

## Graphic Organizers – Powerful Tools for the Classroom

- The webinar will start at 3:30 pm EDT/ 2:30 pm CDT.
- If you have a technical question before the webinar, please type it into the question panel. We will do our best to answer your question.
- When you log on, check your audio to make sure your headphones are working properly.
- If you use your phone to call in, be sure to enter the appropriate codes.
- As you enter the webinar, your audio will be muted to avoid a lot of background noise.
- You will not hear anything until 3:30 p.m. when the webinar goes live, so please don't think that anything is wrong.
- If you haven't downloaded the PowerPoint handout and guide, please feel free to do so from the handout panel.

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## Graphic Organizers Powerful Tools for the Classroom

A Workshop by GED Testing Service®

## Welcome!

- Daphne Atkinson, GED Testing Service
- Debi Faucette, GED Testing Service
- Bonnie Goonen, Consultant to GEDTS
- Susan Pittman, Consultant to GEDTS

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## Session Objectives



- Learn what research says about the use of graphic organizers on making curriculum supportive and improving student achievement
- Explore different graphic organizers used in GED® professional development activities
- Learn when and how to use the various types of graphic organizers
- Share resources

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## Making Curriculum Supportive



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## What is a graphic organizer?

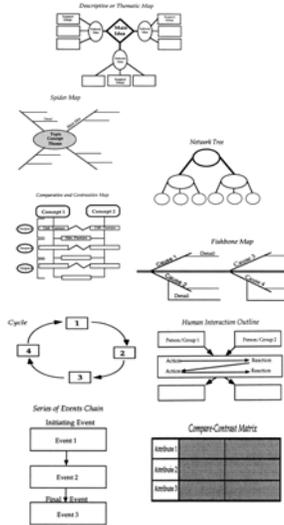
A visual and graphic display that depicts the relationships between facts, terms, and/or ideas within a learning task.



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## Types of Graphic Organizers



- **Cyclical** – process of events
- **Hierarchical** – rotation between concept and its levels
- **Conceptual** – how a main concept is supported by facts, evidence, characteristics
- **Sequential** – chronological order of events



## According to the Research

Text and graphic/picture formats are one of the most basic ways to make a lesson accessible to most learners (Allan Paivio's theory of dual coding). Decades of research support that use of graphic organizers improves student learning.

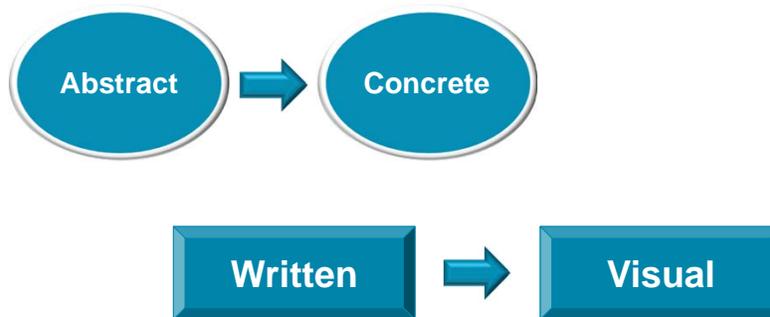


Hall & Strangman, 2002; Dexter, D. D., Park, Y. J., & Hughes, C. A. (2011); Douglas, K. H., Ayres, K. M., Langone, J., & Bramlett, V. B. (2011)



## Why Are They Effective?

- Involve graphics to help students understand complex ideas and remember them longer

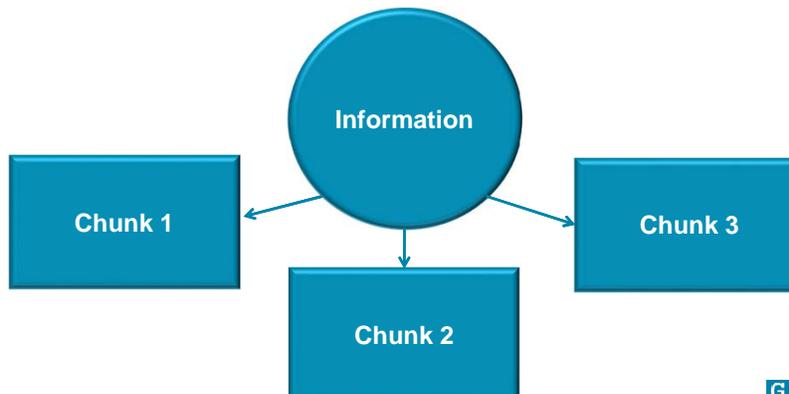


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## Why Are They Effective?

- Organize information into chunks for easier memory and for developing processes

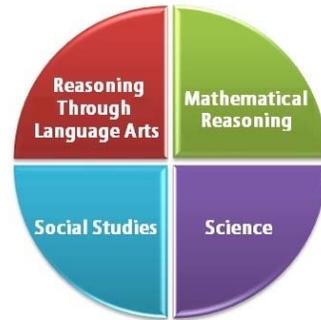


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## Why Are They Effective?

- Require students to construct responses “which targets higher-order thinking skills”
- Builds analytical, critical, and creative thinking skills in all academic areas



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## Why Are They Effective?

- Provide a scaffolded approach to keep students “on track”
- Reduce information processing demands
- Engage students

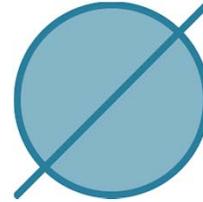


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## Graphic Organizers: What are the obstacles?

- May be viewed as an additional task
- Time consuming to create “answer keys”
- Can be used incorrectly
- Can be stressful
- Can impact notetaking skills
- May be seen as blocking creativity



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## When to Use Graphic Organizers

**Before** Instruction to activate thinking

**During** Instruction to process information

**After** Instruction to assess

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## Advantages of Graphic Organizers for Instructors

- A reference when presenting lessons and assisting in interactivity
- Structures lesson notes in a way that makes sense to students
- Helps in assessing your students' understanding of what they are reading
- Observe student thinking processes on what you taught as a class, as a group, or independently

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## How to Use Graphic Organizers

- Familiarize yourself with the graphic organizer that you will use.
- Explain to students the purpose of the graphic organizer and its framework.
- Present the specific graphic organizer. Model the use of the graphic organizer. Make your thinking visible.
- Have students assist you in completing a graphic organizer.
- Assign the graphic organizer as an individual, paired, or group activity.
- Review students' work. Generate classroom discussion on the use of the graphic organizer and the outcome.

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# Reasoning through Language Arts

Graphic Organizers and Tools from GEDTS

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## Why use graphic organizers in RLA?

- Provides a step-by-step structure for writing
- Assists in the process of analyzing and evaluating text
- Aids in a better understanding of relationships
- Encourages decision making
- Makes it easy to classify ideas and communicate
- Supports better understanding of character traits, plot structure, sequence of events, and themes

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## What is your favorite?

What is your favorite type of graphic organizer to use when teaching reading and writing skills in your GED® classroom?



## One of Our Favorites

Both Sides Now		
Evidence that Supports		Evidence that Opposes
	Question or statement Which position is better supported?	
Decision (Claim)		
Reasons (Analysis/Evaluation)		

Assists students in:

- Interacting with the text
- Planning their argumentative response by
  - Listing the evidence that supports
  - Listing the evidence that opposes
  - Evaluating the evidence
  - Selecting the position that is better supported and why



## Example

Both Sides Now		
Evidence that Supports		Evidence that Opposes
Will ease traffic congestion	<b>Which position regarding the building of a new road is better supported?</b>	Will bypass town and harm it
Will create jobs		Road paid for with federal funds
Improving highway means jobs for construction workers		Few residents will use road
Will bring more long-distance travelers to area		Will lose money because of bypass
30% increase in traffic that won't impact city roads		Construction jobs are only temporary
Will attract national motel and restaurant chains		Minimum wage jobs will remain
Will eliminate truck traffic through city by as much as 75%		Highway will bypass four cities in one district, so fewer travelers will stop in the cities
Will reduce road maintenance costs		2001 study shows bypasses have negative impact on local businesses
Representative held town meetings		Representative did not listen to local concerns in her town meetings

**Decision (Claim)**  
When comparing the two positions, Representative Walls has the better supported position.

**Reasons (Analysis/Evaluation)**  
The press release provides a stronger argument because it provides more factual and valid evidence instead of opinions.

**Or, I can take the other side**

**Decision (Claim)**  
When looking at both arguments, the writer of the letter to the editor has the better supported argument.

**Reasons (Analysis/Evaluation)**  
The letter to the editor provides a stronger argument because the writer is a resident and more credible and uses more factual evidence.

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## More RLA Graphic Organizers

- TIPP?
- Unpack the Prompt
- Close Reading Questions
- Evaluating What You Have Read
- Types of Evidence
- Both Sides Now
- Pros and Cons
- Constructed Response Graphic Organizers
- Thesis/Claim and Evidence Frames
- Question/State/Cite/Explain
- Introduce/Cite/Explain/Elaborate
- Revising and Editing Checklist
- Nonfiction Text Structures
- Character Inferences
- It Says – I Say – And So
- Making Inferences
- QtA
- Making Text Connections

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## Where to Find Them

- What Students Need to Know: GED® RLA's Extended Response: December 2017 (*Both Sides Now*)
- Thinking Strategies for Crafting Constructed Responses: One Step at a Time - Part 1: May 2016 and Part 2: June 2016 (*Do/What, Both Sides Now, Different Types of Evidence, Frames, State-Cite-Explain, Editing Checklist*)
- Argumentative Writing: A Key to Teaching Constructed Response: June 2015 (*Do/What, Both Sides Now, Prewriting Organizer: Toulmin Model, Frames, Constructed Response Graphic Organizers, Explain the Evidence Assessing the Claim*)
- Close Reading: A Key to Teaching Constructed Response: May 2015 (*Patterns of Organization for Nonfiction Text, Annotating the Text, QtA*)

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# Social Studies

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## Why use graphic organizers in Social Studies?

- Helps students build focus, especially when teaching cause and effect or compare and contrast relationships
- Assists in “chunking” information
- Enhances reading comprehension of primary and secondary sources
- Assists in identifying important information

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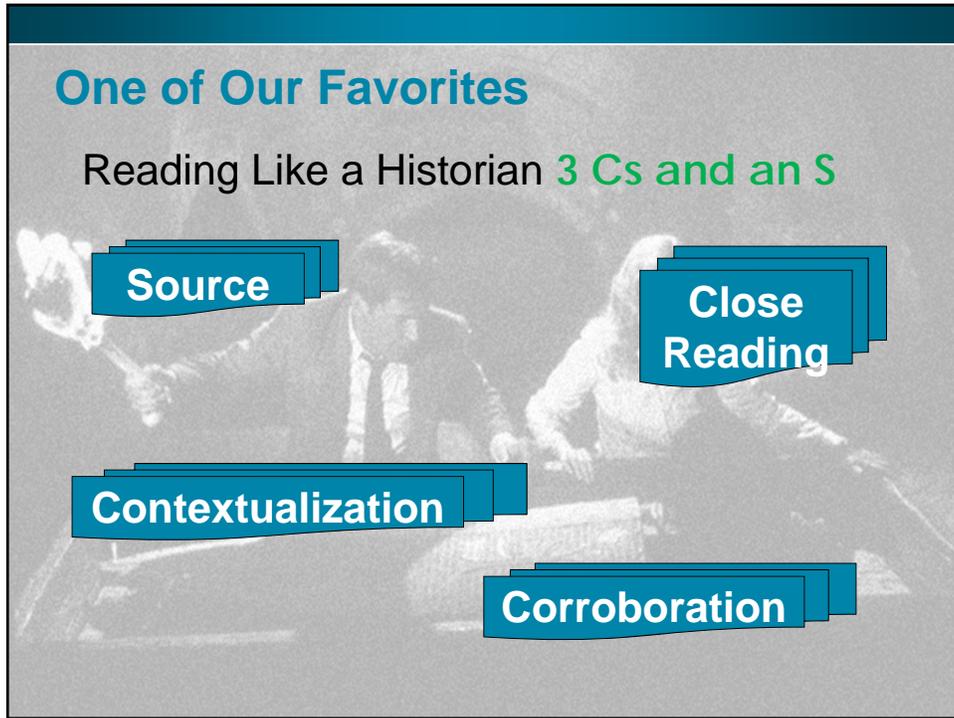
## What is your favorite?

What is your favorite type of graphic organizer to use when teaching social studies in your GED® classroom?



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## Examples

<b>Sourcing</b> Who made this source? Where did it come from?	
<b>Contextualizing</b> Imagine the setting around this document. How does that world differ from our own? What does this source tell you about that world?	
<b>Close Reading</b> What does this document tell you? Make a brief list of details.	
<b>Corroborating</b> Does this document tell you something new or reinforce what you already knew? Does it contradict something you already knew?	
<b>Evaluating</b> Does this document change your opinion? Why or why not?	

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## More Social Studies Graphic Organizers

- Primary Source Analysis Tool
- Read Like a Historian – Using S + 3Cs + E
- Read Like a Historian
- Questions for Analyzing Primary Sources
- Asking Questions of Photographs
- Cartoon Analysis Worksheet
- Making Inferences

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## Where to Find Them

- Read Like a Historian: Differentiating Instruction – One Size Doesn't Fit All!: October 11, 2016 (*Read Like a Historian 3 Cs and an S*)
- Hitting the Mark – Taking a Deeper Dive into Reading: March 2016 (*Three Reads, K-N-W-S*)
- Close Reading: A Key to Teaching Constructed Response: May 2015 (*Patterns of Organization for Nonfiction Text, Annotating the Text, QtA*)

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# Science

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## Why use graphic organizers in Science?

- Facilitates comprehension of science content by showing interrelatedness of ideas
- Provides visual clues
- Assists in understanding of abstract concepts and vocabulary
- Scaffolds information and processes

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## What is your favorite?



What is your favorite type of graphic organizer to use when teaching science skills in your GED® classroom?



## One of Our Favorites

Describe the problem or ask a question

**State the Hypothesis**

**Design the Experiment**

Describe the control group

Describe the experimental group

Independent Variables	Dependent Variables
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**Collect Data**

**Conclusions**

- Assists students in:
  - Breaking down the steps of a scientific investigation
  - Organizing information needed to conduct an experiment
- Can be used with hands-on experiments, scenarios, or source text information



## Example

Have students use the graphic organizer to design an experiment for the following scenario.

A new brand of fertilizer called *Rapid Grow* hits the market accompanied by advertisements that claim it is better than the leading brand. The current leading brand, *Super Plants*, is famous for its slogan “What plants like best”.

Design an experiment to test the companies' claims, making sure to include descriptions of:

- The independent variable
- The dependent variable
- The control group
- The experimental group
- A *step-by-step* explanation of the experiment including explanations of what kind of **data** you would collect to form your conclusion



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## More Science Graphic Organizers

- Circle of Inquiry
- Building on a Theme Lesson Planner
- Analyze the Prompt
- Preparing the Response
- Scientific Method Flow Chart
- Experimental Design Graphic Organizer
- Types of Graphs
- Question and Answer Relationships – QAR
- Getting the GIST (5 Ws and H)

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## Where to Find Them

- From the Headlines: October 2017 (*Circle of Inquiry, Theme Lesson Planner, Venn Diagram*)
- How Do I Display That: August 2017 (*Types of Graphs*)
- Taking the Struggle Out of Science: December 2016 (*Experimental Design Organizer, Constructed Response Organizers*)
- Scientific Minds Want to Know: November 2015 (*Scientific Design Organizers, Comparison Alley*)
- Close Reading: A Key to Teaching Constructed Response: May 2015 (*Patterns of Organization for Nonfiction Text, Annotating the Text, QtA*)

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# Mathematical Reasoning

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## Why use graphic organizers in math?

- Helps students think through the problem-solving process (organization and structure)
- Processes important from non-important information
- Helps identify missing information
- Mastery of vocabulary and mathematical concepts
- Provides spatial arrangement
- Assists in understanding abstract concepts through concrete representations

Zollman - 2009

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## What is your favorite?

What is your favorite type of graphic organizer to use when teaching math skills in your GED® classroom?



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## Example – Solve It!

Make a Table				Write an Equation
Red	Blue	Yellow	Total	Write an equation. Use substitution. $r + b + y = 96$  $r + b + y = 96$ ( $r = 2b$ and $b = 5y$ ) $2b + b + y = 96$ (substitute $r = 2b$ )  $2(5y) + 5y + y = 96$ (substitute $b = 5y$ )  $10y + 5y + y = 16y = 96$ so $y = 6$  $y = 6, b = 30, r = 60$
20	10	2	32	
30	15	3	48	
40	20	4	64	
50	25	5	80	
60	30	6	96	



## More Math Graphic Organizers

- K-N-W-S
- Frayer Model (Vocabulary)
- SOLVE
- Goals and Givens
- SQRQC!
- Four Corners and a Diamond
- Problem Solving Graphic Organizer



## Where to Find Them

- Making Mathematical Thinking Processes Visible: April 2016 (*Three Reads, Noticing and Wondering, SOLVE, Goals and Givens*)
- Hitting the Mark – Taking a Deeper Dive into Reading: March 2016 (*Three Reads, K-N-W-S*)
- Improving Students' Mathematical Problem-Solving Skills: April 2015 (*Frustration Model, K-N-W-S, Four Corners, SQRQCQ*)

## A Short Recap

Summing It All Up!

## A Recap: Reasons for Using Graphic Organizers

Graphic organizers are tools for

- Critical and creative thinking
- Organizing information
- Understanding information and relationships
- Depicting knowledge and understanding
- Optimizing self learning
- Every discipline

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## A Recap: A Few Tips

- Model how to use the organizers
- Avoid complete sentences
- For complex material, consider teacher-generated organizers or partially completed organizers
- Let students color outside the lines
- Offer a variety of organizers

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## Tuesdays for Teachers



### Next Tuesdays for Teachers – June 26

- More content-based information
- More strategies and activities
- More resources



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# Questions

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# Thank you!

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