

A stylized illustration of a person in an orange dress standing on a green ladder, reaching up towards a bright yellow star in a blue night sky. The sky is filled with other stars and a crescent moon. The background has soft, wavy blue and green shapes.

# *Developing Critical Thinking and Reading Comprehension in Students of Poverty*

The College of William & Mary  
Center for Gifted Education  
Project Athena

Tamra Stambaugh, Ph.D.  
Vanderbilt University

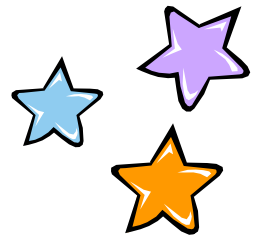
Joyce VanTassel-Baska, Ed.D.  
Editor

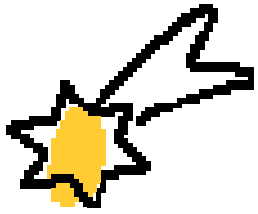
Drs. Heather French, Tamra Stambaugh, Denise Drain  
and Paula Ginsburgh, contributing authors



# *Children of Poverty & Reading*

- ★ Students in Title I schools using reform models do not show gains in higher level thinking skills or meaning construction.
  - (Tivnan & Hemphill, 2005)
- ★ The most accomplished teachers in Title I schools used small group instruction, independent reading, coaching, higher level questioning, and writing prompts in response to reading.
  - (Taylor, Pearson, Clark, & Walpole, 2000)





# *Reform Models Research*

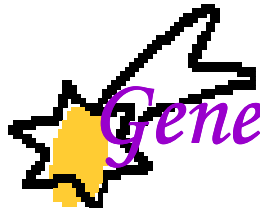
## American Federation of Teachers Study (1998)

- Exemplary Center for Reading Instruction (ECRI) and Junior Great Books only two reading models with studies disaggregating advance readers with significant results (ECRI limited)
- ECRI and JGB also only two to posit data on critical thinking as part of curriculum
- Cooperative Integrated Reading and Comprehension, Direct Instruction, Multicultural Reading and Thinking, Success for All, Open Court Young Scholars compared)

## Tivnan & Hemphill, 2005

- compared Building Essential Literacy, Literacy Collaborative, and Developing Literacy First. Findings from their study suggest that none of the programs posit strong gains in thinking skills and supplemental programs are necessary

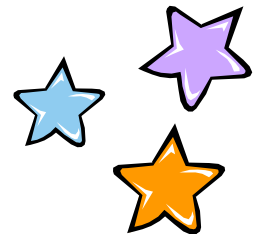


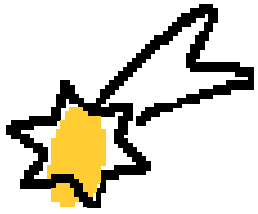


# General Characteristics of Students of Poverty

- ★ 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



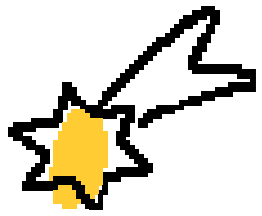


# *Interventions That Work*

- ★ Graphic organizers over time
  - VanTassel-Baska & Stambaugh, 2007
- ★ Link to student experiences or create the experience for them
- ★ Use choice and discussion as a vehicle for learning
- ★ Teach them to ask questions
- ★ Scaffolding of content, process, and independence level
- ★ Modeling of content, process, and discussion/ vocabulary
- ★ Link to conceptual understanding
  - VanTassel-Baska & Stambaugh, 2007
- ★ Sort relevant and irrelevant information (reasoning)
- ★ Cooperative vs. competitive environments (cortisol)
- ★ Scaffolding of content (models and graphic organizers)
- ★ PRAISE, positive reinforcement
  - Payne, 2005



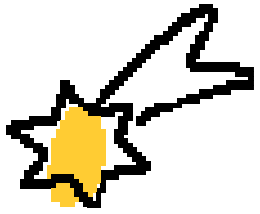
# *We Must Be Deliberate in Our Selection of Curriculum*



No, this one should fit my curriculum.  
It's forty minutes long.

Watts, 1996

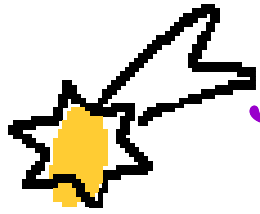




## *Purpose of Jacob's Ladder*

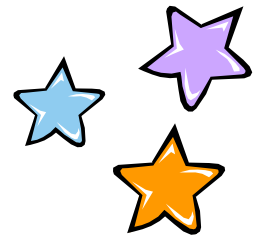
- ★ To enhance reading comprehension skills
- ★ To build reading skills from lower order to higher order
- ★ To enhance student discussion of textual meaning
- ★ To promote instructionally sound test preparation
- ★ Build scaffolding for students to better employ higher level thinking skills

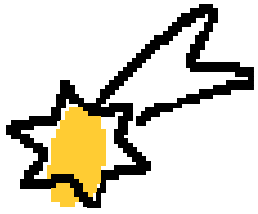




## *State Assessment Item Categories for Reading Comprehension*

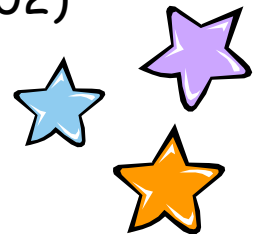
- ★ Categorize and classify ideas
- ★ Recall details in text
- ★ Summarize the main idea of a text
- ★ Analyze character traits
- ★ Draw a conclusion
- ★ Analyze details in text
- ★ Use webs to show understanding





# *Research Base for Jacob's Ladder Reading Comprehension Program*

- ★ Instructional scaffolding that embeds strategy instruction in text reading enhances reading comprehension (Fielding & Pearson, 1994; Villaume & Brabham, 2002)
- ★ Responding to literature and reading through open-ended comprehensive questions improves test performance (Guthrie, Schafer, & Huang, 2001)
- ★ Literacy discussions that stress collaborative reasoning foster greater engagement and higher level thinking (Chin, Anderson & Waggoner, 2001; Pressley, 2001; Taylor, Peterson, Pearson, & Rodriguez, 2002)
- ★ Rereading text improves metacomprehension accuracy (Rawson, Dunlosky, & Thiede, 2000)
- ★ Teachers who emphasize higher order thinking through questions and tasks promote greater reading growth (Taylor, et al, 2003; Knapp, et al, 1995)
- ★ Less than 20% of questions teachers ask in language arts are at the advanced levels of Bloom's Taxonomy (Taylor, et al, 2002)
- ★ Teacher stance (providing coaching, modeling, & feedback) enhances reading and writing growth (Pressley, et al, 2001; Taylor, et al, 2002)



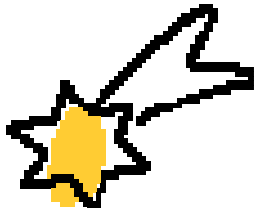


# *The Montillation of Traxoline*

★ 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?

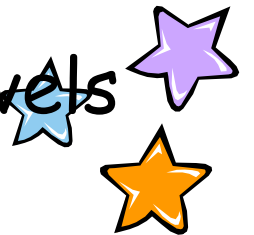


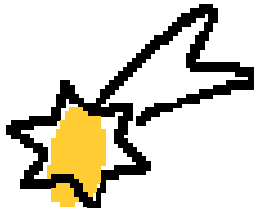


# *Why Jacob's Ladder?*

## *The Inside Scoop*

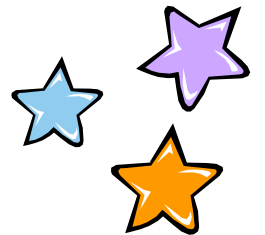
- ★ Designed based on teacher need for scaffolding reading - especially for advanced readers who are capable of reading and interpreting at a higher level but need help getting started
- ★ Designed to differentiate reading instruction for students based on research-based models
- ★ Designed to move students from lower order to higher order thinking so they may gain independence in reading and analyzing literature - work consistently at higher levels of achievement

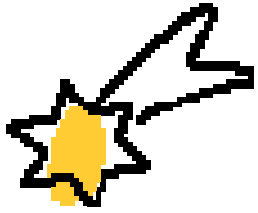




# Overview of the Program

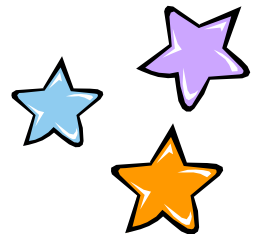
- ★ Includes 10 reading selections of each of the following genres:
  - Fables/myths (level 1), short stories and Essays (level 2 and 3)
  - Poetry
  - Nonfiction NEW!
- ★ Each reading selection (except poetry in Level I) includes 2 ladders based on best fit with the reading selection

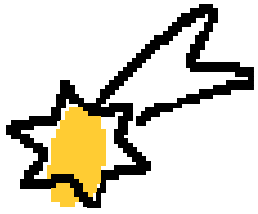




# *Curriculum Organization*

- ★ Introduction and User Guide
  - same in each level
- ★ Appendices
  - Readings and Commensurate Ladders
  - Performance-Based Assessments w/rubric
  - Assessment System
  - Reflection Forms
  - Answer Sets
  - Standards Alignment





# Goals and Objectives

- ★ **Goal 1 - To develop inference skills and judging relationships among data provided**

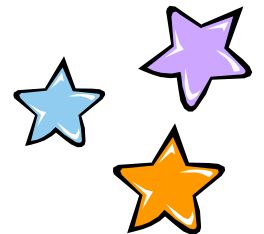
Students will be able to:

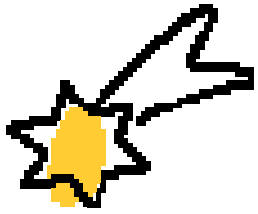
- Provide a sequence of events, procedures, and/or activities that occur in the text.
- Analyze cause and effect relationships in text.
- Draw consequences and implications from text for application in the real world.

- ★ **Goal 2 - To develop deductive reasoning skills, moving from the concrete to the abstract**

Students will be able to:

- Provide details, examples and illustrations from written text.
- Classify details from the story/text into categories.
- Create generalizations about the story/text based on categories.

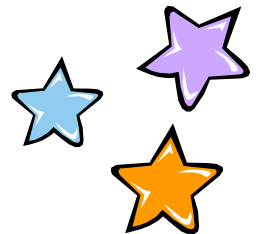


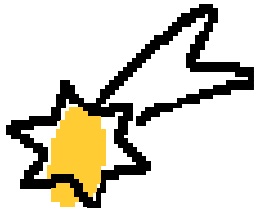


# Jacob's Skill Ladders

## Jacob's Ladder A

	<i>Consequences and Implications</i>	<i>Title of Reading Selection</i>
A 3	Questions inserted here.	
	<i>Cause and Effect</i>	
A 2	Questions inserted here.	
	<i>Sequencing</i>	
A 1	Questions inserted here.	

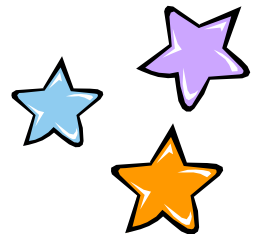


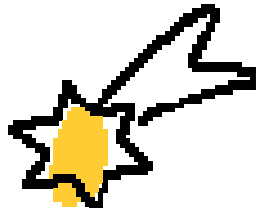


# Jacob's Skill Ladders

## Jacob's Ladder B

	<i>Generalization</i>		
<b>B 3</b>	Questions inserted here.	<i>Title of Reading Selection</i>	
	<i>Category/Classification</i>		
<b>B 2</b>	Questions inserted here.		
	<i>Details/Examples</i>		
<b>B 1</b>	Questions inserted here.		





# Goals and Objectives (cont.)

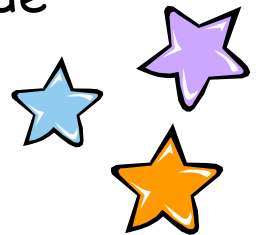
## ★ Goal 3 - To develop literary analysis skills, based on understanding literary elements

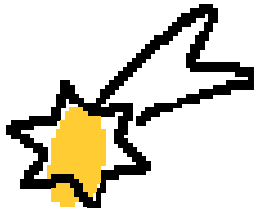
Students will be able to:

- Identify character traits and qualities for main characters in a story.
- Identify and analyze poetic devices as appropriate.
- State the setting or context for the story by place and time.
- Make inferences or provide evidence about the story from given data.
- State the main ideas or themes of the story.

## ★ Goal 4 - To develop synthesis skills, moving from restating to creative synthesis

- Paraphrase important quotations from the text.
- Summarize the main ideas presented in the text and provide support using text-based evidence.
- Generate new ideas based on their evaluation of existing ideas.



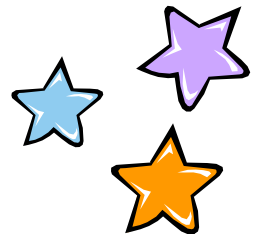


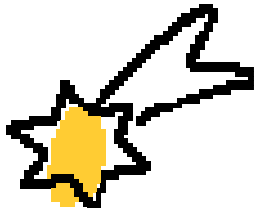
# Jacob's Skill Ladders

## Jacob's Ladder C

		<i>Main Idea/Theme</i>	
C 3		Questions inserted here.	
		<i>Evidence/Inference</i>	
C 2		Questions inserted here.	
		<i>Context/Setting/Characterization</i>	
C 1		Questions inserted here.	

*Title of Reading Selection*



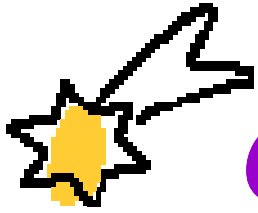


# Jacob's Skill Ladders

## Jacob's Ladder D

D 3	<i>Creative Synthesis</i>	<i>Title of Reading Selection</i>
	Questions Inserted Here	
D 2	<i>Summarizing</i>	
	Questions Inserted Here	
D 1	<i>Paraphrasing</i>	
	Questions Inserted Here	



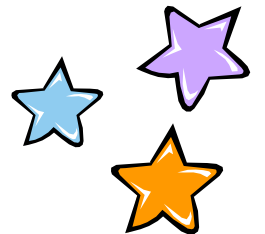


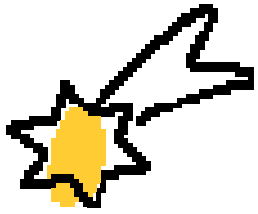
## *Goals and Objectives (cont.)*

★ **Goal 5 - To promote learning through interaction and discussion of reading material in the classroom**

Students will be able to:

- Articulate their understanding of a reading to a partner.
- Solve problems collaboratively.
- Engage in a dialogue about the meaning of a selection.
- Agree on a response to the reading stimulus.

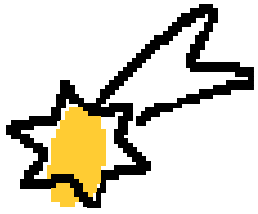




## *Teaching Jacob's Ladder*

- ★ Whole group modeling first
- ★ After students understand how to complete the Jacob's Ladder ladders, each student completes the ladder individually and then discusses the answers with a partner
- ★ Debrief again whole class or in a small reading group



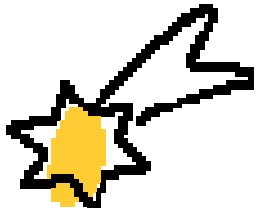


## *Delilah*

She has blue eyes like the ocean.  
Her tongue like a rose.  
Her nose like a heart.  
Her tail like a fan.  
Her black coat like the night sky.

By Casey Carroll  
Grades 4-5  
Honorable Mention  
Center for Gifted Education Talent Search





C  
3

*Theme/Concept*

❖ Write a poem like *Delilah* to describe your pet or an animal you know. (Use the poem as your model.)

C  
2

*Evidence/Inference*

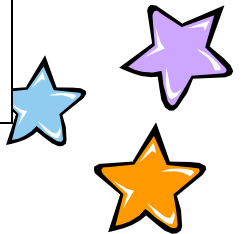
❖ What evidence is important in deciding on Delilah's identity?  
❖ What or who is Delilah in the poem, based on the evidence?

C  
1

*Characterization*

❖ What words does the poet use to show Delilah as a lovable creature?

*Delilah*





# *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





## Why Own A House When You Can Own an R.V.? (4<sup>th</sup>)

The nineties are so hectic nobody spends any time in their homes with their families. Leisurely evenings at home have given way to hectic evenings on the road. People are always on the go, so why not take the house with you? That's where the recreational vehicle (R.V.) comes in. When you have to run errands, or take your kids to soccer or basketball practice, your time could also be spent cleaning your house, doing your laundry or making a meal.

We've created a world where the goal is to make things faster and to allow us to do two or three things at once. Traditional mail has been replaced by overnight mail, e-mail and faxes, and home cooked meals have been replaced by fast food or microwave meals. We have so many things to make our lives "easier," but we never have time to use any of them.

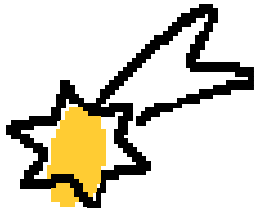
One solution for anyone who says "I spend no time in my house," is to trade your expensive mortgage for a house you can take with you. After all, with a good hook-up, an R.V. contains all the necessities of life: a bathroom, running water, kitchens, beds, satellite TV, cellular phones, electric lights, and, of course, a moving vehicle. In the near future, our communities will simply be R.V. lots so families can drive from their home lot to temporary lots that provide home-like settings for busy families on the go.

Another solution would be to cut back your busy schedules and stay home more often. Do one thing at a time and live for today. Sit back once in a while, relax, and take the time to enjoy your life.

*Robert J. Hidy*

*Second Place: Essays, Grades 4-5*





C 3

*Theme/Concept*

What ideas are expressed in the essay about the concept of time?

C 2

*Evidence/Inference*

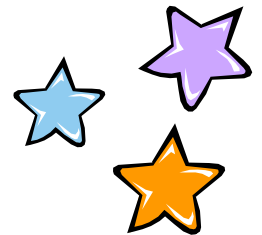
Do you agree or disagree with the author about trading in your house for an R.V.? What evidence supports your answer?

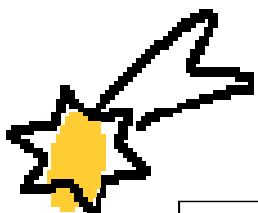
C 1

*Characterization*

Write a paragraph or draw a picture of the type of family being characterized in this essay.

*Why Own a House When You Can Own an R.V.?*





**B 3**

*Generalizations*

What generalizations can you make about how families spend time today?

**B 2**

*Classifications*

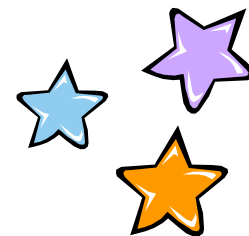
Classify your list into categories.

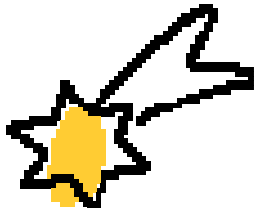
**B 1**

*Details*

Make a list of at least 25 things that keep families busy.

*Why Own a House When You Can Own an R.V.?*



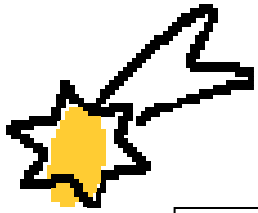


## *The Crow and the Pitcher*

A crow, dying of thirst, came upon a pitcher which had once been full of water. When the crow put his beak into the mouth of the pitcher, he found that only very little water was left in it, and he could not reach far enough down to get at it. He tried and tried, but at last had to give up in despair.

Then a thought came to him. He took a pebble and dropped it into the pitcher. Then he took another pebble and dropped it into the pitcher. Then he took another pebble and dropped it into the pitcher. Then he took another pebble and dropped it into the pitcher. Then he took another pebble and dropped it into the pitcher. At last he saw the water rising toward him, and after casting a few more pebbles into the pitcher, he was able to drink and save his life.





A  
3

*Consequences and Implications*

- ❖ What would have happened if the crow had done the following:
  - a) Kept putting his beak in the bottle?
  - b) Flown away?
  - c) Broken the bottle?
  - d) Waited for rain?

*Cause and Effect*

- ❖ What caused the water to reach the crow? What overall effect did it have on the crow?

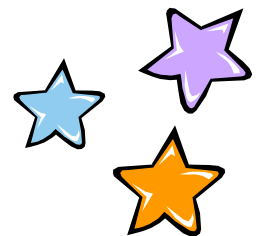
A  
2

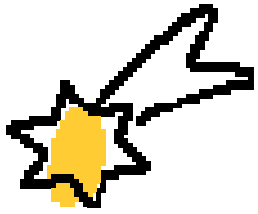
*Sequencing*

- ❖ What steps did the crow use to get water? Outline them below in order:
  - 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
  - 3. \_\_\_\_\_
  - 4. \_\_\_\_\_

A  
1

*The Crow and the Pitcher*





C  
3

*Main Idea/Theme*

❖ What main idea(s) did you get from this story?

C  
2

*Inference*

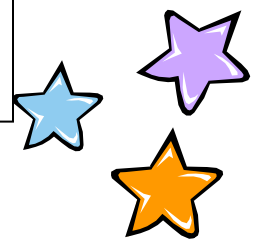
❖ What made the crow successful in getting a drink of water? Why did his plan work?

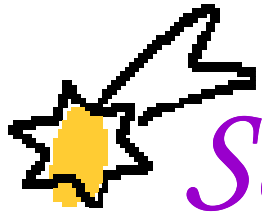
C  
1

*Characterization*

❖ What are the crow's most important qualities? What other characters have you read about that show similar life qualities? How were their situations similar or different from the crow's situation?

*The Crow and the Pitcher*

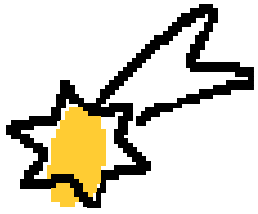




# *Sample Follow-Up Questions*

- ★ That's interesting.. Does anyone have a different idea?
- ★ I agree with ---- because...
- ★ I disagree with --- because..
- ★ I thought the passage.... was.... because
- ★ My idea was different or the same as...
- ★ I think... because in the story it says...





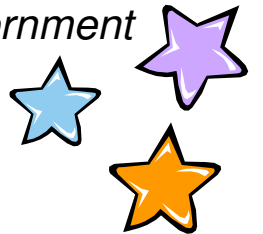
# *The Gettysburg Address (5<sup>th</sup>)*

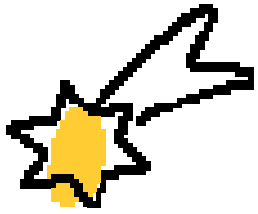
*By Abraham Lincoln*

*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.*





C 3

What does Lincoln's address say about the concept of liberty?

*Evidence/Inference*

What inferences can you make about Lincoln's hopes for the future of the United States? What evidence supports your answer?

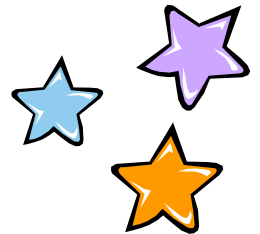
C 2

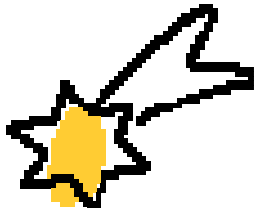
*Characterization*

How does Lincoln characterize the soldiers who died during the Battle of Gettysburg? Support your answer.

C 1

*The Gettysburg Address*





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*

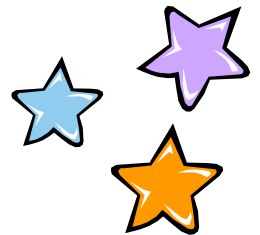
In three sentences or less, summarize the message Lincoln is trying to convey to the American people.

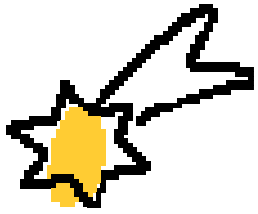
D 1

*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."

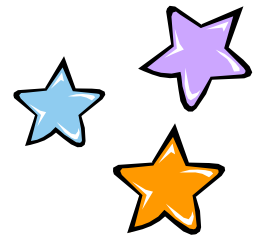
*The Gettysburg Address*

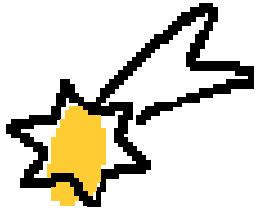




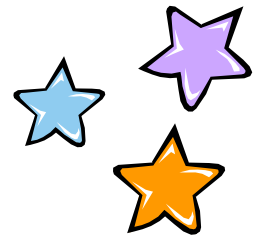
## *Why Is The Curriculum Effective with Promising Students of Poverty?*

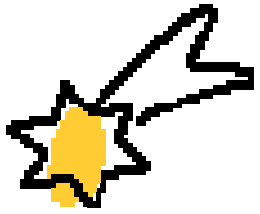
- Teaches Writing/ Communication Skills in Formal Register
- Scaffolding & modeling
  - lower level to higher level thinking
- ★ Encourages Discussion and Goal Setting
- ★ Allows for Creativity and Question-asking
- ★ Provides models for thinking and solving complex problems



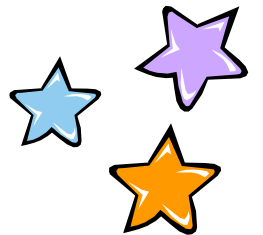


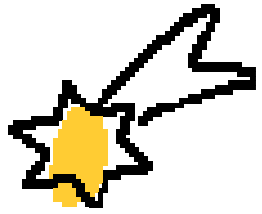
# *Assessing and Managing Jacob's Ladder*





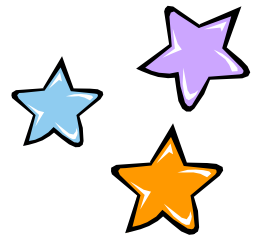
★ What gets  
measured gets  
done.

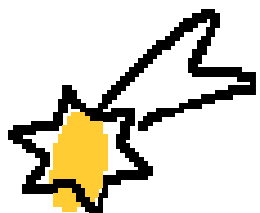




# *Examples of Pre-Post Assessments Used in JL*

- ★ Four Questions and a Short Reading
  - Question One - Implications and Consequences
  - Question Two - Inference
    - Analyzing a quote
  - Question Three - Theme/Generalization
  - Question Four - Creative Synthesis
    - Create a new title...





# Assessment/Response Form

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Circle One: A3 B3  
C3 D3

Student Score: 0 1 2  
Teacher Score: 0 1 2

Circle One: A2 B2  
C2 D2

Student Score: 0 1 2  
Teacher Score: 0 1 2

Circle One: A1 B1  
C1 D1

Student Score: 0 1 2  
Teacher Score: 0 1 2

Scoring: **0 = Needs Improvement** **1 = Satisfactory** **2 = Exceeds Expectations**

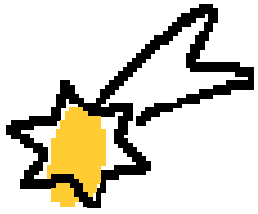
Students score their work in the top part of the scoring box.  
Teachers score the work in the bottom part of the scoring box.

Student Comments: Is there anything you would like your teacher to know about your work on this reading?

Teacher Comments:

Selection Title: \_\_\_\_\_

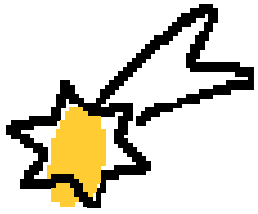




# *Reflection Form*

- ★ What I did well...
- ★ What I learned...
- ★ New ideas I have after discussion...
- ★ Next time I need to...





# Grading Ideas

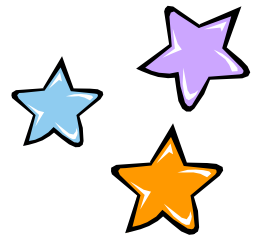
- ★ Instead of always using the answer sheet try the following:
  - Students individually write bulleted responses to the stories for discussion only... Work with a partner to discuss the readings. At end of the ladder discussion require a graded activity such as:
    - Journal response (highest rung)
      - Which one word to you think best describes what the Crow and Pitcher is about. Use examples from the story to justify your answer.
      - What do you think Delilah is? Why?
    - Activity (see example)
      - See creative synthesis in Ladder D
      - Concept map

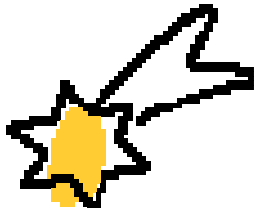




## *Process for Piloting Jacob's Ladder*

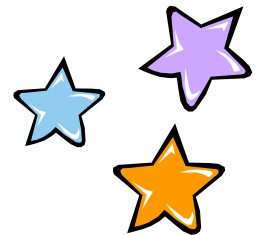
1. Administer pre-assessment and determine groups and student needs.
2. Introduce the ladder skills and terms that students will encounter, using the Teachers' Guide examples (pp. 4-8).
3. Do one reading and one ladder with the whole class and debrief.
4. Organize folders for center use or reproduce readings and ladders as needed for classroom use in small groups or guided reading.
5. Monitor student work, using answer sets and assessment forms as a tool.
6. Record class progress.
7. Make adjustments to groups as needed.
8. Administer the post-assessment.

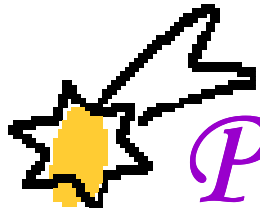




# *Grouping Alternatives*

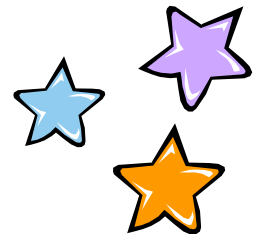
- ★ Learning centers with dyads
  - See folder examples
- ★ Small group discussion (3-4)
- ★ Whole class engagement
- ★ Reading group activities
- ★ Group by pre-assessment

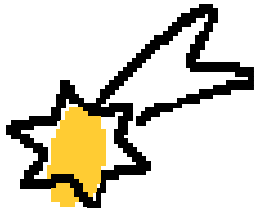




# *Pilot Study of Jacob's Ladder*

- ★ N=495 (222=comparison/273 experimental) - 2 school districts
- ★ Reading Comprehension:
  - Experimental group statistically outperformed the comparison group on ITBS ( $d=.51$ )
- ★ Critical Thinking:
  - Experimental group statistically outperformed the comparison group on the Test of Critical Thinking (TCT) ( $d=.54$ )
- ★ Performance-Based:
  - Experimental group grew 1 standard deviation between pre and post tests in literary analysis
- ★ By Factor: (SES, gender, gifted, grade)
  - No SES differences; No gender differences
  - Gifted as an entire group outperformed nongifted on TCT
  - Grade level differences on ITBS: 3<sup>rd</sup> and 4<sup>th</sup> grade experimental outperformed comparison group but no differences in 5<sup>th</sup> grade

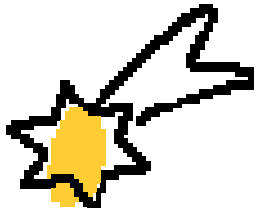




# Teacher Comments

- ★ "Students are much better at answering two-part questions where they must defend or prove their answer using the selection."
- ★ "I became more cognizant of the types of questions I asked and realized I need to make my questions more open-ended."
- ★ "Observing and listening to student discussions and written work show that they are using higher level thinking. When they are given time in class to discuss anything, they talk more and are more eager to share their responses."
- ★ "The processes align with standards in reading I'm required to teach."





## Quote

★ *The most important outcome of education is to help students become independent of formal education.*

★ -- Paul E. Gray

