Bonnie Goonen  

Susan Pittman  

June Rall  

Welcome!

If you have a question, please type it into the Q&A option.

Attendee microphones will be muted. You will be in listen only mode.

Today’s presentation is being recorded. It will be archived and available on the IPDAE website within 48 hours.
Objectives

In this session, we will:
- Explore the High Impact Indicators and Focusing Themes for social studies and science
- Investigate areas of instruction and strategies for the classroom
- Share resources and ideas
- Discuss next steps in obtaining additional strategies and activities for the social studies and science classroom

Assessment Targets – PLDs – HIIs

A QUICK REVIEW

<table>
<thead>
<tr>
<th>Below Passing</th>
<th>Pass/High School Equivalence</th>
<th>GED® College Ready</th>
<th>GED® College Ready + Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 - 144</td>
<td>145 - 164</td>
<td>165 - 174</td>
<td>175 - 200</td>
</tr>
</tbody>
</table>

Scores are below the GED® test Passing Standard
Scores at or above the GED® test Passing Standard
Scores indicative of College and Career Readiness
Scores indicative of skills taught in some beginning college-level courses
What do I teach?

Performance Level Descriptors (PLDs)
Helpful tool for the classroom
- Explain in detail the skills students need to demonstrate to pass the test
- Two formats
  - Official Version
  - Test-taker Version

How to use PLDs in the classroom

Use PLDs to:
- Tip 1: Assess student’s current skill level
- Tip 2: Determine when students are ready to test
- Tip 3: Shape learning activities for different types of delivery models
- Tip 4: Add perspective to lesson plans
High Impact Indicators (HIIs):

• Are important skills that are widely applicable
• May currently receive light coverage during GED® test preparation
• Lend themselves to straightforward instruction
• Are based on research

Where to access

• PLDs
  www.gedtestingservice.com/educators/pld

• High Impact Indicators

Don’t forget . . .
The Florida Adult General Education Curriculum Framework for GED® Preparation
FOCUSING SCIENCE INSTRUCTION

Overview of the Science Test

- Content
  - Life Science – 40%
  - Physical Science – 40%
  - Earth and Space Science – 20%
- Themes
  - Human Health and Living Systems
  - Energy and Related Systems
- Science Practices – reasoning and thinking scientifically
- Question types - Technology-enhanced items and two short answers

Too Much to Teach – Too Little Time

HELP
Use Focusing Themes
Science Content Topics

**Life Science (40%)**
- Human body and health
- Organization of life
- Molecular basis for heredity
- Evolution

**Physical Science (40%)**
- Chemical properties and reactions related to human systems
- Energy flows in ecologic networks (ecosystems)

**Earth & Space Science (20%)**
- Interactions between Earth’s systems and living things
- Earth and its system components
- Structure and organization of the cosmos

Focusing Themes

**Human Health and Living Systems**
- Human body and health
- Organization of life
- Molecular basis for heredity
- Evolution
- Chemical properties and reactions related to human systems
- Interactions between Earth’s systems and living things

**Energy and Related Systems**
- Relationships between life functions and energy intake
- Energy flows in ecologic networks (ecosystems)
- Conservation, transformation, and flow of energy
- Work, motion, and forces
- Newton’s Laws of Motion
- Types of energy
- Sources of energy
- Properties/states of matter
- Natural hazards (e.g., earthquakes) and their impact on the earth
- Characteristics of the atmosphere
- Types of planets, asteroids, etc.

Science High Impact Indicators

- **SP.2.b:** Identify and refine hypotheses for scientific investigations.
- **SP.2.e:** Identify and interpret independent and dependent variables in scientific investigations.
- **SP.4.a:** Evaluate whether a conclusion or theory is supported or challenged by particular data or evidence.
- **SP.6.a:** Express scientific information or findings visually.
- **SP.7:** Apply formulas from scientific theories.

"Science is a way of thinking much more than it is a body of knowledge."

*Carl Sagan*

American Scientist & Writer, 1934 – 1996
Teaching the Big Ideas of Science

• Incorporate inquiry based thematic lessons using focusing themes
• Build students’ scientific reasoning skills
• Teach graphics and statistics through a science context
• Integrate the reading and writing process using science texts

Develop science lessons that:
• Allow students to investigate, create, discuss, reflect, and ask about what they are learning
• Incorporate the “big ideas” of the focusing themes
• Connect the different areas of science that are integrated within the theme

Check out the lesson plans on Florida IPDAE to get started!

Antibiotic Resistance
**Build Student’s Scientific Reasoning Skills**

**GED® Sample Science Questions – Look Familiar?**

A rough hypothesis for this investigation is “ozone pollution affects fish hearing.”

Which statement represents the **most appropriate reason** for this hypothesis?

- A. Fish hearing improves as a result of elevated dissolved oxygen levels in water.
- B. Fish hearing remains consistent as a result of elevated dissolved oxygen levels in water.
- C. Fish hearing is correlated with the number of days a fish is exposed to high levels of dissolved oxygen.
- D. Fish hearing is correlated with the number of days a fish is exposed to a low level of dissolved oxygen.

Identify the independent and dependent variable in this investigation:

**Independent:**

**Dependent:**

**Teach Scientific Investigation**

Teach experimental design through real-world application and reporting.

- **Observe:** Make observations
- **Question:** Ask a question or identify a problem
- **Research:** Search for existing answers or solutions
- **Hypothesize:** Formulate a hypothesis
- **Procedure/Experiment:** Design and perform an experiment/collection of data
- **Draw Conclusions:** Analyze the data/make conclusions
- **Communicate:** Report or share your results

**Results Align with Hypothesis** or not at all with hypothesis

**Teach Scientific Investigation**

- **Formulating a Hypothesis**
  
  [Link to resource]

- **Scientific Inquiry**
  
  [Link to resource]
Where do we see statistics, data, and math on the test?

• Questions assessing statistics and data indicators on social studies and science
• Use of calculator and formulas in different content areas
• Charts, tables, and graphs

What is close reading?

“A careful and purposeful rereading of a text.”

Dr. Douglas Fisher
San Diego State University
What do close readers do differently?

<table>
<thead>
<tr>
<th>Close Readers</th>
<th>Not-So-Close Readers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reread</td>
<td>Read the text once</td>
</tr>
<tr>
<td>Focus on the text</td>
<td>Let their thinking wander</td>
</tr>
<tr>
<td>Ask questions</td>
<td>Take the text at face value</td>
</tr>
<tr>
<td>Pay attention to language</td>
<td>Ignore syntax clues</td>
</tr>
<tr>
<td>Uncover deeper meaning</td>
<td>Understand only at surface level</td>
</tr>
</tbody>
</table>

Use Science Texts

Use science texts when teaching close reading strategies

Science News for Students
https://www.sciencenewsforstudents.org/

FOCUSING SOCIAL STUDIES INSTRUCTION

Start by using Hitis and focusing themes.
First, let’s test your knowledge!

What is the national flower of the United States?

Overview of Social Studies Test

- Content
  - 50% - Civics and Government
  - 20% - United States History
  - 15% - Economics
  - 15% - Geography and the World
- Themes
  - Development of Modern Liberties and Democracy
  - Dynamic Responses in Societal Systems
- Social Studies Practices – analyzing, thinking, reasoning
- Technology-enhanced question items

Focusing Themes

U.S. History

Economics

Civics & Government

Geography & the World
Social Studies High Impact Indicators

- **SSP.2.a** Determine the central ideas or information of a primary or secondary source document, corroborating or challenging conclusions with evidence.

- **SSP.2.b** Describe people, places, environments, processes, and events, and the connections between and among them.

- **SSP.3.c** Analyze cause-and-effect relationships and multiple causation, including action by individuals, natural and societal processes, and the influence of ideas.

- **SSP.5.c** Analyze how a historical context shapes an author's point of view.

- **SSP.8.a** Compare treatments of the same social studies topic in various primary and secondary sources, noting discrepancies between and among the sources.

Teaching the Big Ideas of Social Studies

- Use primary and secondary sources
- Incorporate thematic lessons using focusing themes
- Teach close reading strategies in a social studies context
- Teach visual literacy skills

Why do I need to teach primary sources?

<table>
<thead>
<tr>
<th>Indicator</th>
<th>What to look for in student work: Students' work shows they have . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSP.2.a</td>
<td>differentiated between the concepts of topic and main idea.</td>
</tr>
<tr>
<td></td>
<td>identified the topic and/or main idea of a piece of text.</td>
</tr>
<tr>
<td></td>
<td>identified supporting details for a given main idea.</td>
</tr>
<tr>
<td></td>
<td>summarized a piece of text.</td>
</tr>
<tr>
<td></td>
<td>fully explained relevant details in the text that support the main idea</td>
</tr>
<tr>
<td></td>
<td>located a single piece of evidence in the text.</td>
</tr>
<tr>
<td></td>
<td>located multiple pieces of evidence in a text.</td>
</tr>
<tr>
<td></td>
<td>differentiated between relevant and irrelevant evidence.</td>
</tr>
<tr>
<td></td>
<td>used evidence to support or challenge an author’s conclusion.</td>
</tr>
</tbody>
</table>
• Primary Sources: Looking for the Answer in the Constitution

Try Scavenger Hunts

Primary Sources on the GED Test

Social Studies - Candidate Name

The answer below is from the U.S. Supreme Court decision in Youngstown Sheet & Tube Company et al. v. Sawyer (1950).

MRS. JUSTICE BLACK delivered the opinion of the Court.

We are asked to decide whether the President was acting within his constitutional power when he issued an order directing the Secretary of Commerce to take possession of and operate most of the Nation’s steel mills.

The President’s powers, if any, to issue the order must come either from the Constitution of the United States or from the Constitution itself.

The President’s power to interfere with constitutional powers held by the Congress in Control of the Armed Forces has the ultimate power as chief of the Executive to take possession of private property in order to keep panic away from election producers. This is but the one man’s name. Yet it is his personal authority.

Based on this, what did the Court want to prevent?
A. Judicial interference with legislative powers
B. Executive interference with legislative powers
C. Congressional interference with executive powers
D. Congressional interference with executive powers

Or try a newspaper scavenger hunt!

One Text - Numerous Concepts
Start with one primary source to build a social studies thematic lesson

The Wonderful World of Social Studies
http://www.floridaipdae.org/index.cfm/fuseaction/resources.GEDAHS&catid=16A9B399B9E29F32AE4A749237CCC5A604DF5D3710001D29C4D4820A2C
What are the concerns when reading primary sources?

Close Reading and Primary Sources

“We the People of the United States, in Order to form a more perfect Union, establish Justice, insures domestic Tranquility, provide for the common defense, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.”

Check out the “Reading Like a Historian” Webinar
https://www.floridaipdae.org/index.cfm?fuseaction=resources.GEDAHS&cagid=B64C5DF1B41B55A6105126A95015C843FC59CB1AE84A8641AE377148BC196028

Teach Visual Literacy Strategies

Editorial Cartoons

Don’t Forget About the Graphics
https://www.floridaipdae.org/index.cfm?fuseaction=resources.GEDAHS&cagid=5C10479B5E628725DD6873C4BBFB5CFE60437A52CA02E52D2EEFC0A0F850B25
• Teach the “Big Ideas”
• Build students’ close reading skills
• Use hands-on demonstrations and experiments
• Have students construct and interpret graphs, charts, tables, diagrams, photographs, and editorial cartoons
• Connect social studies and science to everyday life
GED® Preparation Train the Trainer Workshops for Social Studies and Science

- Access to materials presented at the GED Testing Service® Summer Conference
- Current information on the GED® Test Outcomes in Florida
- Access to additional materials and strategies for your classroom
- Ability to share information with your fellow educators

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The IPDAE Team