



Curriculum Development for the Gifted: Key Features in Classroom Practice

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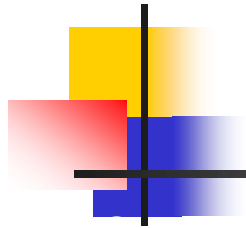


How People Learn

- New knowledge is constructed based on existing conceptions and beliefs
- Usable knowledge is connected and organized around important concepts that support transfer of learning
- The use of deliberate learning strategies to scaffold instruction

- National Research Council, 2000

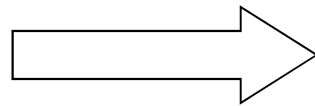
Learner Characteristics and Corresponding Emphases in the Curriculum



THE LEARNER

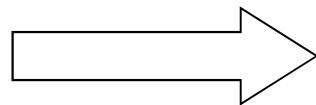
THE CURRICULUM

Precocity



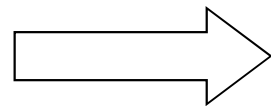
Advanced content (Provides opportunities for new learning)

Intensity



Process/product depth considerations (Enhances engagement and creative production; allows utilization of information in a generative way)

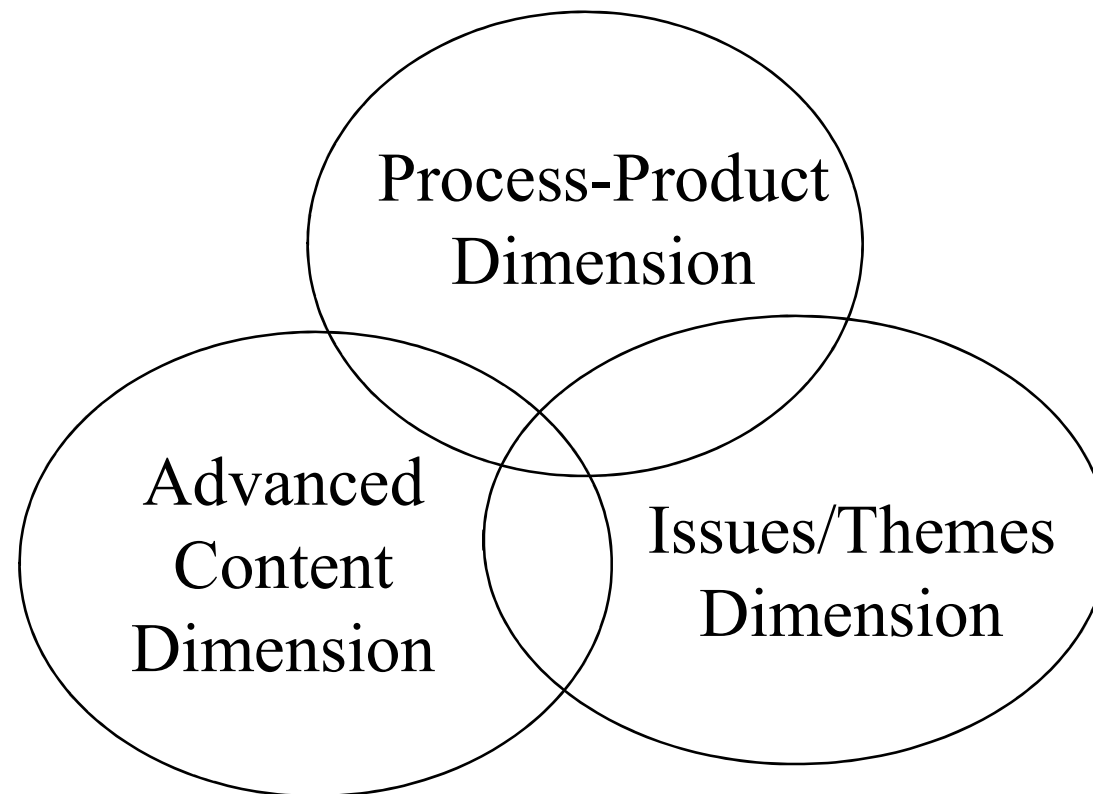
Complexity



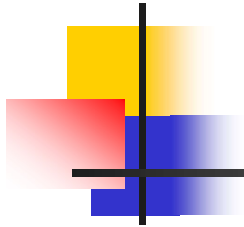
Issues/concepts/themes/ideas across domains of learning (Allows students to make connections across areas of study and to work at a level of deep understanding)



The Integrated Curriculum Model



- VanTassel-Baska, 1986



Create a concept map for the idea of "differentiation".



What is Differentiation?

The process of differentiation is the deliberate adaptation and modification of the curriculum, instructional processes, and assessments to respond to the needs of gifted learners.



What is Differentiated Curriculum for the Gifted?

Features

- Acceleration
- Complexity
- Depth
- Challenge
- Creativity



Example of differentiated task

- Use descriptive statistics (ie.mean, frequencies and percentages) to analyze data on career choices of college graduates over the past five years in Hong Kong, prepare graphs to illustrate your understanding of the data, and present findings.
- Why are these the top choices, do you think? Are there patterns in the data?



Example of differentiated task

- Analyze the social, political, and economic issues that influenced three ancient civilizations: Egyptian, Greek, and Roman. Synthesize their influence on each culture and evaluate how each issue contributed to cultural decline. Use at least 3 sources (one primary) to substantiate your claims in a 6-page research paper.



Example of differentiated task

- Read a selected novel by Nobel prize winner Marquez and research how the theme of “man’s inhumanity to man” is central to the work. How can this theme be applied to the period in which he lived? To other artistic works then and now? Write an essay comparing the use of this theme in selected works.



Example of differentiation

- Design an art product (your choice of a vase, a painting, or a collage of found objects) to demonstrate your understanding of the elements of color, balance, perspective, and theme. Write an artist's statement about your art object that synthesizes its features and situates it in an artistic tradition. Exhibit your work in an appropriate context.



Your turn

- **Create a differentiated task demand for your classroom, using the criteria discussed and/or the examples provided.**

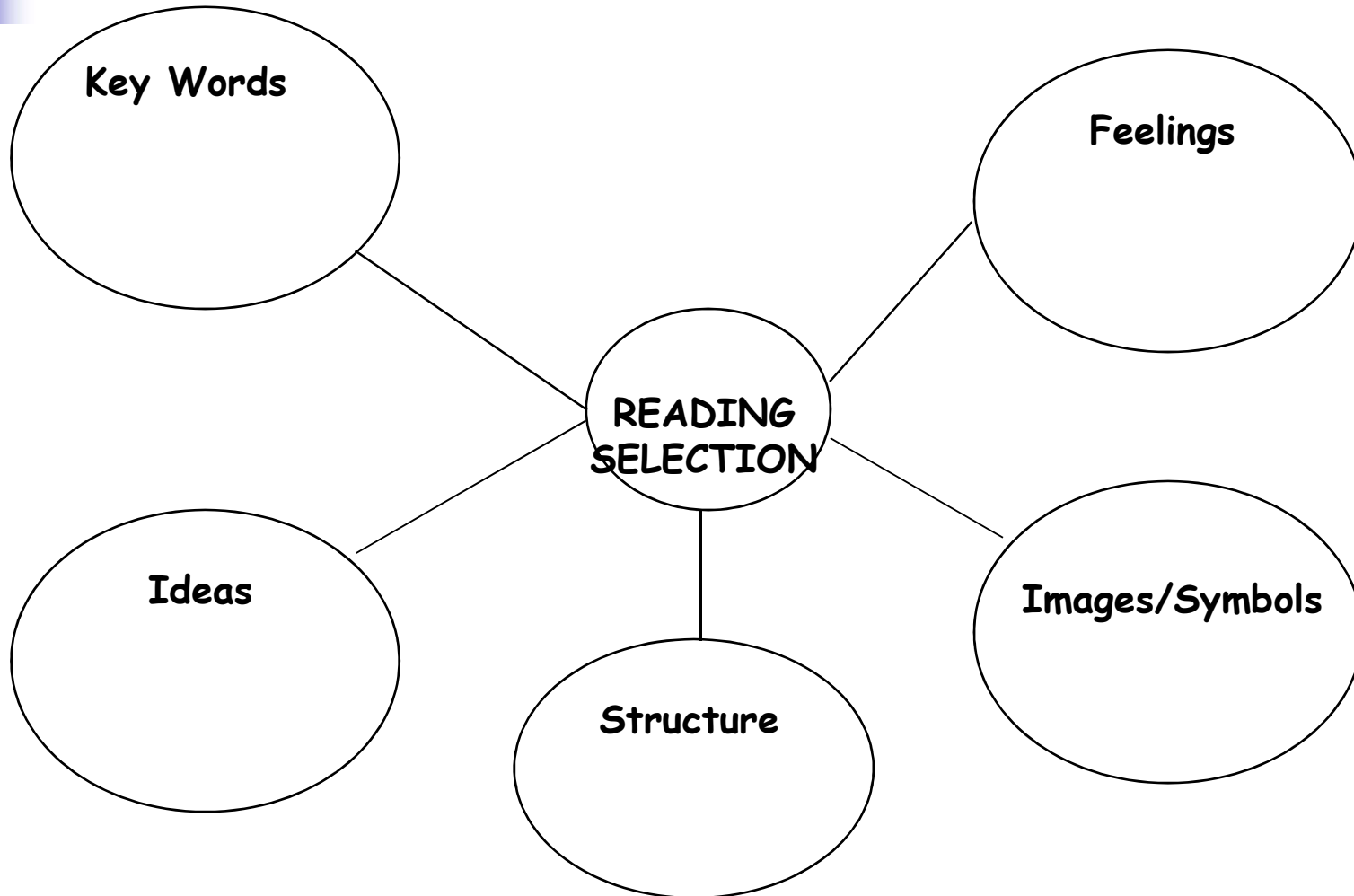


Models

- Concept Development Model
- Reasoning Model
- Problem-Based Learning
- General Research Model
- Hamburger Model
- Dagwood Model
- Vocabulary Web
- Literature Web
- Scientific Research Model



Literature Web

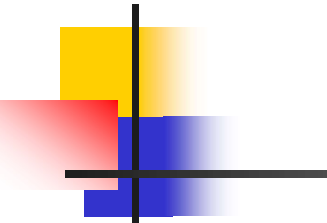




Literature Web

- *Key Words:* What were some words and phrases that were especially interesting or important? What words were new to you?
- *Feelings:* What feelings did you get reading the passage? What feelings did the characters have? How were those feelings expressed?
- *Ideas:* What was the main idea? What other major ideas and concepts were important? What was the author trying to say about those ideas?
- *Images/Symbols:* How did the author use description and imagery in the novel? What sensory images came to your mind? How did the author use symbols?
- *Structure:* What type of writing was this? What literary and style elements did the author use? How did the structure of the writing contribute to the meaning of the novel? May identify such features as: use of unusual time sequence in narrative, use of voice, use of figurative language, etc.

Wild Geese



**You do not have to be good
You do not have to walk on your knees
for a hundred miles through the desert, repenting.
You only have to let the soft animal of your body love what it loves.
Tell me about despair, yours, and I will tell you mine.
Meanwhile the world goes on.
Meanwhile the sun and the clear pebbles of the rain
are moving across the landscapes,
over the prairies and the deep trees,
the mountains and the rivers.
Meanwhile the wild geese, high in the clean blue air,
are heading home again.
Whoever you are, no matter how lonely,
the world offers itself to your imagination,
calls to you like the wild geese, harsh and exciting –
over and over announcing your place
in the family of things.**

--M. Oliver

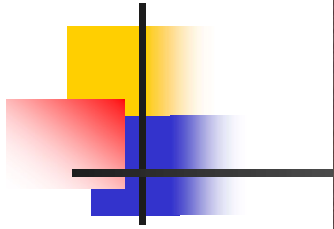


Building Textual Understanding

Underlying Assumption: Discourse that promotes understanding needs direction, focus, and movement towards goal.

- Marking (focusing)
- Revoicing (repeating student ideas)
- Turning back (textual or student-based)
- Recapping (synthesizing)
- Modeling (thinking aloud)
- Annotating (providing information)

Beck & McKeown, 1996



Pablo Picasso
3 Musicians
1921

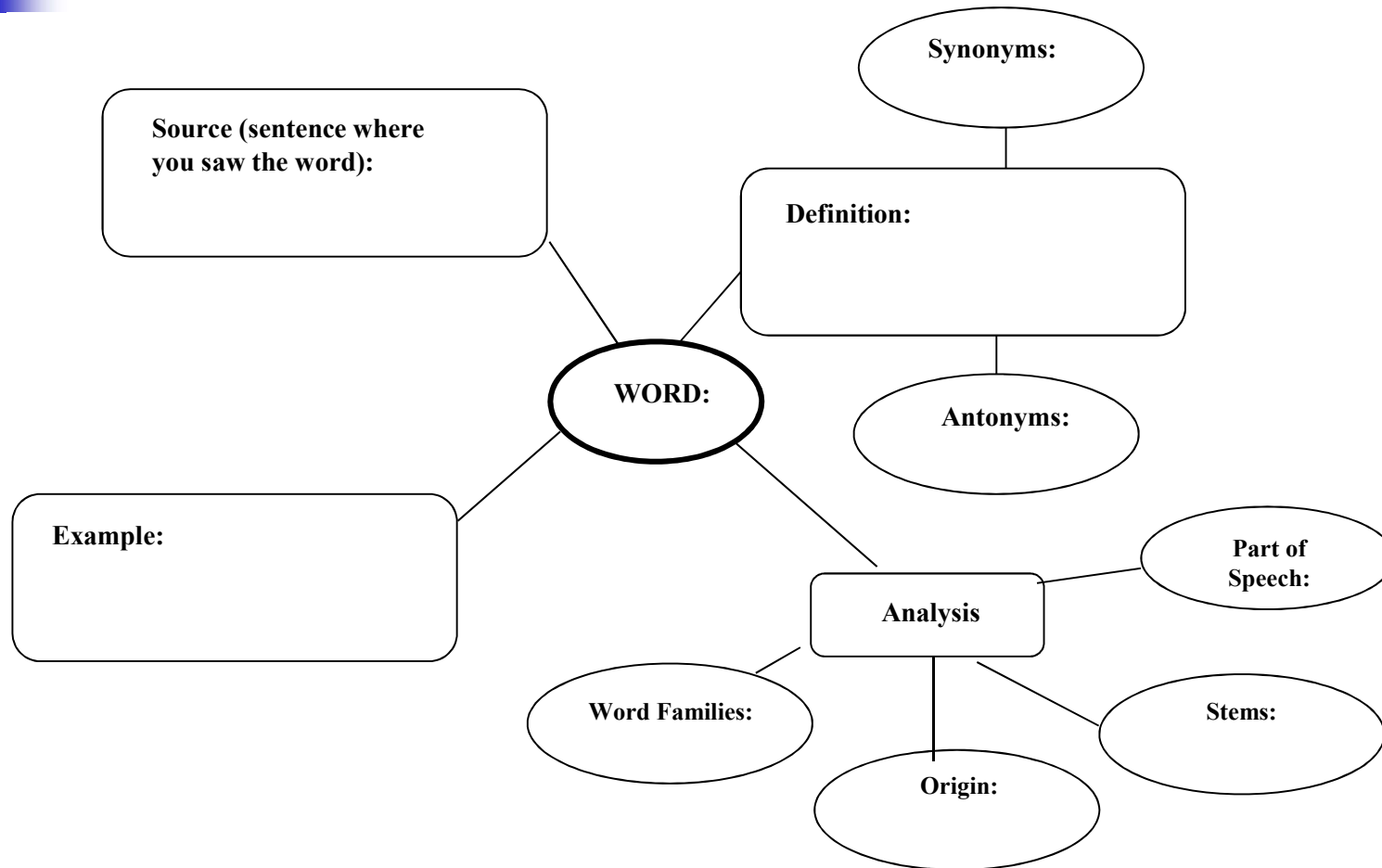


Pre-assessment for the use of the literature web with images

- Provide an artistic image
- Ask students to identify **key features**, and **describe their personal reaction** to the picture.
- Provide **key ideas** conveyed.
- What are the **symbols** used?
- How does the artist help you **understand the image through structure and organization?**

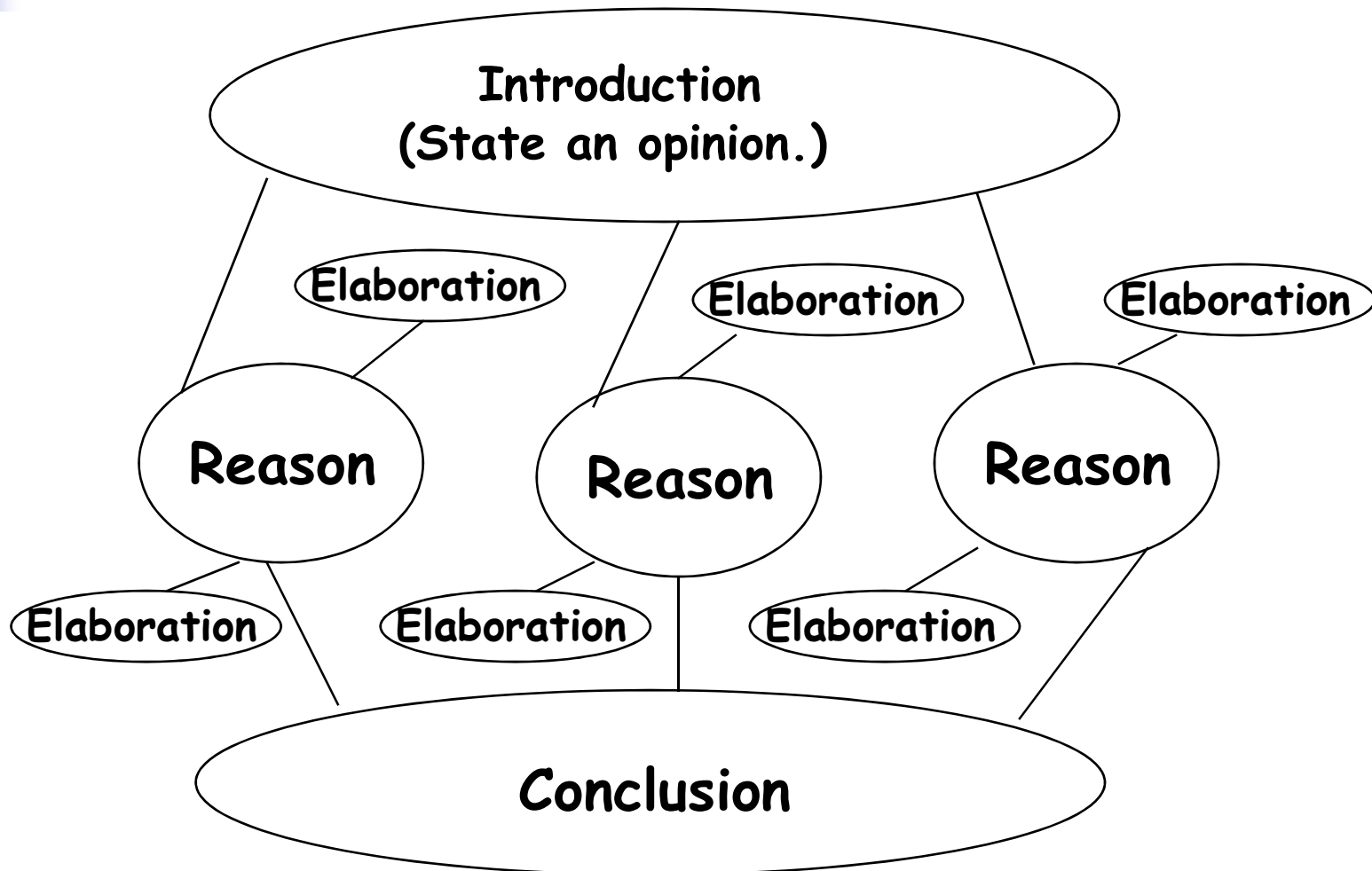


Vocabulary Web

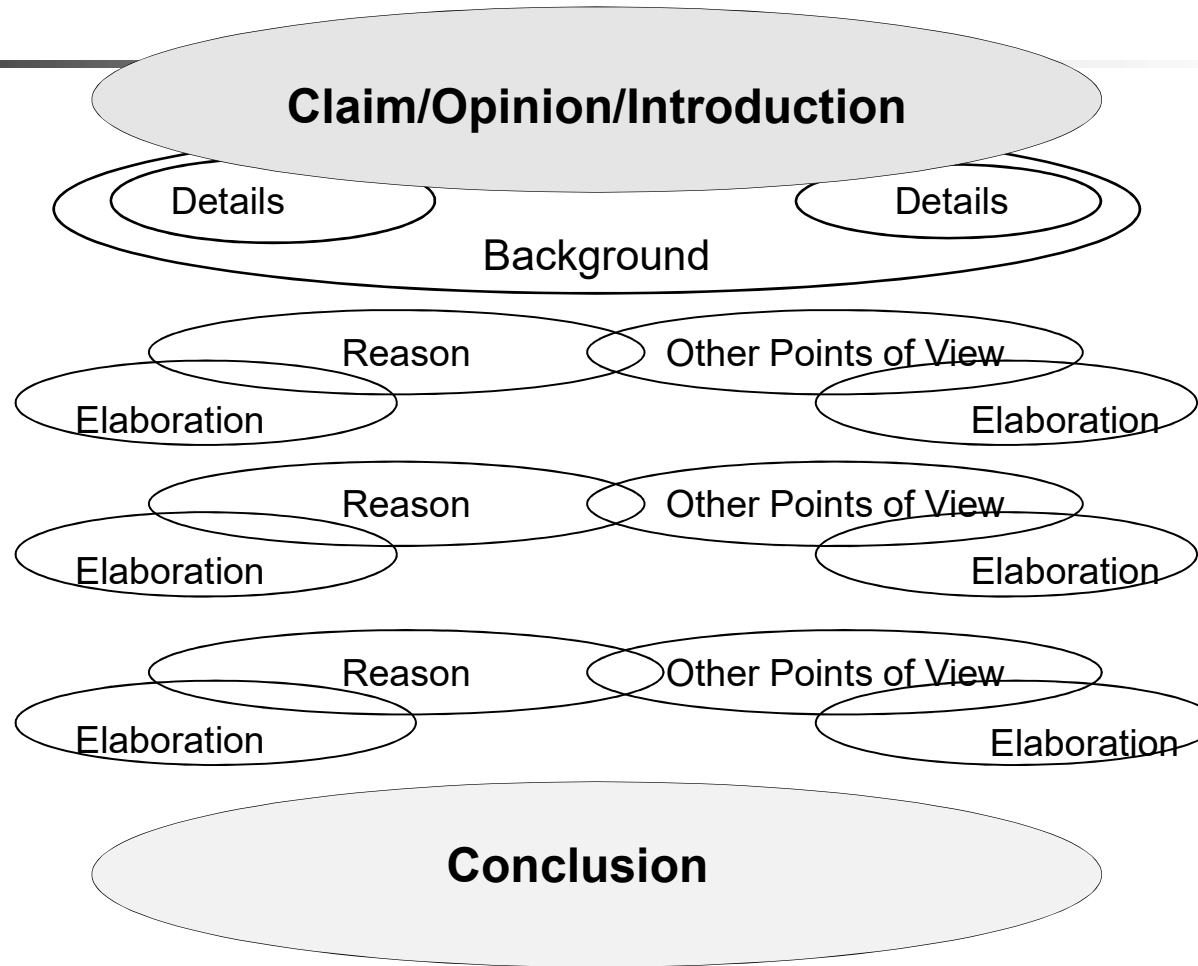
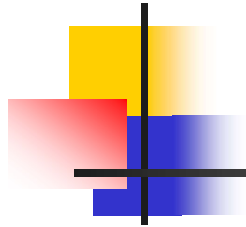




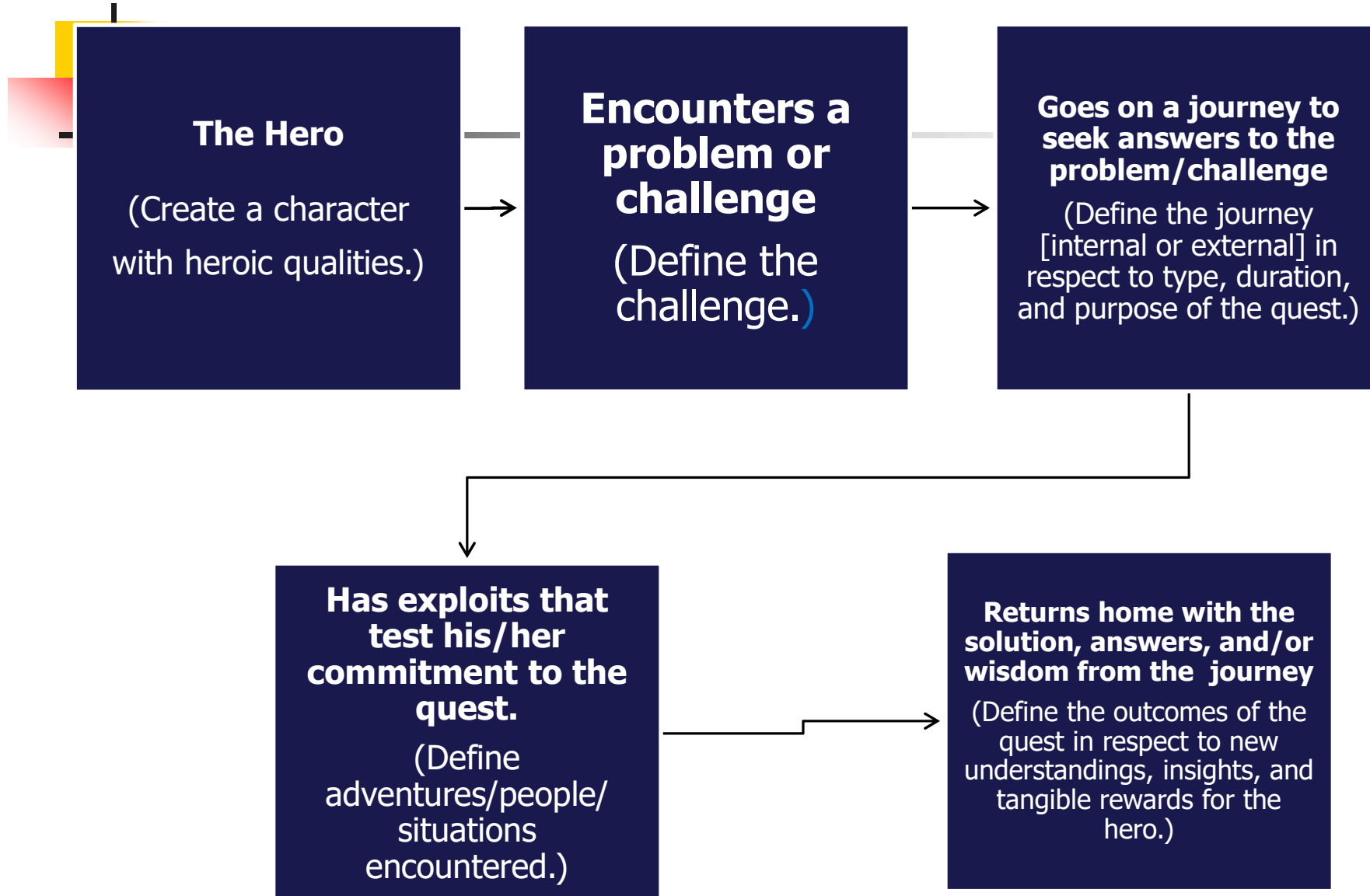
Hamburger Model for Persuasive Writing



Dagwood Model

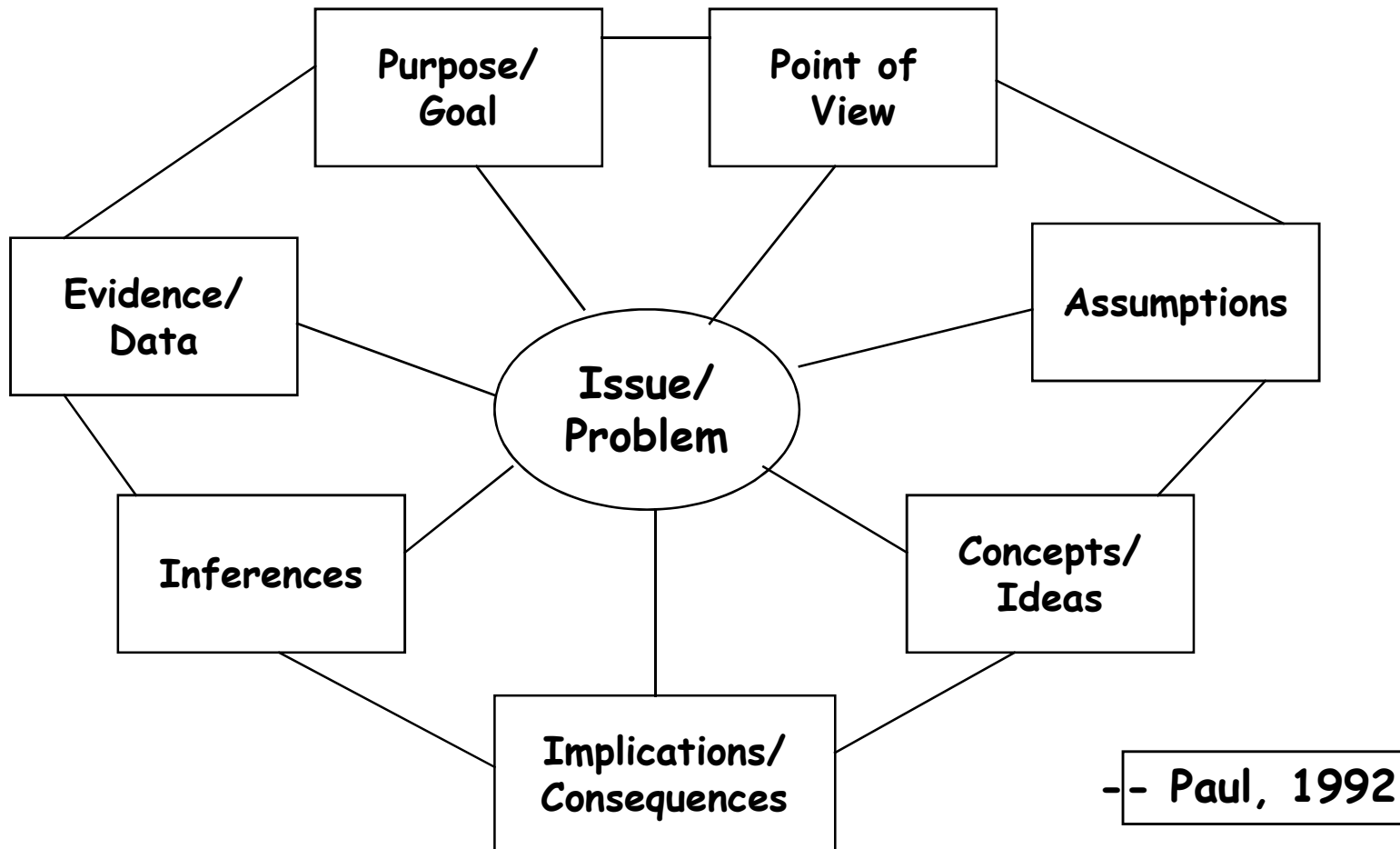


Quest Model for Creative Writing



VanTassel-Baska, J (2007)

Elements of Reasoning



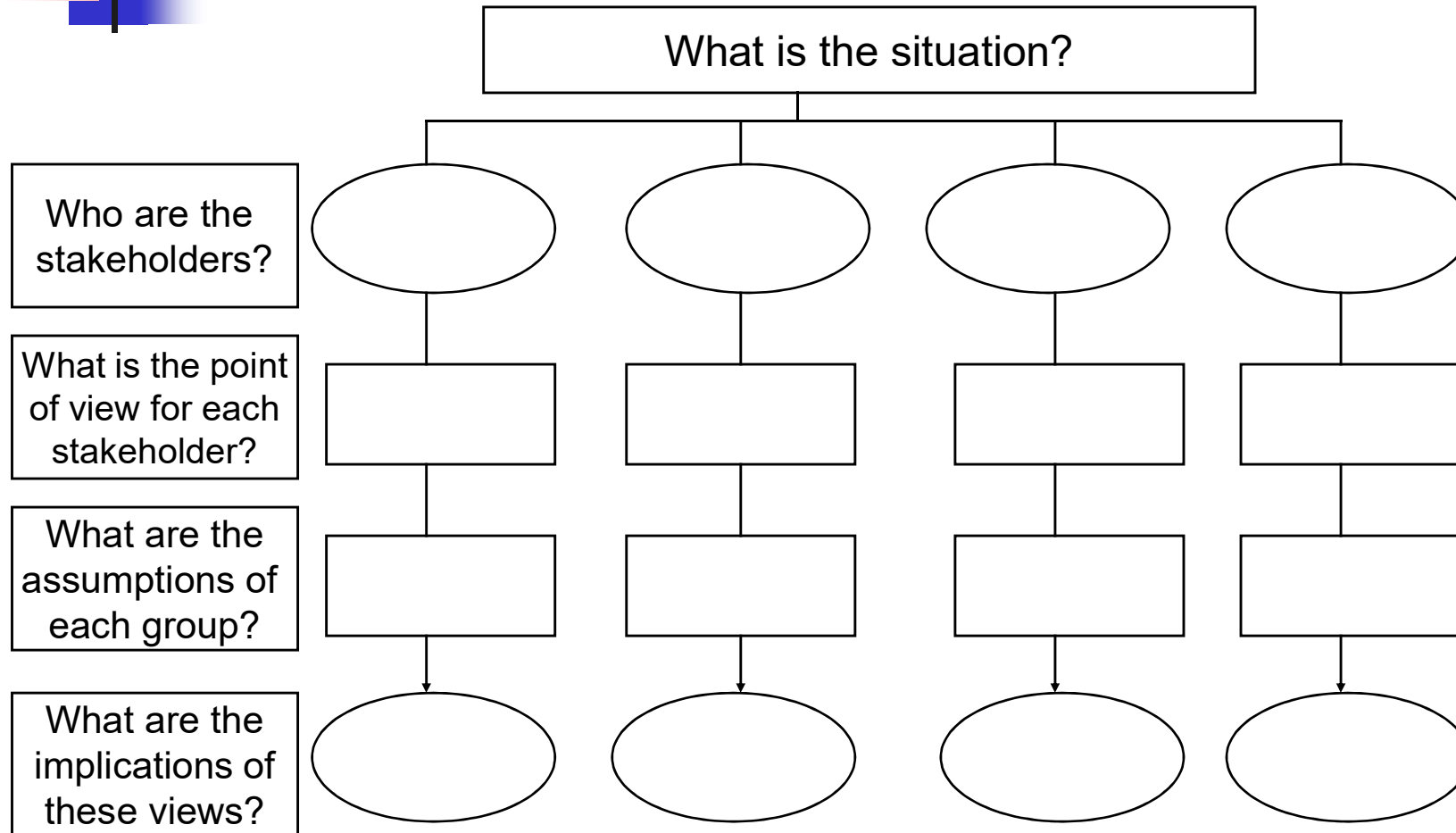


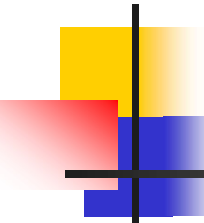
Developing Questions

Using the Standards of Reasoning

- What is the issue or problem the character is facing?
- How is the concept of _____ important in the story?
- What are the implications of the character's actions?
- What assumptions might we make about the story from the title and opening?

Reasoning about a Situation or Event





Take one of the following situations and reason through it, using the scaffold:

- World War II
- Opium Wars
- Economic depression of 2008



Concept Development

Examples of Concepts

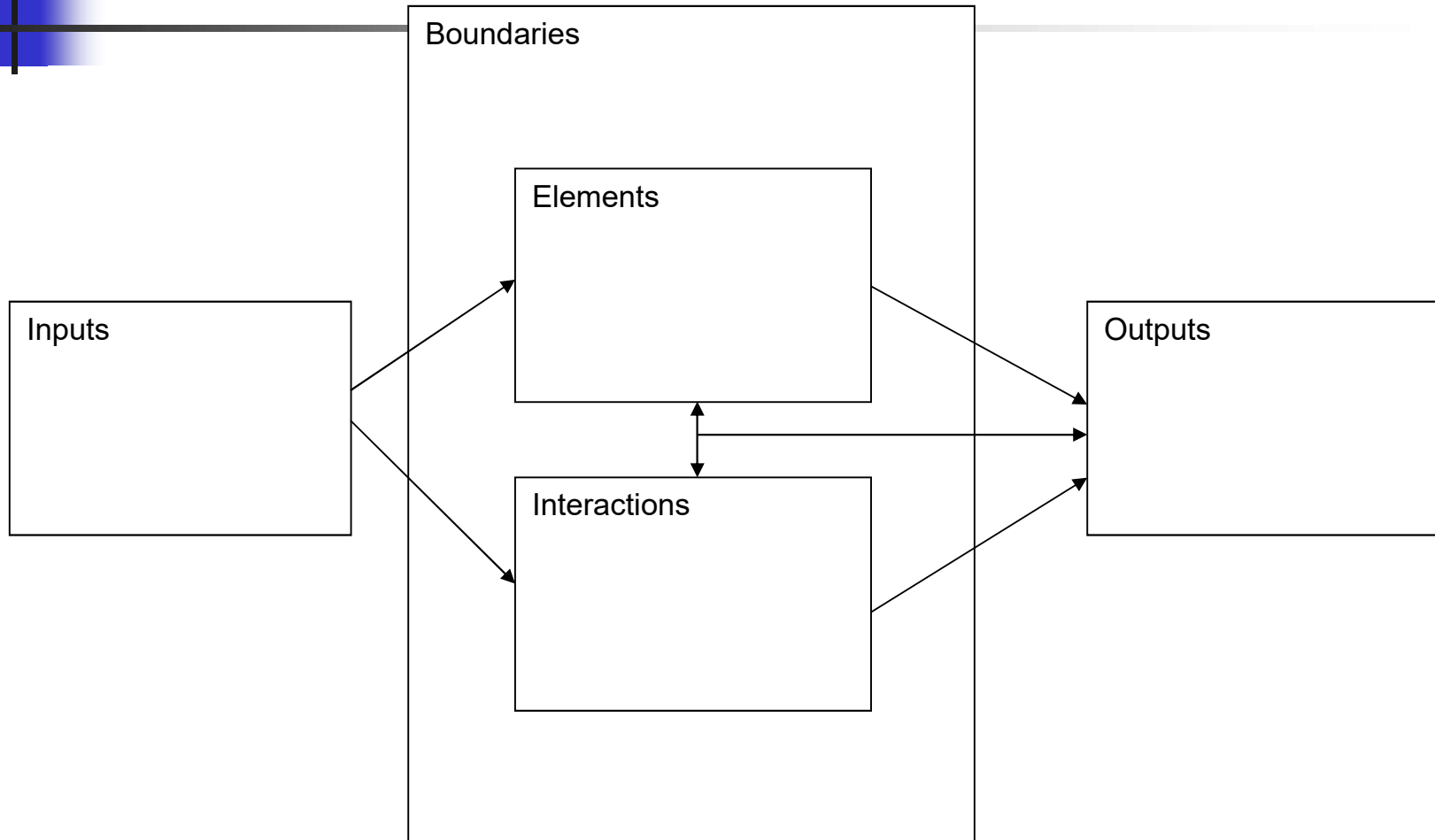
(used in W&M curriculum units)

- CHANGE
- SYSTEMS
- CAUSE AND EFFECT
- AUTHORITY
- PERSPECTIVE

Concept Development Process

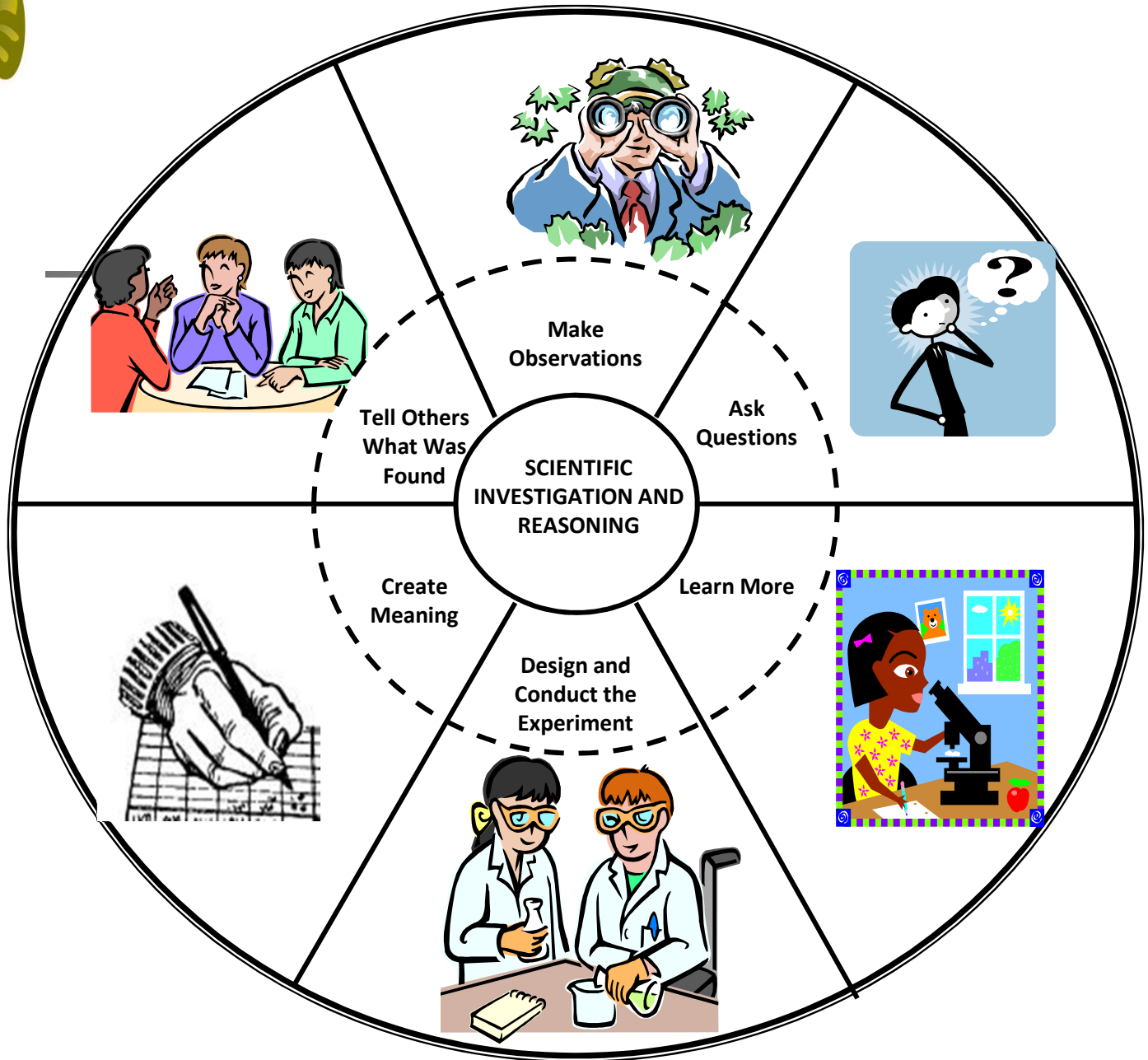
- Cite examples.
- Categorize.
- Cite non-examples.
- Generalize.

Analyzing a System





Wheel of Scientific Investigation





Problem Statement

(Tailored for Local Area)

You are the supervisor of the day shift of the Virginia State Highway Patrol in Williamsburg, Virginia. It is 6:00 a.m. on a steamy June morning. You are awakened by the ringing phone. When you answer you are told, “Come to the Queen’s Creek overpass on eastbound Interstate 64. There has been a major accident and you are needed.”

Quickly you dress and hurry to the overpass. As you approach the bridge, you see an overturned truck that is completely blocking both eastbound lanes of the freeway. You see “CORROSIVE” on small signs on the side and rear of the truck. The truck has lost at least one wheel and is resting on the freeway guard rail. There is a large gash in the side of the truck; from this gash, a clear liquid is running down the side of the truck, onto the road, and down the hill into Queen’s Creek. Steam is rising from the creek. All traffic has been halted and everyone has been told to remain in their cars. Many of the motorists in the traffic jam appear to be angry and frustrated. Police officers, firemen, and rescue squad workers are at the scene. They are all wearing coveralls and masks. The rescue squad is putting the unconscious truck driver onto a stretcher. Everyone seems hurried and anxious.



Need to Know Board

What do we know?	What do we need to know?	How can we find out?



Compacting

- **Step #1**---Pre-assess learners on basic material to be taught
- **Step #2**---Streamline teaching of the rest of basic material by compressing content
- **Step #3** Group students by preassessment results
- **Step #4**---Assess mastery and document learning



Meaningful Project Work

- Advances content understanding
- Teaches higher level skills of cognition and metacognition.
- May be group or individual
- Requires written and oral outcomes
- May be short term or long term (1 week- 1 semester)
- Is assessed by rating of skills employed and quality of product



Developing an Issue

State the issue:

Identify the stakeholder groups:

Describe each group's position:

State your initial position:

Research Model



1. Identify your issue or problem.

What is the issue or problem?

Who are the stakeholders and what are their positions?

What is my position on this issue?

2. Read about your issue and identify points of view or arguments through information sources.

What are my print sources?

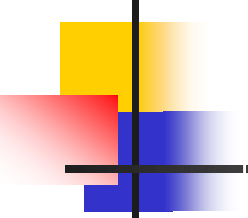
What are my media sources?

What are my people sources?

What primary and secondary source documents might I use?

What are my preliminary findings based on a review of existing sources?

3. Form a set of questions that can be answered by a specific set of data:

- 
- 1) What would be the results of _____?
 - 2) Who would benefit and by how much?
 - 3) Who would be harmed and by how much?

My research questions:

4. Gather evidence through research techniques such as surveys, interviews, or analysis of primary and secondary source documents.

What survey questions should I ask?

What interview questions should I ask?

What generalizations do secondary sources give?

What data and evidence can I find in primary sources to support different sides of the issue?

5. Manipulate and transform data so that they can be interpreted.

How can I summarize what I found out?

Should I develop charts, diagrams, or graphs to represent my data?

6. Draw conclusions and make inferences.



What do the data mean? How can I interpret what I found out?

How do the data support my original point of view?

How do they support other points of view?

What conclusions can I make about the issue?

7. Determine implications and consequences.

What are the consequences of following the point of view that I support?

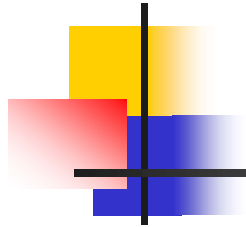
Do I know enough or are there now new questions to be answered?

8. Communicate your findings. (Prepare an oral presentation for classmates based on note cards and written report.)

What are my purpose, issue, and point of view, and how will I explain them?

What data will I use to support my point of view?

How will I conclude my presentation?



- **Question-asking**



Why questions?

- Stimulation of thinking
- Clarification
- Search for understanding
- Wondering about possibilities



Research on the use of questions

- Promotes higher level thinking (Asami et al, 2008)
- Encourages active inquiry in students (Alexander et al., 2014)
- Deepens thinking (Gardner, 2004)



Three Types of Question Models

- **Problem-based learning**
 - What do we know?
 - What do we need to know?
 - How do we find out?
- **Reasoning model**
 - What is the author's purpose?
 - What data or evidence supports it?
 - What inferences do you draw from the evidence?



Three Types of Question Models cont.

Taxonomy-based

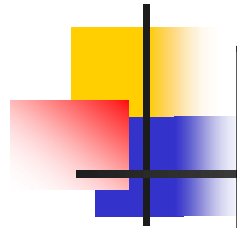
- Who/What/When/Where?
- Why? How?
- What if...?
- Pretend...
- Which is better/best?



4-Question Strategy

- Memory/Cognition—who, what, when, where
- Convergent---why, how
- Divergent—what if, pretend
- Evaluative---which is better or best

Lower to Higher Order Questions



Memory/ Cognition Level	When did the US election take place? What changes have already been attempted?
Convergence Level	What accounted for a Trump win? For a Clinton loss?
Divergence Level	What would have happened if Clinton had won? How would the country be different?
Evaluative Level	How successful was the Trump victory for conservatives?

Application activity



I I'm nobody.

Who are you?

Are you nobody too?

Then there's a pair of us, don't tell.

How dreary to be somebody,

How public like a frog,

To tell your tale the livelong day

To an admiring bog.

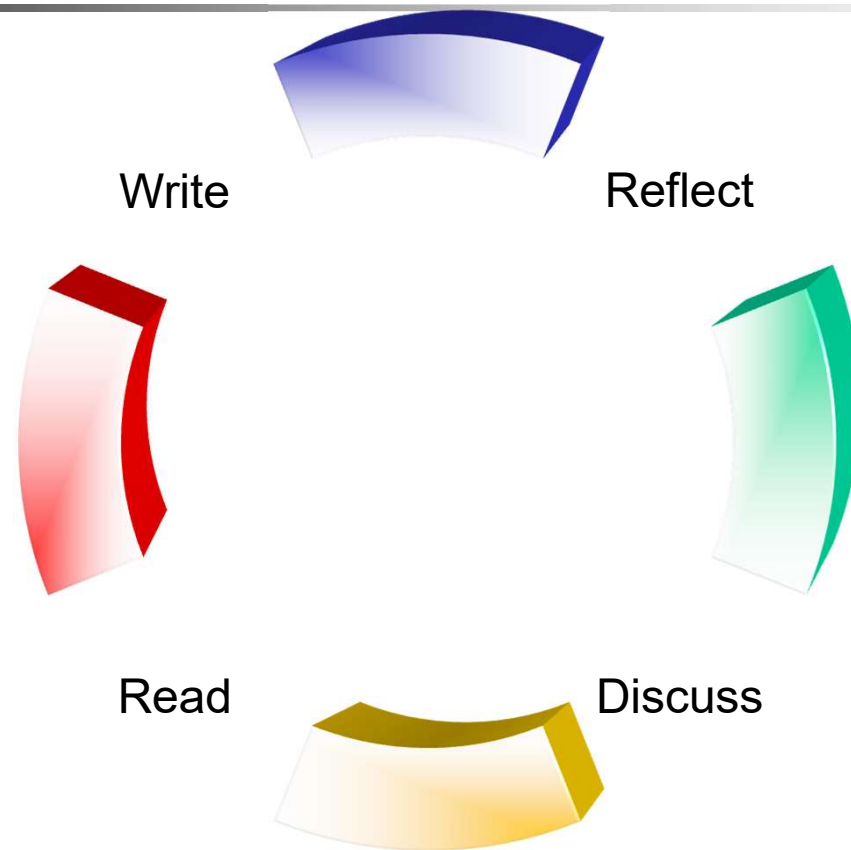
--Emily Dickinson



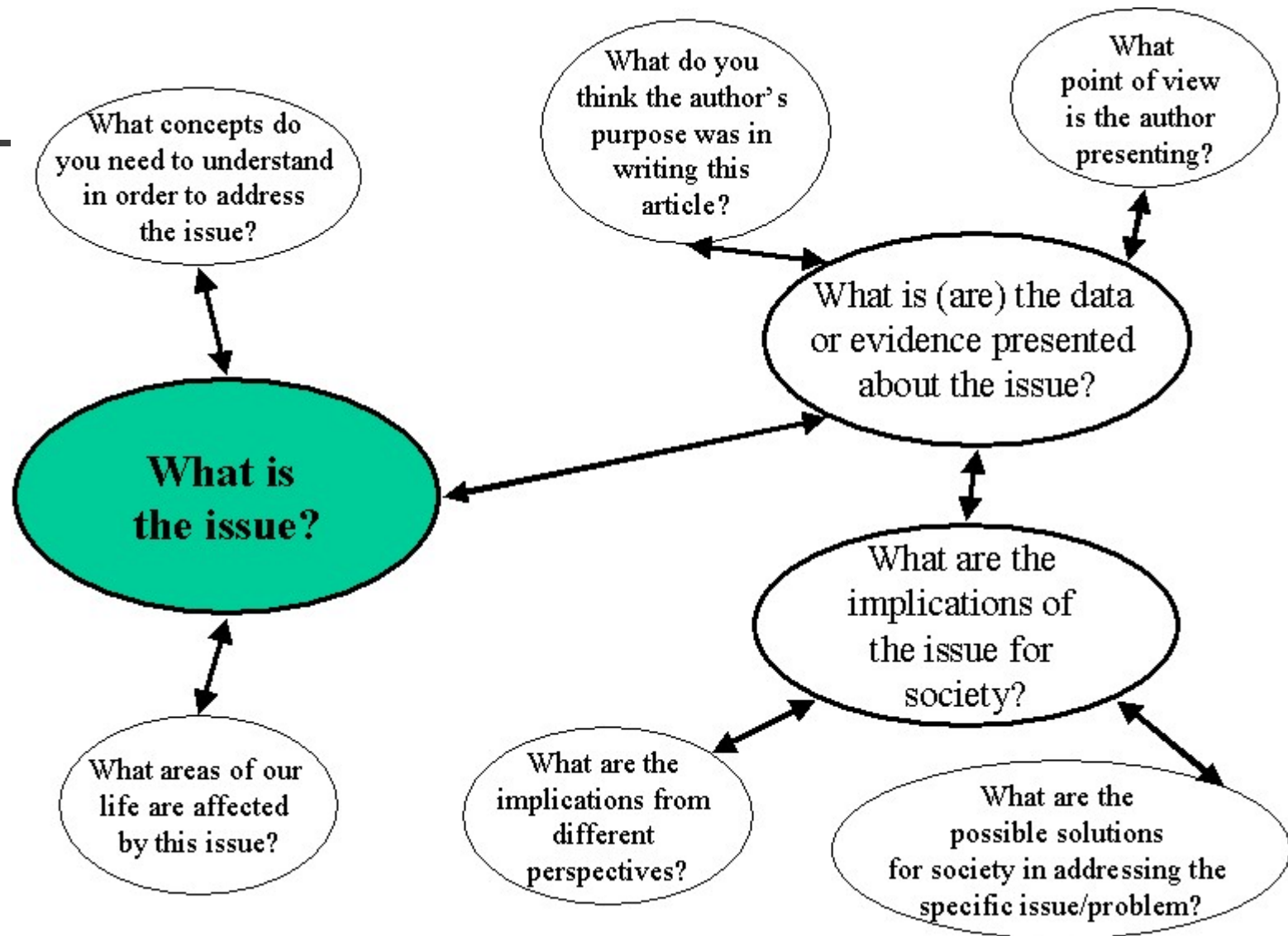
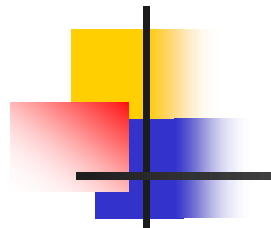
Application Activity

- Select one of the following four current event topics and prepare a set of questions, using the 4-question strategy:
 - global warming
 - weather patterns
 - the danger of rogue dictators
 - political corruption

4-Step Model to Enhance Thinking



Questioning Model for Current Event Articles



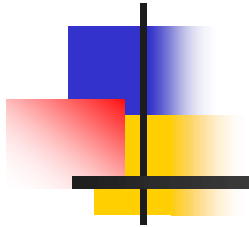
Application activity



Select one of the following projects and create a set of researchable questions and a plan to answer them:

- Design a study to test how people decide what grocery lines to get in for check out.
- Design a study to test the use of texting in schools.
- Design a study to assess television habits among teenagers.

Document Analysis



The College of William and Mary



Analyzing Primary Sources

- Establishing a Context and Intent for the Source (author, time written, related culture and events, purpose, intended audience)
- Understanding the Source (issues/events addressed, main ideas/arguments, assumptions and values reflected, expected actions/outcomes)
- Evaluating/Interpreting the Source (authenticity/reliability, representativeness, potential and actual consequences, influence on historical interpretation)



Establishing a Context and Intent

- Author:

- Time/When was it written?
- Briefly describe the culture of the time and list related events of the time.
- Purpose (Why was the document created?)
- Audience (Who was the document created for?)



Understanding the Source

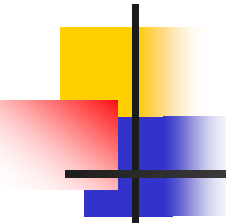
- What problems/issues/events does the source address?
- What are the main points/ideas/arguments?
- What assumptions/values/feelings does the author reflect?
- What actions/outcomes does the author expect? From whom?



Evaluating/Interpreting the Source

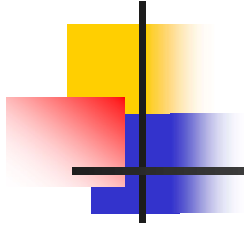
- Authenticity/Reliability (Could the source be invented, edited or mistranslated? What corroborating evidence do you have about the source? Does the author know enough about the topic to discuss it?)
- Representative. (How typical is the source of others of the same period? What other information might you need to find this out?)
- What could the consequences of this document be? (What would happen if the author's plans were carried out? What could happen to the author when people read this? How might this document affect or change public opinions?)
- What were the actual consequences? What really happened as a result of this document?
 - Short-term
 - Long-term
- What new or different interpretation does this source provide about the historical period?

Sample Primary Source Discussions

- 
- Ancient poem in praise of the Nile

 - Letters about indentured servitude
 - Stamp Act and Stamp Act Resolutions
 - Camp diaries from Civil War soldiers
 - 1920s KKK mission statement and essay on Garvey's Back to Africa movement
 - Federalist and Anti-Federalist papers
 - Letters to students about riot at Kent State

Creative Thinking Tools

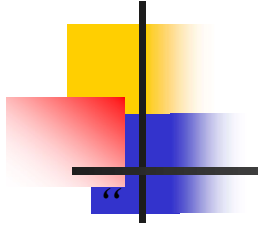




Creativity Models/Strategies

- Creative problem solving
- Six Hats
- Synectics
- Metaphor development
- Use of visual stimuli

What is Metaphor?

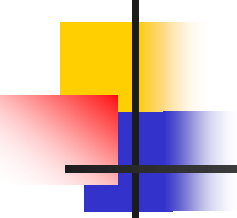


Our species thinks in metaphors and learns through stories.

– Mary Catherine Bateson, 1994

- **A figure of speech in which a term is transferred from the object it ordinarily designates to an object it may designate only by comparison or analogy.**
- **A relationship between two unlike objects, ideas, or situations.**
- **A physical picture of an abstract condition**
- **A story form to link ideas and persuade others**

Examples of Metaphor

- 
-
- The universe as a mechanical system (e.g. the solar system as clockwork)
 - The human body as a machine (e.g. the heart is a pump)
 - Time is money.
 - Modern capitalism as a cancer on the social immune system
 - Life is a roller coaster, full of ups and downs.
 - Life is a river and we make decisions about how to navigate it.
 - The interconnected world as a whispering pond
 - Leaders as improvisational jazz musicians



Metaphoric Thinking Approaches

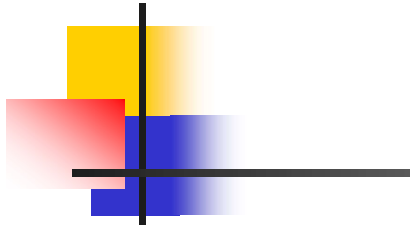
- **Using basic structural properties of an object to define a person (eg. She is a warm towel, wrapped around me.)**
- **Building metaphor as a way to grasp an important yet difficult concept (e.g. leadership, love, justice)**

**Change is a _____ because
_____ (describe why)**

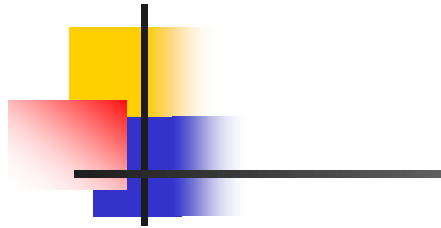


Using visual stimuli to promote creativity

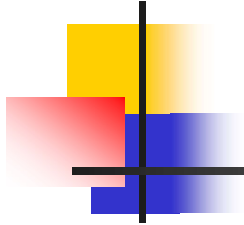
- What do you see in your picture?
- What could you change in the picture that would make it more appealing to you?
- What aspect of the picture do you identify with and why?
- Create a poem, metaphor, or graphic organizer that captures the essence of your picture.



Frida Kahlo
Self-Portrait
1926



Roy Lichtenstein
Still Life with Goldfish
1972



The future will require individuals who are able to formulate new problems, come up with new solutions, and adapt readily to the new ideas of others.

- --Csikszentmihalyi & Wolfe, 2000



Reflection

How can you use the higher level questioning model of differentiation to change your current practice?

How will using this differentiation approach benefit students in your class?