



# *Identifying and Serving Promising Students of Poverty During and After School*

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# Conceptions of Poverty

- Individual
  - Caused by laziness, poor choices, incompetence, lack of ability
- Cultural Beliefs
  - Culture of poverty adapts a subculture of belief systems and values that prohibit success
- Political-Economic
  - System prevents those in poverty from obtaining success
    - Upper class groups in power making decisions
  - Barriers to education, high paying jobs, health care, safety
- Geographic
  - Regional differences that place certain groups at a disadvantage
- Cumulative & Cyclic
  - Combination of political and geographic – all inter-related
    - » Bradshaw, 2006

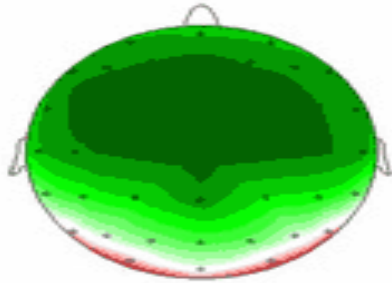
# Class Differences

Payne, 2000

Category	Poverty	Middle Class	Wealthy
<b>Possessions</b>	People	Things	One-of-a-Kind Objects, Legacies, Pedigrees
<b>Money</b>	To be used, spent	To be managed	To be conserved, invested
<b>Personality</b>	Entertainment, sense of humor	Acquisition and stability; achievement highly valued	Connections: financial, political, social
<b>Social Emphasis</b>	Include people like them only	Self-governance and self-sufficiency	Social exclusion: "the club"
<b>Food</b>	Do you have enough?	Did you like it?	Was is presented well?
<b>Time</b>	Today; survival	Future; long-term consequences	Traditions and history
<b>Education</b>	Valued and revered as abstract (not reality)	Crucial for climbing the success ladder and making money	Necessary tradition for making and maintaining connections
<b>Language</b>	Casual; survival and entertainment	Formal; negotiation	Formal; networking
<b>World View</b>	Local	National	International

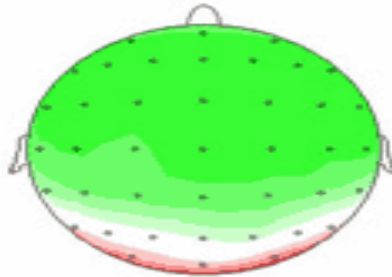
# Differences in Brain Function Between High and Low SES

## High SES



256 ms

## Low SES



240 ms

Brain function was measured by means of an electroencephalograph (EEG) - basically, a cap fitted with electrodes to measure electrical activity in the brain - like that used to assess epilepsy, sleep disorders and brain tumors.

"Kids from lower socioeconomic levels show brain physiology patterns similar to someone who actually had damage in the frontal lobe as an adult," said Robert Knight, director of the institute and a UC Berkeley professor of psychology. "We found that kids are more likely to have a low response if they have low socioeconomic status, though not everyone who is poor has low frontal lobe response."

<http://www.berkeley.edu/news/media/releases/2008/12/images/eeg-brain.gif>

# Key Considerations of Successful Schools of Poverty for Promising Learners



- Inclusive Identification
- Access to Rigorous Curriculum and Appropriate Instruction
- Qualified Personnel
- Opportunities Beyond the School Day



*Inclusive Identification  
Strategies for Promising  
Students of Poverty*



# Research-Based Strategies for Identifying Promising Students of Poverty

- Begin identification processes early in a child's school career; provide intervention and enrichment
  - Identify early and often
  - Project STAR and Young Scholars
- Provide dynamic and authentic assessments for identification
  - (formal and informal approaches: portfolios, real-world problems, preteaching, PBA's, checklists based on research regarding students of poverty; nonverbal measures in addition to verbal)
- Ensure ongoing identification with equal access
  - (whole grade testing; multiple opportunities)
- Provide professional development to teachers
- Valid and reliable instrumentation for that population
- Different assessments find different students – use a variety of assessments – no ONE test
  - » Teacher training for identifying students (Characteristics)
- Match identification measures to programs
- Use a variety of ways to identify for talent - (creativity, music, art)

# General Characteristics of Students of Poverty

- Disorganized
- Don't do homework
- Like to entertain
- Do only parts of an assignment
- Great storytellers
- Unique sense of humor
- Like discussion/hands-on
- Creative responses
- Laugh at inappropriate times/situations
- Struggle with reasoning (prefer verbal/physical assault)
- Dislike authority
- Talk back
- Will do work if they like you (relationships important)
- Lack procedural self-talk (get started or continue work)
- Appear rude
- Independent
- Need more "space" and opportunity for creativity
- Speak their mind freely
- Live in moment ( no goal setting)
  - Payne, 2005

# District-identified vs. Athena-identified as Gifted

	IQ $\geq$ 120		IQ $\geq$ 130	
	Frequency	Percent	Frequency	Percent
<b>District Identified Gifted</b>	<b>94</b>	<b>37.2%</b>	<b>29</b>	<b>45.4%</b>
<b>Athena Identified Gifted</b>	<b>159</b>	<b>62.8%</b>	<b>35</b>	<b>54.6%</b>
<b>Total</b>	<b>253</b>	<b>100%</b>	<b>64</b>	<b>100%</b>

# Task Demand for Students of Poverty

- Create a humorous title for the following picture and write or tell how the picture was funny.



# Sample Item

Year Round School

Name \_\_\_\_\_

Think of all of the positive and negative effects of the following situation, and record them in the chart below:

***Situation: You have been told that your school will go on a year-round schedule next year.***

Positive Effect	Negative Effect

Choose one positive effect and explain your thinking about why it would be positive. \_\_\_\_\_

\_\_\_\_\_

# Issues with Teacher Referrals for Students of Poverty

- Less effective
- Less accurate
- Untrained to identify these students for special programs
- Prejudice stereotypes about students' abilities

# Why Parents Do Not Seek Help

- Complicated parent forms
  - Difficulty understanding the form
- Forms lack reliability and cultural sensitivity
- Competing priorities
- Fear

# Other Issues About Parent Referrals

- Lack of trust in the system
- Limited time
  - Multiple jobs
- Do not understand the educational system
- Do not know programs exists
- Cultural differences (language; differing ideas about education)
  - Kitano & DiJiosia (2002)

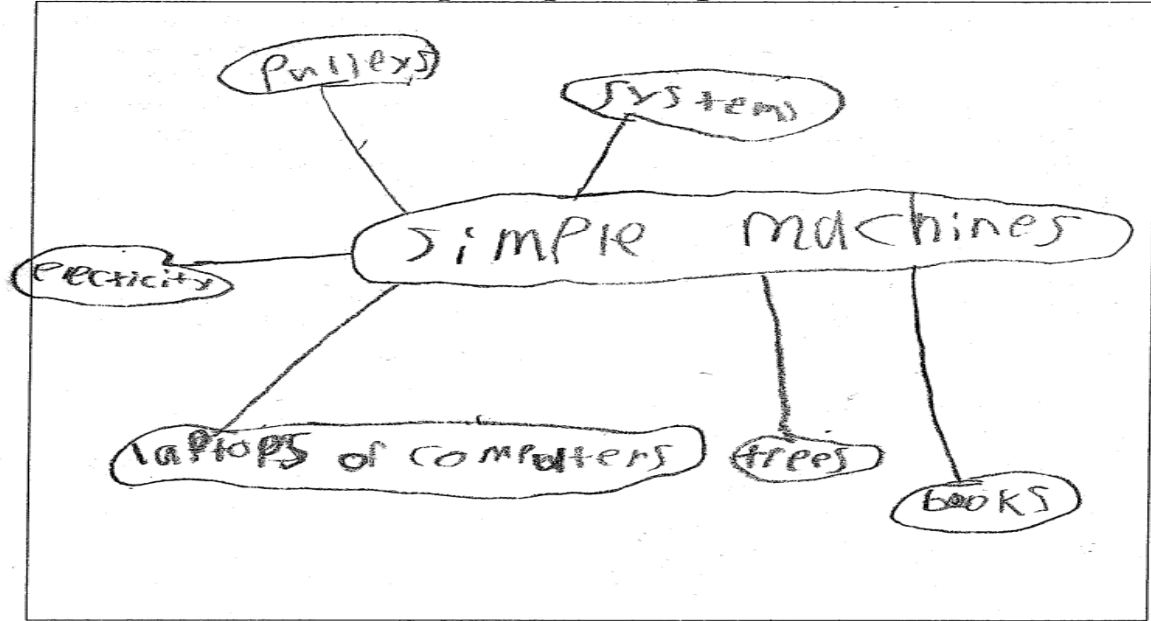
1. simple machines are systems.  
2. a laptop or computer are systems.  
3. people at grocery stores use machines.

Pre-Assessment for Content  
Invitation to Invent

Name (first & last) \_\_\_\_\_

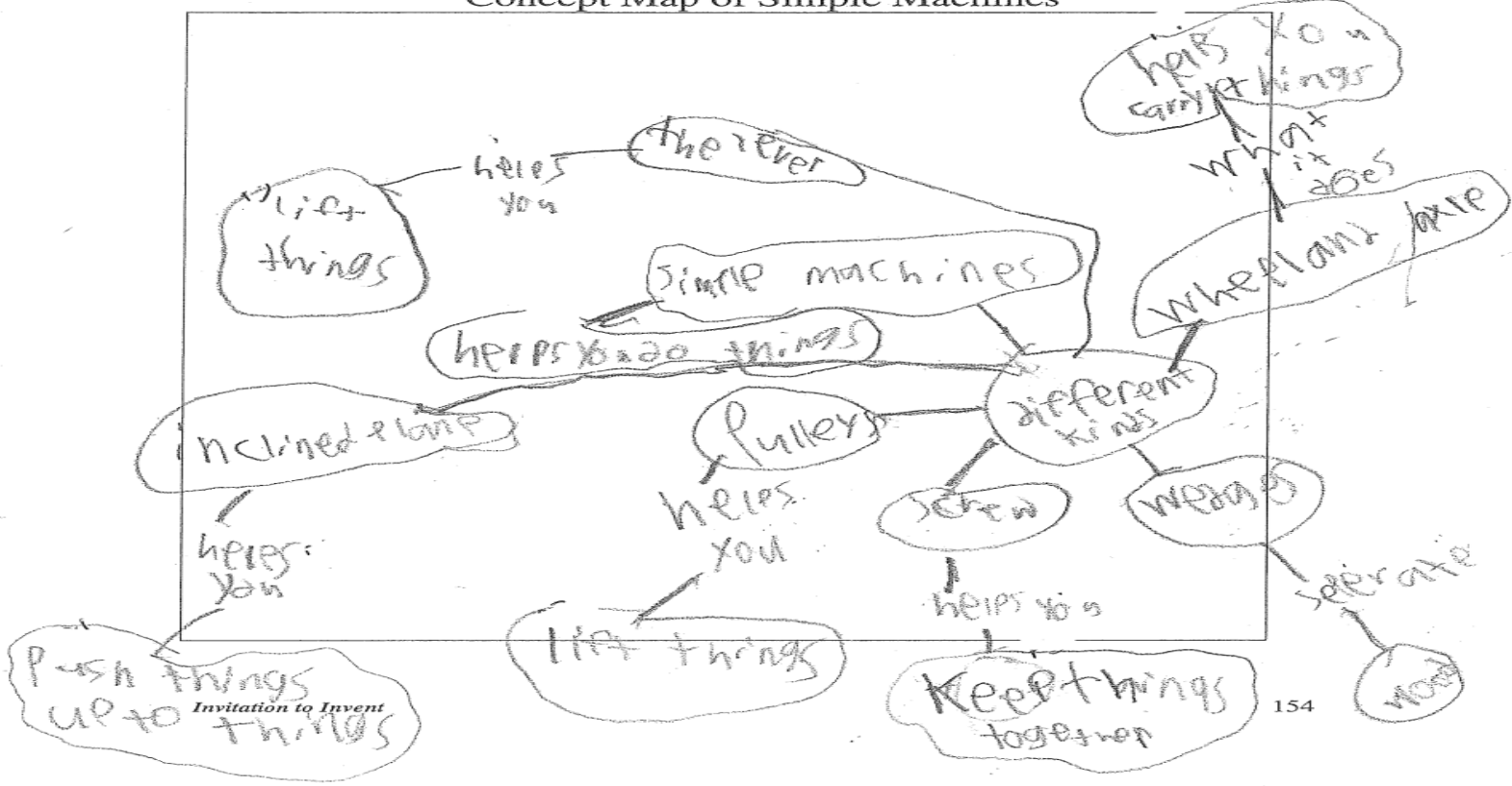
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Concept Map of Simple Machines





Concept Map of Simple Machines



# Provide Creative Choices to Exhibit Learning (portfolio & instruction)

- Comic strips
- Drama
- Photography
- Oral presentation
- Joke-telling
- Interviews
- Songs
- Poems
- Portfolio
- Journal
- Invention
- Survey
- Puppet show
- PowerPoint
- Crossword puzzles
- Blueprint
- Build a model
- Maps
- Persuasive letter
- Debate
- Technology
- Pop-up books



*Access to Rigorous  
Curriculum and Instructional  
Opportunities*

# The Montillation of Traxoline

(Create Experience for Them)

- It is very important that you learn about traxoline. Traxoline is a new form of zointer. It is montilled in Ceristanna. The Ceristannians gristeriate large amounts of fevon and then bracter it to quasel traxoline. Traxoline may well be one of our most lukized snezlaus in the future because of our zointer lescelidge.
  - What is traxoline?
  - Where is traxoline montilled?
  - How is traxoline quaselled?
  - Why is it important to know about traxoline?

# Curriculum & Instructional Opportunities

- Well-designed school-based interventions that include advanced curriculum and enrichment opportunities have demonstrated learning gains in developing accelerated content acquisition and critical thinking.
  - W&M curriculum in language arts, science, Jacob's Ladder
  - Jr. Great Books
  - Advanced Placement courses
  - Mentoring Mathematical Minds (M3)

# Other Interventions That Work

- Graphic organizers over time (same)
  - VanTassel-Baska & Stambaugh, 2008
- Link to student experiences or create the experience for them
  - Payne, 2005
- Scaffolding of content, process, and independence level
  - Stambaugh, 2007
- Modeling of content, process, and discussion/ vocabulary
  - Stambaugh, 2007; Payne, 2005
- Cooperative vs. competitive environments (cortisol)
  - Payne, 2005; Wolfe, 2002
- PRAISE, positive reinforcement
  - Payne, 2005
- Teaching by strength and learning style (modeling)

# Learning Styles

## Students of Higher SES

- Abstract thinkers
- Deductive thinkers
- Individualistic, independent learner
- Require/prefer less structure, direction
- Seek academic meaning
- Kinesthetic learners
- Verbal, auditory

## Students of Poverty

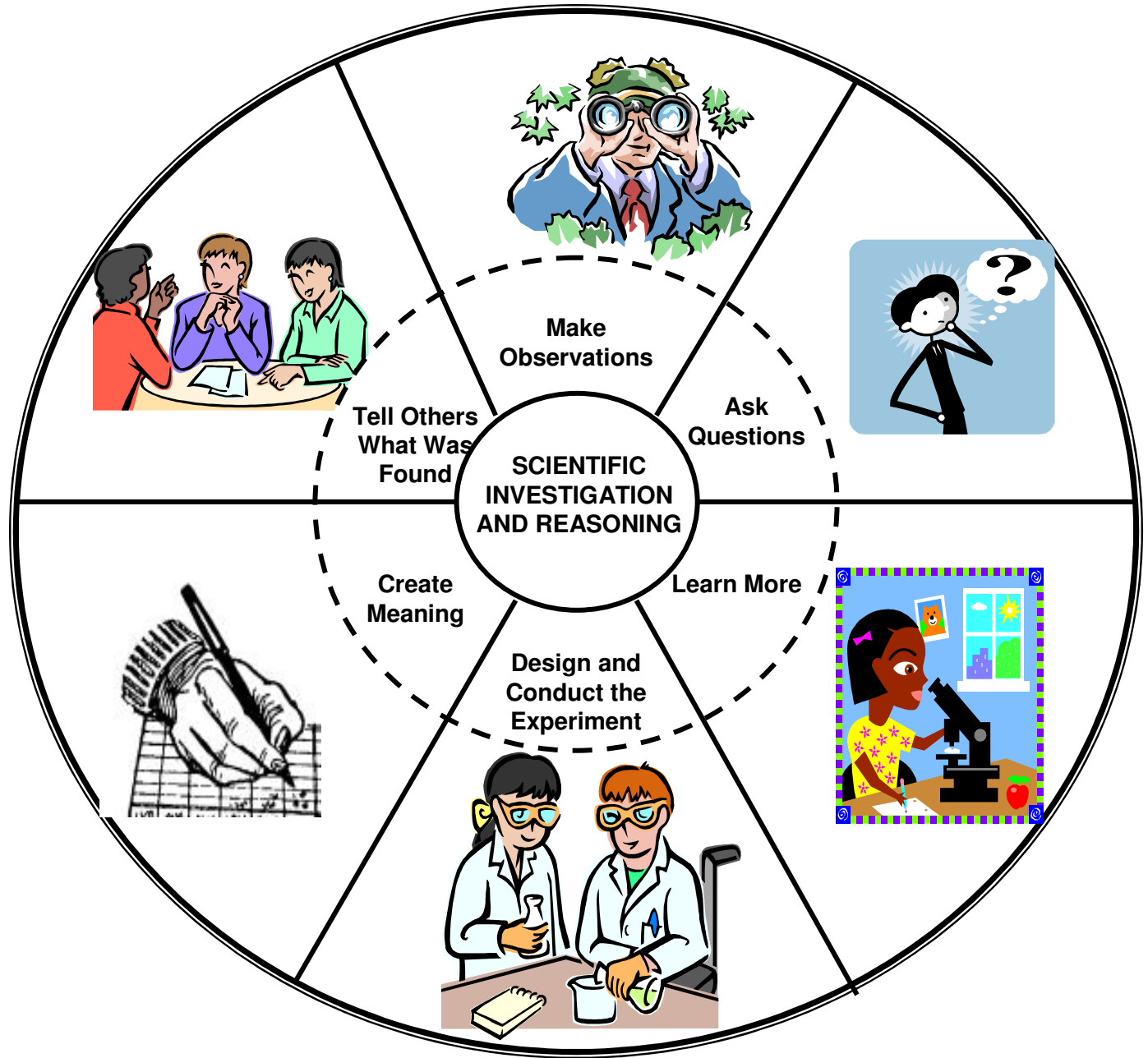
- Concrete thinkers
- Inductive thinkers
- Contextual and situational learners
- Interdependent, social, cooperative learners
- Require/prefer more structure, direction, specificity
- Seek relevance-personal meaning and significance
- Kinesthetic & tactile learners
- Visual, spatial

# Provide Creative Choices to Exhibit Learning (portfolio & instruction)

- Comic strips
- Drama
- Photography
- Oral presentation
- Joke-telling
- Interviews
- Songs
- Poems
- Portfolio
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# Wheel of Scientific Investigation



# Experimental Report Form

Name of Experiment \_\_\_\_\_

Your Name \_\_\_\_\_

1. What was your hypothesis (or prediction about what would happen)?
2. What materials did you use to test the hypothesis?
3. What methods did you use? (Outline steps)
4. What data has been collected? Where are your data recorded? (attach your data table)
5. What are your findings? (Did your hypothesis prove to be true or false?)
6. What new questions do you have?

# Sample Problem-Background

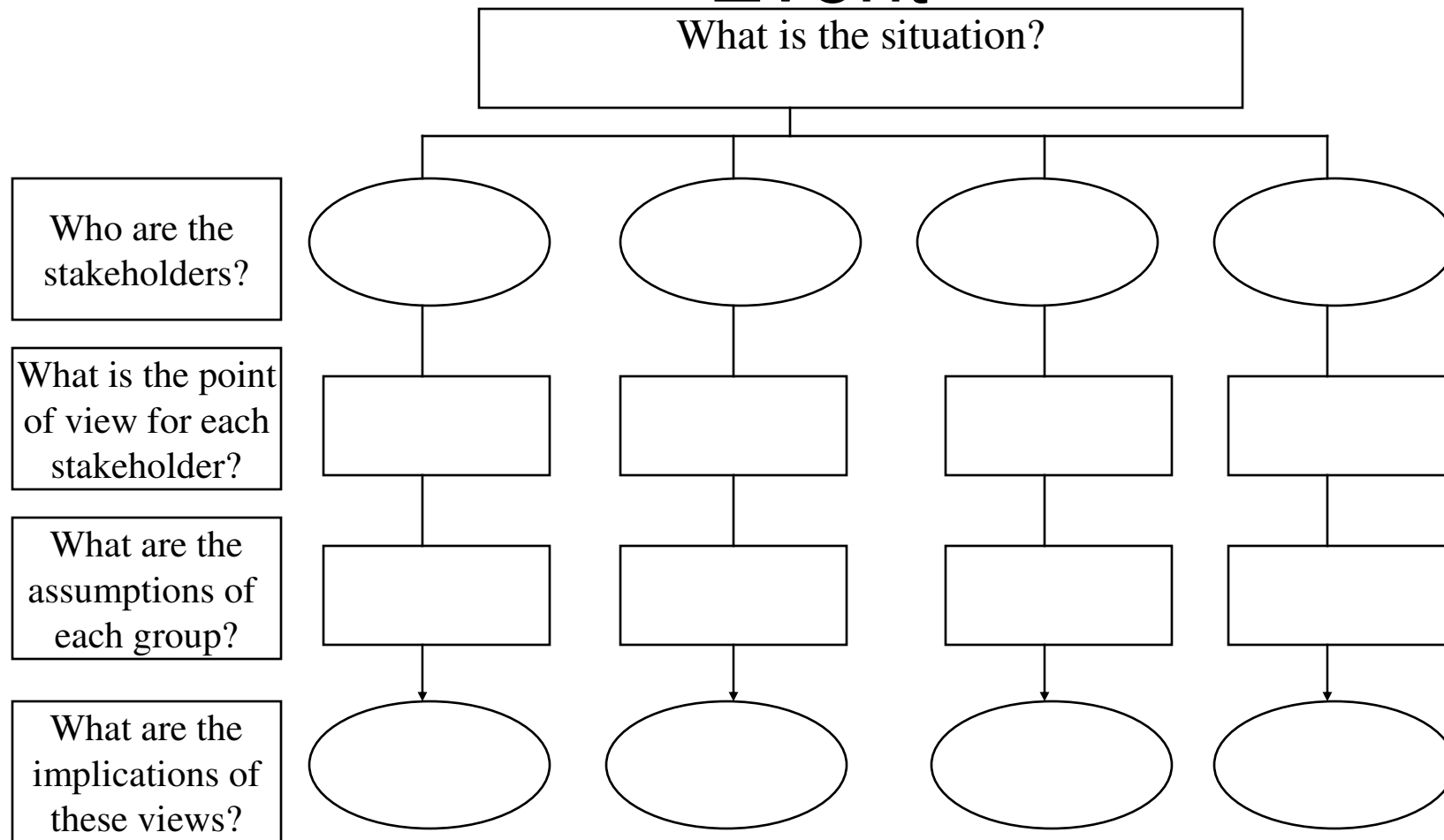
- Every year the seventh grade students at Langston Hughes School go on an outdoor education camping trip. During the week-long trip, the students study nature and participate in recreational activities. Everyone pitches in to help with the cooking and cleanup. Arvind and Mariah are in charge of making orange juice for all the campers. They make the juice by mixing water and orange juice concentrate. To find the mix that tastes best, Arvind and Mariah decided to test some recipes on a few of their friends.

# The Problem

- **Arvind and Mariah tested four juice mixes.**
- Mix A:
  - 2 cups concentrate and 3 cups water
- Mix B:
  - 1 cup concentrate and 4 cups water
- Mix C:
  - 4 cups concentrate and 8 cups water
- Mix D:
  - 3 cups concentrate and 5 cups water
- Which recipe will make juice that is the most “orangey”?
- Which recipe will make juice that is least “orangey”?
- Assume that each camper will get  $\frac{1}{2}$  cup of juice. For each recipe, how much concentrate and how much water are needed to make juice for 240 campers?
- Explain your answers in pictures, numbers, or words. Test your hypothesis as needed.

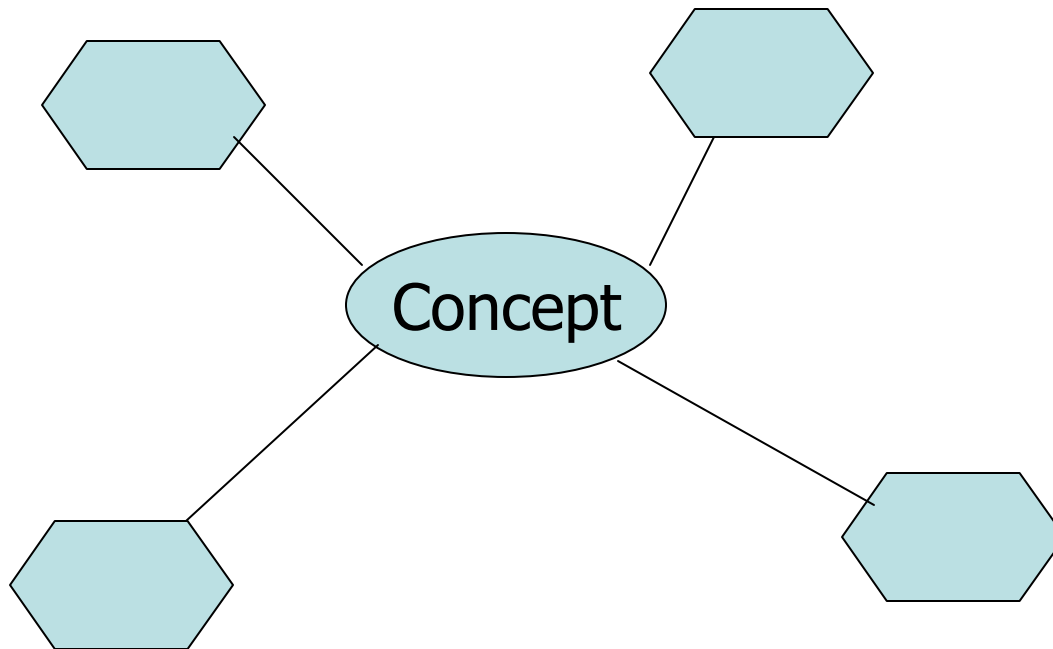
» From Connected Mathematics

# Reasoning about a Situation or Event



# Concept Map

- 



# The Gettysburg Address (5<sup>th</sup>)

*By Abraham Lincoln*

*Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.*

*Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.*

*But, in a larger sense, we can not dedicate—we can not consecrate—we can not hallow—this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.*

D 3

*Creative Synthesis*

Pretend you are a stakeholder from the audience (e.g. mother/father/sibling of a soldier, a soldier, a congressional leader, the secretary of war, etc.) who has just heard "The Gettysburg Address." How would you react to the message of Lincoln's speech? Create a reaction to the "The Gettysburg Address."

D 2

*Summarizing*

In three sentences or less, summarize the message Lincoln is trying to convey to the American people.

D 1

*Paraphrasing*

In your own words, paraphrase Lincoln's statement, "It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced."

*The Gettysburg Address*

# Why Is The Curriculum Effective with Promising Students of Poverty?

- Teaches Writing/ Communication Skills in Formal Register
- Scaffolding & modeling
  - lower level to higher level thinking
- Allows for opportunities to solve real-world problems
- Encourages Discussion and Goal Setting
- Allows for Creativity and Question-asking
- Provides models (graphic organizers) for thinking and solving complex problems

# Findings From Language Arts

- When compared to students of poverty not exposed to the LA curriculum, students who used the curriculum exhibited:
  - Significant growth in persuasive writing and literary analysis
  - Significant growth in reading comprehension standardized assessments
  - Significant growth in critical thinking

# Findings From Science

- When compared to students of poverty who were not exposed to the inquiry-based curriculum, the students who were exposed to the science curriculum exhibited:
  - Significant growth in critical thinking
  - Significant growth in scientific knowledge (standardized assessment)
  - Significant growth in scientific process, content knowledge, and conceptual understandings

# Findings from Math

- Mentoring Mathematical Minds
  - (Gavin, Casa, Adelson, et al)
    - Significant effects between experimental and control groups, favoring experimental on ITBS math
    - Significant pre-post growth in experimental performance-based assessments



*Services Beyond the School  
Day Matter*



# What do We Know? Value-Added Interventions

- Relationships/Mentoring
- Guidance and Career Counseling
- Use of Leisure Time
  - Saturday and Summer Activities
- Access to Advanced Curriculum and Educational Opportunities Beyond the School Day

# Pre-Collegiate Accelerated and Enrichment Programs Matter

- After school, extra-curricular, Saturday, and summer enrichment programs, especially in math and science, are found to positively impact college application, attendance rates, and entrance into advanced courses as well as overall academic achievement.
  - (e.g., AVID, KIPP, CTD, JKC Young Scholars, Talent Search Opportunities)

# Mentoring Matters

- Ongoing mentoring by counselors, teachers, and researchers to provide support for low income students **AND THEIR FAMILIES** positively impacts academic success, social skills, and student efficacy.

# Career Counseling Matters

- Proactive, targeted career and guidance counseling for low-income promising students **AND THEIR FAMILIES** positively impacts student **selection of rigorous high school courses** and post-secondary **enrollment at selective universities.**



*Access to Qualified and  
Knowledgeable Faculty*

# Professional Development Matters

- Characteristics and Assessment for Promising Students of Poverty
  - Verbal vs. Nonverbal Assessments
  - Alternative Assessments
  - Typical Characteristics
- Learning Differences and Modulating Expectations
- Stereotype Threat
- Specific Research-Based Curriculum
- Talent Development
- Interaction with Families
- Belief Systems
- Career Counseling Differences
- Mentoring Differences
- Developing Social Awareness
- Efficacy and Self-Esteem

	Identification	Curriculum and Instruction	Access Beyond the School Day	Professional Development Emphases
PreK - 2nd				
3rd - 5th				
6th - 8th				
9th - 12th				

	Identification	Curriculum and Instruction	Access Beyond the School Day	Professional Development
PreK - 2nd	Teachers Observe in PreK and K classrooms during thinking skills lessons - promising list	Clarion Science Young Scholars Early Intervention with Strengths and Remediation 2nd Preschool Graphic Organizers	After Care with Enrichment and Thinking Skill Component (Library, museums, study skills)  Science Kits (Ustars) Book Kits (with parent component)	Characteristics Identification Thinking Skills Scaffolding Working with Families
3rd - 5th	Whole grade in 3rd & 5th (with verbal, nv, or quant)  Match program to strength  Portfolio Option  Checklist of Observable Behaviors for Poverty	Jacob's Ladder W&M LA M3 Math W&M Science Tutoring Learning Style Options/Teaching Graphic Organizers	Summer Book Club  Saturday Enrichment  After School Study and Enrichment  Super Summers	Identification for Poverty Characteristics Specific Curriculum Maintaining Expectations Scaffolding Working with Families
6th - 8th	Portfolio Option for Adv. Courses  Subject Specific Exams with Pre-Teaching	Jr. Great Books Accelerated Options Choice Products Pre-AP Graphic Organizers	Summer Study Skills Saturday Clubs with Advanced Coursework Summer Talent Search HS Mentoring Program	Talent Development Building Efficacy Maintaining Rigor Characteristics Scaffolding Working with Families
9th - 12th	Subject Specific Exams with Pre-Teaching	Honors and AP IB Social Skills Courses College App and Financial Aid Study Skills	Mentoring Internships School led college visits	Preparing for Test Taking Stereotype Threat Scaffolding Characteristics Building Efficacy Working with Families

# Where do we Go?

## Questions for Future Research

- What types of interventions are most effective with different types of students, under which circumstances, and in what doses?
  - Systemic approaches
- Which internal and external factors positively or negatively impact promising students of poverty (e.g., school culture, resiliency, self-esteem, efficacy, personality, family, reform efforts)?
- What do effective teachers do that is distinctive for low-income promising students?
- Which support systems are necessary for continued growth during transition years?
- What is the cost of inaction?
  - Overlooked Gems, 2007



- *“If the misery of the poor be caused not by the laws of nature, but by our institutions, great is our sin.”*

» (Darwin)