale:
The test-taker must demonstrate an understanding of Anne's personality by selecting these descriptors:

- **dramatic** Anne demonstrates her flair for drama in paragraph 10 when she “burst(s) into tears” after realizing Marilla was expecting her to be a boy. (paragraph 10) She then further demonstrates her dramatic nature when she tells Marilla “You would cry, too, if you were an orphan and had to come to a place you thought was going to be home and found that they didn’t want you. Oh, this is the most tragical thing that ever happened to me!” (paragraph 12)

- **enthusiastic** Anne behaves enthusiastically throughout the excerpt. Anne is described as an "odd little figure" with "eager, luminous eyes." (paragraph 1) She is later described as "eagerly" asking Marilla to "please call me Cordelia." (paragraph 16)

- **disappointed** Anne is disappointed by Marilla's reaction to her presence. "You don’t want me!" she cries to Marilla in paragraph 9, and she continues, "You would cry, too, if you were an orphan and had to come to a place you thought was going to be home and found that they didn't want you." (paragraph 12)
What students will need to do

Reasoning through Language Arts – Reading

• Read closely text that
  – Is more complex
  – Is greater in length
• Determine what is explicitly stated
• Make logical inferences based on evidence
• Make inferences about characters
The passage below is incomplete. Navigate to each “Select…” button and choose the option that correctly completes the sentence.

Ellen Gardner, CEO
Skyview PC, Inc.
888 Pyle Rd.
San Marte, CA 94656

Dear Ms. Gardner:

My wife and I have been loyal owners of Skyview computers for over 10 years. We are currently on our third Skyview laptop computer, which we purchased three months ago. We appreciate your competitive prices that allow us to upgrade every few years. Also, we have always been delighted with the compatibility of Skyview products with software we use for our home-based business. The speed and power of our Skyview products have been

Just last week, however, our new laptop began to freeze almost every time we logged on. My wife called the Skyview help desk and received advice from five different advisors. She followed their recommendations, but the computer continues to freeze.

I researched the problem and found that Skyview laptops in our serial number range have a history of freezing up, just as ours is doing. None of the advisors with whom my wife spoke acknowledged this problem. Each asked for the serial number of our machine but never mentioned that there is an ongoing problem which needs to be resolved.

I called Skyview again this morning.

The representative with whom I eventually spoke directed me to take our laptop to a repair facility 30 miles from our home. I mentioned the information I had learned, and was told that there is a shortage of the parts necessary for repair. Because of this shortage, he said the repair could take up to two months. This is not acceptable. My wife and I conduct business from home and need daily access to our computer.

We believe it is unreasonable for Skyview to ask us to transport our computer at our expense for repair that could take...
What students will need to do

Reasoning through Language Arts - Language

• Demonstrate command of conventions of standard English
• Recognize the errors in the responses that are not correct
• Identify option that is grammatically correct
• Edit to eliminate run-on sentences, fused sentences, or sentence fragments
A scientist is studying red maple tree growth in a state park. She measured the trunk diameters of a sample of trees in the same month every other year. The tables show the data for two of the trees.

### Tree 1

<table>
<thead>
<tr>
<th>Year</th>
<th>Trunk Diameter (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18.6</td>
</tr>
<tr>
<td>3</td>
<td>19.2</td>
</tr>
<tr>
<td>5</td>
<td>19.8</td>
</tr>
<tr>
<td>7</td>
<td>20.4</td>
</tr>
<tr>
<td>9</td>
<td>21.0</td>
</tr>
<tr>
<td>11</td>
<td>21.6</td>
</tr>
<tr>
<td>13</td>
<td>22.2</td>
</tr>
</tbody>
</table>

### Tree 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Trunk Diameter (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11.4</td>
</tr>
<tr>
<td>3</td>
<td>12.0</td>
</tr>
<tr>
<td>5</td>
<td>12.6</td>
</tr>
<tr>
<td>7</td>
<td>13.2</td>
</tr>
<tr>
<td>9</td>
<td>13.8</td>
</tr>
<tr>
<td>11</td>
<td>14.4</td>
</tr>
<tr>
<td>13</td>
<td>15.0</td>
</tr>
</tbody>
</table>

This is the final year in which she will collect data. When her data collection is complete, she will predict future red maple tree growth.

The scientist plots the data for tree 2 on a coordinate grid. She begins by plotting data for year 3 and year 11. What are the locations of the two points on the coordinate grid?

Click on the grid to plot the points.

(Note: To remove a point, place the arrow over the point and click the left mouse button.)
Mathematical Reasoning

**Mathematical Indicator A.7.a:** Locate points in the coordinate plane.

**Answer Rationale:**
The correct response shows the location of two points in the coordinate plane.

The test-taker must determine the coordinates for each point by interpreting the table for Tree 2. In Year 3, the diameter of the trunk is 12.0 inches. On the coordinate grid, the year is plotted on the x-axis and the tree’s diameter is plotted on the y-axis. Thus, the coordinates for year 3 are (3, 12). Using this same method yields the second ordered pair (11, 14.4).

To plot the point (3, 12) the test-taker begins at (0, 0) moves 3 units to the right and 12 units up. To plot the point (11, 14.4) the test-taker begins at (0, 0) moves 11 units to the right and 14.4 units up. The location of 14.4 is just below halfway between 14 and 15.
What students will need to do

Mathematical Reasoning – Algebraic Problem Solving

• Read and locate information within a table
• Distinguish between x-axis and y-axis of a coordinate plane
• Recognize order of coordinates, i.e., x-coordinate and y-coordinate (1, 2)
• Locate points in the coordinate plane
Tropical rain forests contain diverse communities of organisms with many interesting relationships. One such relationship connects parasitic fungi and their insect hosts. A type of parasitic fungus, called *Ophiocordyceps unilateralis*, disperses spores onto the forest floor, but cannot successfully grow on the ground. The fungus requires specific conditions and must grow inside of a specific ant species, called the host, to reproduce. The ants, various species of carpenter ant, make nests in the trees.

*O. unilateralis* feeds on and grows inside the insect host, and within a few days the fungus affects the insect’s brain. The insect exhibits unusual behaviors such as wandering away from the colony to where light and humidity favor fungal growth. Just before dying, the insect bites into and firmly attaches itself to a plant. Then, the fungus slowly grows outward from the dead insect’s head, producing a pod of spores that eventually bursts open. The spores fall to the ground, restarting the life cycle of the fungus.

Deforestation, or clearing away trees, is occurring in tropical rain forests.

Explain how deforestation could disrupt the life cycle of *Ophiocordyceps unilateralis* in tropical rain forests. Include multiple pieces of evidence from the text to support your answer.

Type your response in the box. This task may require approximately 10 minutes to complete.
Science – Short Answer

Science Indicator SP.1.a: Cite specific textual evidence to support inferences, conclusions, or analyses of technical texts, attending to the precise details of explanations or descriptions of a process, event, phenomenon, or concept.

Science Content Subtopic: L.c.5 Disruption of ecosystems (e.g., invasive species, flooding, habitat destruction, desertification) and extinction (e.g., causes (human and natural) and effects)

**Scoring Guide**

**3-Point Response**
- Gives an explanation of how deforestation could disrupt the life cycle of Ophiocordyceps unilateralis
- AND
- Supports the explanation with at least two relevant and specific pieces of evidence from the text.

**2-Point Response**
- Gives an explanation of how deforestation could disrupt the life cycle of Ophiocordyceps unilateralis
- AND
- Supports the explanation with at least one relevant and specific piece of evidence from the text.

**1-Point Response**
- Gives explanation of how deforestation could disrupt the lifecycle of the Ophiocordyceps unilateralis, but cites irrelevant, inaccurate or no specific evidence from the text to support the explanation.
What students will need to do

Science – Short Answer

• Read complex text
• Identify precise details
• Determine cause and effect
• Identify evidence within the text that
  – Supports inferences
  – Enables them to draw conclusions
• Understand science content
  – Disruption of ecosystems and extinction
• Produce a response that provides an explanation supported by evidence
Social Studies

This definition of sustainability is from the U.S. Environmental Protection Agency (EPA).

Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have, the water, materials, and resources to protect human health and our environment.

Which three graphs relate to the concept of sustainability? Click on the three graphs that you want to select.
Social Studies Indicator SSP.6.a: Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.

Social Studies Content Subtopic:
C.6.b.2 Sustainability

Answer Rationale:
This item presents five graphs and asks the test-taker to select the three that relate to sustainability as presented in a text explanation of the concept.

Correct answer 1: Graph showing world population growth through history: part of the sustainability definition provided in the item describes the needs of present and future generations. Selecting this response allows the test-taker to demonstrate an understanding of the concept of sustainability by integrating the graph on population growth with the text defining sustainability. This option demonstrates an understanding that human population impacts the natural environment.

Correct answer 2: Graph showing global oil consumption: the definition of sustainability includes the concept of human use of resources taken from the natural environment. The selection of this response demonstrates an understanding of the quantitative data and integrating it with the qualitative data from the definition as well as an understanding of the concept of sustainability.

Correct answer 3: Graph showing tropical deforestation: sustainability requires measures to ensure the continuing viability of renewable resources, including forests. If deforestation continues at the rate as shown on the graph, sustainability may become impossible. With this option, the test-taker can demonstrate an understanding of the qualitative data in the text as it relates to the quantitative data in the chart.

To get this item correct, the test-taker must identify all three charts that illustrate concepts discussed in text. Accurately completing this task provides the test-taker with the opportunity to demonstrate mastery over the skill of integrating quantitative and qualitative analyses.
What students will need to do

Social Studies

• Read complex text
• Use prior knowledge about the concept in the text, i.e., sustainability
• Interpret multiple graphs
• Understand how qualitative data in text related to quantitative data in chart
• Determine which graphs illustrate concepts from the text
It’s your turn!

What would a student need to know and be able to do to answer the question correctly?
It’s your turn!

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It’s your turn!

What would a student need to know and be able to do to answer the question correctly?
Next steps

• Share the item sampler with
  – State staff
  – Local program managers
  – Teachers

• Discuss with state staff the need for professional development at the state and local levels
Resources for Professional Development

• GED Testing Service has established professional development resources that will be available beginning in the fall of 2012

• Professional development will include
  – Webinars
  – Distance learning courses
  – Preconference and concurrent sessions
  – Half- and full-day workshops
Webinars

- One-hour sessions that will focus on the delivery of specific information, similar to that provided to launch the *Assessment Guide for Educators*
Distance Learning

- Online, interactive courses that allow instructors to gain more in-depth knowledge in specific content areas
  - Webb’s Depth of Knowledge (DOK)
  - What is the Question Really Asking?
  - The Wonderful World of Technology: Computer Tutorial
  - Overview of Content Areas: Reasoning through Language Arts, Social Studies, Science, Mathematical Reasoning
Preconference and Concurrent Sessions

- 1.5- to 3-hour sessions that focus on instructional practices in adult education classrooms that support the 2014 GED® test

- National/Regional Conferences
  - COABE
  - USCAL
  - National Family Literacy
  - National College Transition Network
  - National Career Pathways Conference
  - Correctional Education Association

- State Conferences
  - By invitation of the jurisdiction
  - Logistics provided through the GED Testing Service
Workshops

- Half- and full-day workshops delivered in conjunction with state jurisdictions to address instructional challenges to meet the standards of the new test
  - “Introduction to the 2014 GED® test”
  - “Writing about Reading: Developing an Effective Extended Response and Short Answer”
  - “It’s More than a Main Idea”
  - “Quantitative Problem Solving”
  - “Algebraic Problem Solving”
  - “It’s More than History”
  - “Surrounded by Science”
Accessing Professional Development

- We are currently developing the process for accessing professional development
- Watch your email for an announcement in the next few weeks
“High achievement always occurs in the framework of high expectation.”

Charles F. Kettering (1876-1958)
DISCUSSION AND QUESTIONS