ipdae INSTITUTE FOR THE PROFESSIONAL DEVELOPMENT OF ADULT EDUCATORS

The Changing Landscape of Adult Education

Presented by: Ronald Cruz

www.floridaipdae.org

Objectives

To improve overall adult student achievement by:

- Getting to know our adult **students** better
- Understanding what knowledge (**content standards**) and skills (**standards of practice**) students need to master in order to be successful
- Exploring readily available **resources** from the IPDAE Website that target adult education content standards.
- Understanding the **assessment** that will measure students' performance against these standards
- Using knowledge of students, curriculum, resources and assessment to **plan/design** lessons that will help students succeed.

The ipdae Experience

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Knowing Our Students

- Who are they?
- What skills do they need?
- What skills do they have?
- Are they prepared to be college and career ready?

What is ABE?

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What is the entrance criteria for the program?

The GED® program is open to any student age sixteen or over who does not have a State of Florida recognized high school diploma. A student of legal school age must have declared his/her intent to withdraw from the regular school program or provide proof of withdrawal. State Board of Education Rule 6A.6.014.

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"The adult education system cannot stand still while the world around us is changing."

Cheryl Keenan, Director of Adult Education and Literacy, OVAE: NCFL 2013

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As Instructional Leaders

- **Knowledge** to lead implementation of College and Career Readiness Standards (CCRS)
- **Vision** to integrate the implementation of the CCRS into broad education improvement efforts
- **Metrics** to clearly describe what successful progress in implementation looks like and facilitates a flexible cycle of change
- **Build capacity** so that all members of the education landscape are learning together
- **Stay engaged** to keep informed of the latest developments and resources

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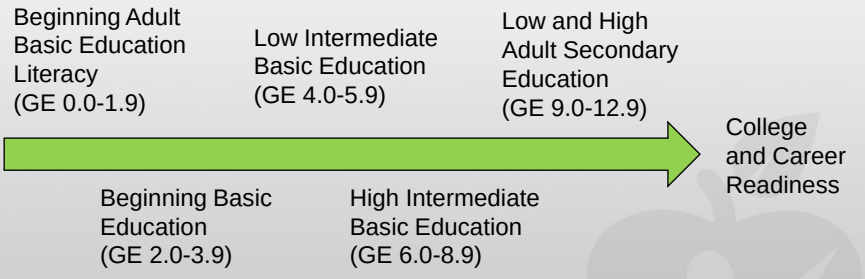
Why the Emphasis on Higher Skills?

- Students entering the workforce need critical knowledge and skills that can be used on an ongoing basis
- Pursuing a career pathway that will support a family requires the ability to perform complex tasks
- Adult education programs must provide students an opportunity to acquire more advanced skills

English Language Arts/Literacy Standards demand

- Robust analytic and reasoning skills
- Strong oral and written communication skills

English Language Arts (ELA)



Programs must	Students must
• Rethink content • Rethink instructional practices and materials • Rethink process • Rethink programmatic structure	• Read more rigorous text; • Produce evidence-based writing; and • Achieve higher-order mathematical problem-solving skills

What are the Opportunities?

Programs have the opportunity to:

- Move past teaching to a test
- Use a more conceptual approach to learning
- Meet the long-term, not just short-term needs of students
- Show students the relevance of what they are learning; thus enhancing student motivation and outcomes

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Getting to Know Our Students

NRS and GE Levels as Related to TABE Scores

NRS Levels GE Levels	FDOE LCPs*	TABE Level	Reading	Total Mathematics	Language
ABE Beginning Literacy (GE 0-1.9)	A, E, J	L/E	≤367	≤313	≤389
ABE Beginning Basic (GE 2.0-3.9)	B, F, K	E/M	368-460	314-441	390-490
ABE Intermediate Low (GE 4.0-5.9)	C, G, M	M/D	461-517	442-505	491-523
ABE Intermediate High (GE 6.0-8.9)	D, H, N	D/A	518-566	506-565	524-559

NRS TEST BENCHMARK FOR ABE AND ASE EDUCATIONAL FUNCTIONING LEVELS

GE Levels	TABE Performance Scores
Beginning ABE Literacy (GE 0–1.9)	**Reading: ≤367 Total Mathematics: ≤313 Language: ≤389**
Beginning Basic Education (GE 2.0–3.9)	**Reading: 368 - 460 Total Mathematics: 314 - 441 Language: 390 - 490**
Low Intermediate Basic Education (GE 4.0–5.9)	**Reading: 461 - 517 Total Mathematics: 442 - 505 Language: 491 - 523**
High Intermediate Basic Education (GE 6.0–8.9)	**Reading: 518-566 Total Mathematics: 506 - 565 Language: 524 – 559**
Low Adult Secondary Education (GE 9.0-10.9)	**Reading: 567-595 Total Mathematics: 566 - 594 Language: 560 - 585**
High Adult Secondary Education (GE 11.0–12.9)	**Reading: 596 and above Total Mathematics: 595 and above Language: 586 and above**

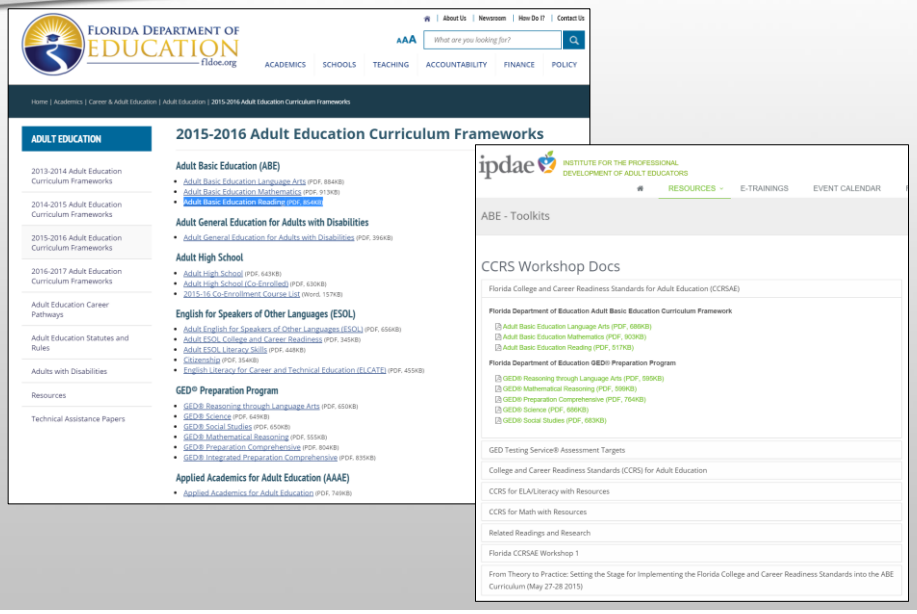
Use your own student roster data to determine the GE Levels of your students.

Label them as follows:

- Beginning ABE Literacy – LIT
- Beginning Basic Education – BEG
- Low Intermediate Basic Education – LOW
- High Intermediate Basic Education - HIGH
- Low Adult Secondary Education - LASE
- High Adult Secondary Education - HASE

You may use the student grouping worksheet to assign students in their GE Level Groups for easy differentiation.

Your Curriculum Frameworks



Content Standards

Let's examine the ABE Mathematics Curriculum Frameworks.

Level

Domain

Anchor Standard

NRS Level 3 GE: 4.0 – 5.9	NRS Level 4 GE: 6.0 – 8.9
CCR.MA.ABE.9. **Statistics and Probability**	
3.1. Develop understanding of statistical variability. a) Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. b) Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. c) Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	**4.1. Summarize and describe distributions.** a) Summarize numerical data sets in relation to their context, such as by: • Reporting the number of observations. • Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. • Giving quantitative measures of center such as median and/or mean. • Giving quantitative measures variability such as interquartile range (data divided into quarters) and/or mean absolute deviation (average distance between data value and the mean). • Describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. b) Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

Benchmark Skill

CCRS ABE Mathematics Domains

1. Base Ten Numbers and Operations
2. Algebraic Thinking
3. Measurement and Data
4. Geometry
5. Fractions and Operations
6. Expressions and Equations
7. The Number System
8. Ratios and Proportional Reasoning
9. Statistics and Probability
10. Functions

3.2 Summarize and describe distributions. a) Display numerical data in plots on a number line, including dot plots (graph of data using dots), histograms (bar graph using ranges of data), and box plots (graph uses rectangles with lines extending from the top and bottom).	**4.2 Use random sampling to draw inferences about a population.** a) Understand that statistics can be used to gain information about a population by examining a sample of the population • Generalizations about a population from a sample are valid only if the sample is representative of that population. • Understand that random sampling tends to produce representative samples and support valid inferences. b) Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. c) Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.
	4.3 Draw informal comparative inferences about two populations. a) Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities. • Measuring the difference between the centers by expressing it as a multiple of a measure of variability. b) Use measures of center (median and mode) and measures of variability (interquartile range and mean absolute deviation) for numerical data from random samples to draw informal comparative inferences about two populations.

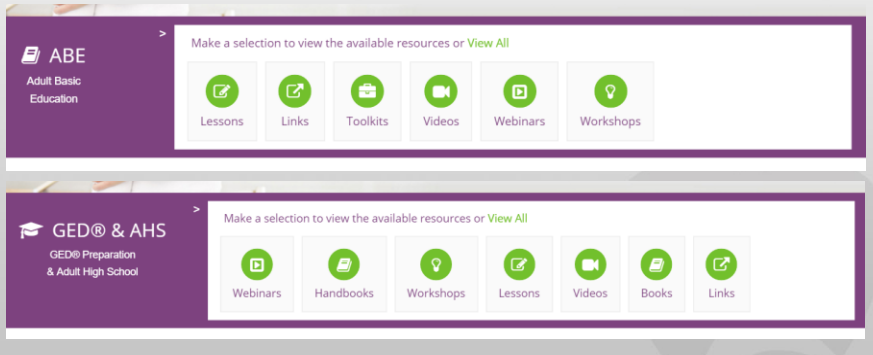
Identifying Student Needs

Let's examine the strengths and needs of some students.

1. Highlight the students' scale scores and identify their GE Level.
2. Identify the weaker content area.
3. Within the content area, identify/highlight the weak objective(s).
4. Identify the weak objective(s) that were the most common among the 6 students.

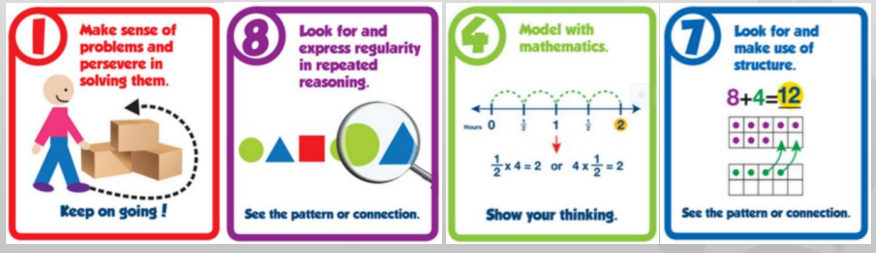
Identifying Available Resources

Let's explore the IPDAE website to find some useful resources that will help address the students' needs.

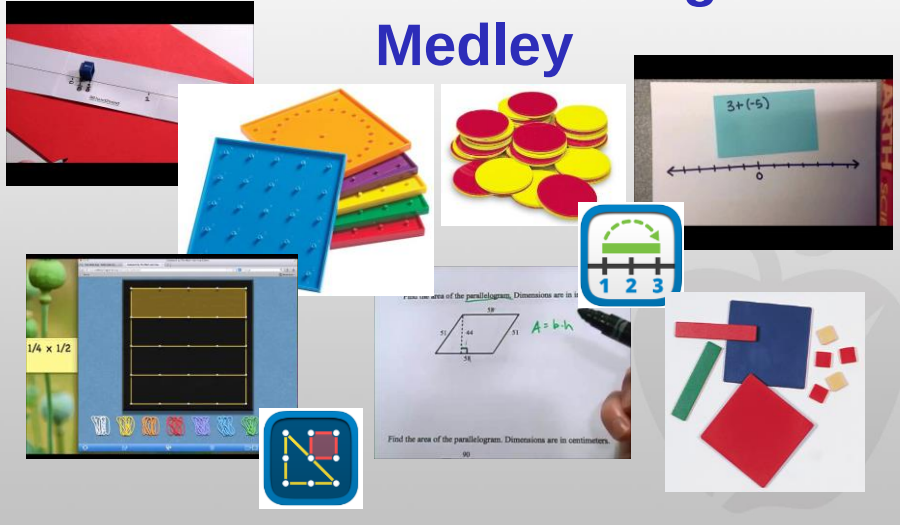


Standards of Mathematical Practice

- MP.1 Build Solution Pathways and Lines of Reasoning
- MP.2 Abstracting Problems
- MP.3 Furthering Lines of Reasoning
- MP.4 Mathematical Fluency
- MP.5 Evaluating Reasoning and Solution Pathways



Instructional Strategies Medley



Sample Problem

1. Amanda has $4.00 remaining in her checking account right before she made an Internet purchase from Itunes for a discounted music album for $6.00. How much will be the balance on her checking account after her purchase?

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Strategies for Problem Solving

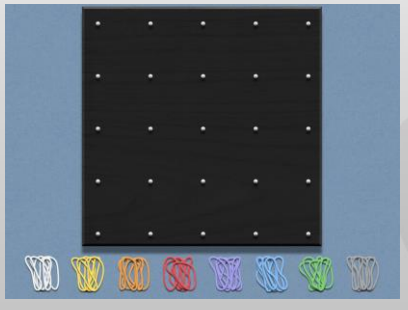
Sample Problem

2. Jill places 3 apples and 4 oranges inside a brown paper bag. If she pulls a fruit at random from the same bag, what is the probability that she will pull out an apple?

   Jill pulled out an apple from the bag. If she tries to pull out another fruit at random from the same bag, what is the probability that she will pull another apple?

Sample Problem

3. A cupcake recipe asks for $\frac{3}{4}$ of a cup of butter. Tony wants to make $\frac{1}{2}$ of the original recipe. How many cups of butter will Tony need?



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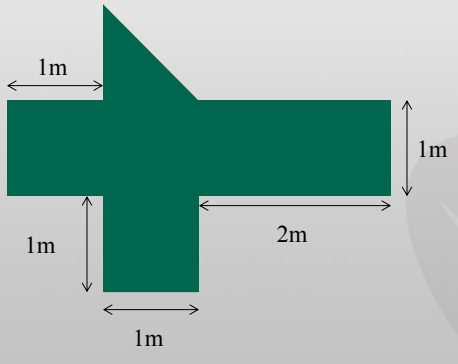
Strategies for Problem Solving

Sample Problem

4. Kelly wants to cover a section of her garden below with turf. How much turf does she need to cover the entire area?



Websites:

http://www.mathlearningcenter.org/web-apps/geoboard/

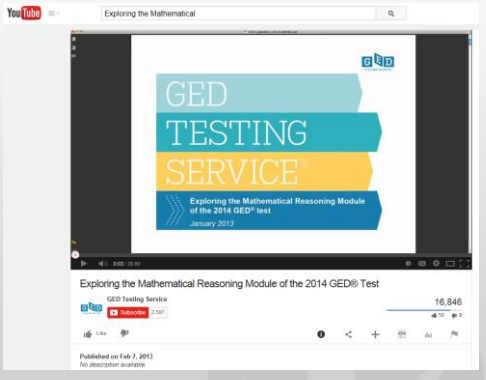
http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html

http://www.mathlearningcenter.org/web-apps/number-line/

Understanding the Assessment

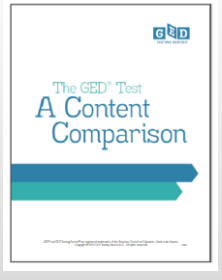
Exploring the Math Reasoning Module

Please visit myged.com to and view the webinar on Exploring the Mathematical Reasoning Module of 2014 GED Test to get more information on the framework, content and format of the new test.



http://youtu.be/LtXOZCztq64

Differences



2002 Series GED® test	2014 GED® test
• One test with two parts, one of which allowed use of calculator • Content – 25-30% Number Operations, Number Sense – 25-30% Measurement and Geometry – 25-30% Data, Statistics, and Probability – 25-30% Algebra, Functions and Patterns • Casio fx260-Solar	• One test with calculator allowed on most items • Content – 45% - Quantitative Problem Solving • Number operations • Geometric thinking – 55% - Algebraic Problem Solving • Texas Instruments - TI 30XS • Integration of mathematical practices
• Item types – Multiple choice – Gridded response – Coordinate plane grid	• Technology-Enhanced Items – Multiple choice – Fill-in-the-blank – Hot-spot – Drag-and-drop – Drop-down

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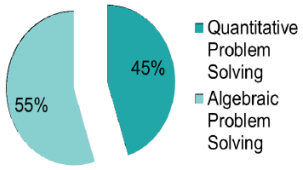
Differences

Mathematical Reasoning

- Some items require
  - procedural skill
  - fluency
  - problem solving
- Presented in academic and workforce contexts
- Statistics and data interpretation standards are also included in other tests



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Similarities

2002 GED® test	2014 GED® test
• Represent and use numbers in a variety of forms	• Apply number sense concepts with rational numbers
• Calculate mentally, on paper, and with a calculator	• Perform operations on rational number
• Represent, analyze, and apply whole numbers, decimals, fractions, percents in a wide variety of situations.	• Solve multistep, arithmetic, real-world problems with rational numbers, ratios or proportions, percents.
• Use Pythagorean Theorem	• Use Pythagorean Theorem

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Similarities

2002 GED® test	2014 GED® test
• Solve and estimate solutions to problems involving, length, perimeter, area, surface area, volume • Evaluate formulas	• Compute surface area and volume of composite 3-D geometric figures, given formulas as needed • Evaluate linear, polynomial, and rational expressions by substituting integers for unknown quantities

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What's new?

What's new on the 2014 Mathematical Reasoning Test?

- Identify absolute value of a rational number
- Determine when a numerical expression is undefined
- Factor polynomial expressions
- Solve linear inequalities
- Identify or graph the solution to a one variable linear inequality
- Solve real-world problems involving inequalities
- Write linear inequalities to represent context
- Represent or identify a function in a table or graph

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What's NOT included?

What's not on the 2014 Mathematical Reasoning Test?

- Select the appropriate operations to solve problems
- Relate basic arithmetic operations to one another
- Use estimation to solve problems and assess the reasonableness of an answer
- Identify and select appropriate units of metric and customary measures
- Read and interpret scales, meters, and gauges
- Compare and contrast different sets of data on the basis of measures of central tendency
- Recognize and use direct and indirect variation

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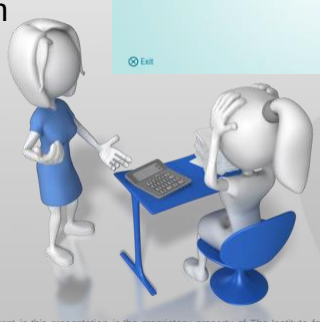
Navigating the Item Sampler

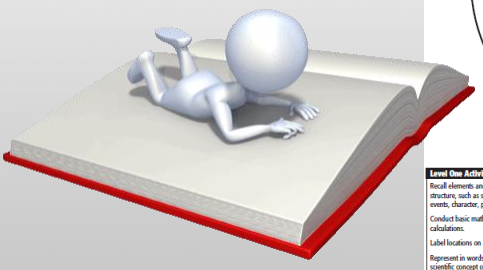
Look for:

- Calculator
- Calculator Reference
- Formula Sheet
- Æ Symbol
- Flag for Review
- Answer Explanation

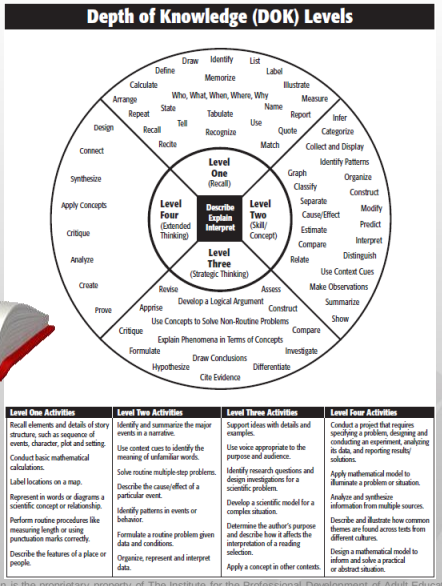


Webb's Depth of Knowledge

Level 1: Recall
Level 2: Skill/Concept
Level 3: Strategic Thinking
Level 4: Extended Thinking



Webb's DOK Handout



Summary

Summary

- We got to know our adult **students** better
- We understood what knowledge (**content standards**) and skills (**standards of practice**) students need to master in order to be successful
- We explored readily available **resources** from the IPDAE Website that target adult education content standards.
- We gained understanding of the **assessment** that will measure students' performance against these standards
- We used our knowledge of students, curriculum, resources and assessment and **designed** a mini-lesson that will help students succeed.

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Reflection

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Evaluation

Training Evaluation

https://www.surveymonkey.com/r/PHG796N


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