



Tennessee Department of Education
Common Core Leadership Course 202
High School Class 1

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Tennessee Department of Education

Common Core Leadership Course 202

High School Class 1

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Welcome to Common Core Leadership 202.

Our Goal in this Course:

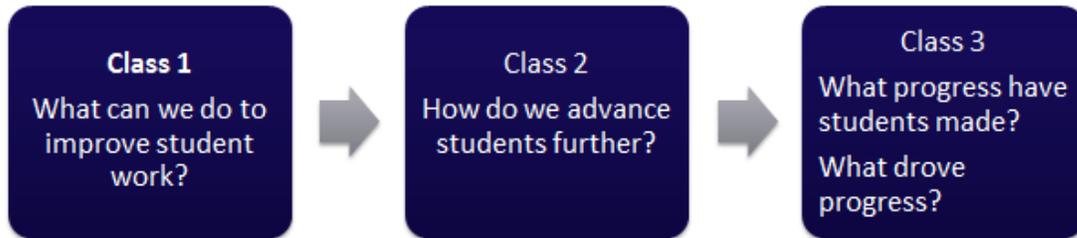
Support collaborative leadership learning focused on increasing student achievement in the transition to Common Core State Standards.

How Will We Achieve that Goal:

- Peer-Led Discussions and Collaboration
- Direct Applications to Our Classrooms and Schools
- A Focus on Student Work

Course Norms:

- Keep students at the center of focus and decision-making.
- Balance urgency and patience.
- Be solutions-oriented.
- Speak Up!
- We need collective solutions. Be present and engaged.
- Challenge with respect.
- Risk productive struggle.
- Monitor airtime and share your voice.



Notes:

Bridge to Practice Overview

In Leadership 202, we will take on two of the hardest and most important questions we face as leaders in education:

- **How do we help all students comprehend complex texts and write effective analyses?**
- **How do we help all students master the most challenging math content in each grade?**

All activities and assignments in Leadership 202 will focus on student work. **Participants will all be asked to partner with two teachers and two groups of students – a math teacher and a math class and a literacy teacher (across any relevant content area) and a group of students.** Specific information about the sequence of activities for each content area is outlined below:

	Literacy	Math
Prior to Class 1	<ul style="list-style-type: none"> • Select partner teacher and students • Students complete cold response to one assigned literacy task • Collect and bring student work to class one • (More details about the Class One assignment are included below) 	<ul style="list-style-type: none"> • Select partner teacher and class • Students complete a math task on focus content • Collect and bring student work to class one • (More details about the Class One assignment are included below)
In Class 1	<ul style="list-style-type: none"> • Analyze student work • Review key strategies for writing • Develop a plan for next steps 	<ul style="list-style-type: none"> • Analyze student work • Review key strategies in mathematics • Develop questions for students
Between Class 1 and Class 2	<ul style="list-style-type: none"> • With partner teacher, conduct a close reading of the text and prompt with students • Review model essays with students • Students plan new essays • Collect and bring student prewriting to class two 	<ul style="list-style-type: none"> • With partner teacher, conduct a lesson using questions to advance student understanding • Students complete a second task • Collect and bring student work
In Class 2	<ul style="list-style-type: none"> • Analyze student prewriting • Review research on best practices on providing feedback (peer and teacher delivered) 	<ul style="list-style-type: none"> • Analyze student work on task 2 • Review math intervention strategies • Determine plan for remediation
Between Class 2 and Class 3	<ul style="list-style-type: none"> • With partner teacher, provide feedback on prewriting • Students revise or rewrite essay • Provide feedback on draft 2 (teacher and peer) • Students complete final draft • Collect and bring student work to class three 	<ul style="list-style-type: none"> • With partner teacher, conduct one class of activities to remediate • Students who did not demonstrate evidence of understanding complete task 3 • Collect and bring student work
In Class 3	<ul style="list-style-type: none"> • Analyze and score final student work 	<ul style="list-style-type: none"> • Analyze and score final student work

Common Core Leadership Course 202 Topics

Overall:

- PARCC support offerings
- PARCC Practice Test Info
- Formative assessments
- Resource guides

Math:

- PARCC sample items, evidence tables, planning
- Key components of good math instruction (assessing v. instructional tasks, how direct instruction fits in, essential understandings, goal orientation)
- Looks fors – how can you tell if a lesson is working towards a clear goal?
- Fluency
- Findings from CRA – key content gaps
- Task Arcs
- Videos

ELA/literacy:

- PARCC sample items, evidence tables
- Units
- More on text complexity – illustration of college level text
- Vocabulary instruction
- Look fors – how can you tell if a less is rigorous?
- Elementary – review simple view of reading
- Secondary – integrating literacy instruction
- Findings from student surveys / writing results

Earning a living wage has never demanded more skills. This generation must learn more than their parents' to do as well.

Tennessee is on a mission to become the fastest improving state in the nation. Doing so will require hard work and significant learning for all. We must learn to teach in ways we were not taught ourselves.

There is no recipe that will deliver a successful transition. Preparing for Common Core will demand effective leadership focused on student growth.

All children are capable of learning and thinking at a high level. Children in Tennessee are as talented as any in the country and often capable of more than we expect.

Our current education results pose a real threat to state and national competitiveness and security. Improving the skills of our children is vital for the future of Tennessee and America.

PARCC is coming. We need to use the transition wisely to make sure our students and our state are ready.

Notes:

20 Things Every Tennessee Teacher Should Know about the PARCC Assessment

PARCC stands for the Partnership for Assessment of Readiness for College and Career. A partnership of 18 states and the District of Columbia, PARCC is developing math and English language arts / literacy assessments in grades 3-11. Beginning in the 2014-15 school year, the PARCC math and English language arts assessments (ELA) will replace the Achievement and End of Course math and ELA assessments as part of the Tennessee Comprehensive Assessment Program (TCAP).

PARCC is still in the design process. Test blueprints have been developed and released and the first round of items has been developed and reviewed by educators in Tennessee. Tennessee, along with other PARCC states, will participate in a field test of these items during spring, 2014. As with the field test for all TCAP assessments, the PARCC field test will help the consortia make final decisions about the design and scoring of the assessments. With Tennessee's strong support, PARCC is committed to creating high quality tests that will be improved over time based on results and feedback from all of the member states.

Based on the design of tests as of October 2013, here are 20 things every Tennessee teacher should know about PARCC:

- 1) **Tennesseans helped build PARCC.** Tennessee is a governing state in PARCC and Tennessee educators from K-12 schools and from institutions of higher education have participated in the design of PARCC and reviewed items for content and for bias and sensitivity. Together with other states, we are building the PARCC assessments.
- 2) **The Tennessee Comprehensive Assessment Program (TCAP) will include the PARCC Assessments in grades 3-11 in Math and English Language Arts / Literacy.** Beginning in the 2014-15 school year, the PARCC assessments will replace the Achievement and End of Course tests for math and English language arts (ELA) as part of the Tennessee Comprehensive Assessment Program (TCAP). We will continue to have Achievement and End of Course exams in science and social studies as part of TCAP.
- 3) **Participating in PARCC will allow Tennesseans to see how our state performs and grows over time in math and English language arts / literacy compared to other PARCC states.** Right now, with each state developing its own tests, there is no way to know how our students' growth and performance compares with our neighbor's performance or pace of growth. Working with other states to develop and administer PARCC will allow us to see how our students' achievement level and pace of growth compares to other PARCC states every year and will allow us to learn from others.
- 4) **The PARCC assessments will be given in two separate windows during the year: a Performance-Based Assessment Component in February or March and an End of Year Assessment Component in April.** There will be a block schedule administration available for both the Performance-Based Assessment and the End of Year Assessment (which will be called the End of Course Component in high school) in the fall and winter. Unlike the Achievement and End of Course math and reading assessments, not all of the testing will happen at the end of the course or year.
- 5) **Students' final scores will reflect their performance on both the Performance Based Assessment and the End of Year Assessment.** The Performance Based Assessment will include all of the questions that students have to perform a task not just pick an answer – for example, write an essay or create a model. The Performance Based Assessment has three parts ELA/Literacy and two parts math. The End of Year Assessment has two parts math, two parts ELA/Literacy. The final student score will be based on performance across all the components (students will not get a different score for each component).

This list represents the best information about the PARCC assessment as of October 2013. As is true of any assessment design process, there may be changes to the PARCC design informed by ongoing feedback and the field test.

- 6) **Sixty percent of the PARCC ELA / literacy assessment will involve writing.** Unlike previous assessments that chiefly assess ELA through multiple choice questions, writing will be a key element of PARCC. You can learn about the three writing task types in more detail and see sample items [here](#).
- 7) **More than 60 percent of the math questions will focus on the math standards that have been identified as the “major work of the grade” (as outlined in the PARCC Model Content Frameworks – see [here](#)).** Unlike the Achievement and End of Course math assessments, with small number of items on every State Performance Indicator (SPI), there will be more questions on certain standards on the PARCC math assessment. Students who do well with the major work of the grade in math will do well on PARCC.
- 8) **The PARCC math and ELA / literacy assessments will include many different types of questions.** There will be questions that ask students to do something – these are typically called constructed response questions. All constructed response questions will part of the the Performance Based Assessment window to allow for hand scoring by the end of the year. There will also be multiple choice questions and interactive technology questions – questions that require students to drag and drop items or type an answer where no choices are given or select from many options. All of these questions will be able to be scored automatically. The End of Year component will only include questions that are automatically scored.
- 9) **Constructed response and writing questions will be hand-scored by trained reviewers.** Reviewers will go through in-depth training on how to use the rubric, similar to the training on our current writing assessment, to ensure fairness and consistency. Multiple reviewers will score each assessment, and a third reviewer will examine student scores if there is a discrepancy in the scoring. This scoring process is a similar approach to the scoring of the writing assessments students have taken for many years.
- 10) **There will be accommodations and accessibility features that allow all students to have the support they need to do well on PARCC.** Unless a student’s Individualized Education Program (IEP) team determines that the student will participate in the portfolio assessment, he or she will participate in the new PARCC assessment. PARCC is being designed to be accessible for all students other than those taking the Portfolio assessment (the MAAS assessment will no longer be administered beginning in the 2014-15 school year.) Students with disabilities will be able to use accommodations specific to the PARCC assessment chosen by their IEP teams. More information about these accommodations can be found [here](#).
- 11) **The PARCC portion of TCAP will be administered online,** and there will be a paper-pencil back up option at first. Not all students will take the PARCC tests at the same time, as typically has been the case with the Achievement and End of Course paper-pencil assessments. Groups of students will cycle through different test parts during a window of several weeks and return to class and continue learning throughout the window. Students will only work on assessments for a few days within the testing window.
- 12) **There will not be questions on the ELA/Literacy assessments that test grammar in isolation; grammar will be assessed through students’ writing.** On PARCC, grammar is assessed solely through writing. There will not be stand-alone multiple choice questions assessing grammar.
- 13) **All passages on the ELA/Literacy parts will come from an authentic text.** The [PARCC passage selection guidelines](#) state: “The texts students encounter on tests should be worthy of careful attention, be content rich and challenging, and exhibit professional published quality.” Unlike previous assessment passages, written for the purpose of the test, PARCC will feature only previously published texts.
- 14) **Multiple-choice and selected-response questions on the ELA/Literacy Assessments will focus on reading and vocabulary.** All multiple-choice questions will be based on a text and require students to provide evidence to

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support their answer. Additionally, vocabulary questions will focus on meaning as presented in the text. Students will not be expected to have prior knowledge of the subject or content of the text.

- 15) **Tennessee will offer the PARCC high school level math assessments for both the traditional course sequence (Algebra I, Geometry and Algebra II) and for the integrated course sequence (Math I, Math II and Math III).** Unlike the previous End of Course offerings which only followed the traditional sequence with Algebra I and Algebra II tested, PARCC will offer the full suite of assessments for both traditional and integrated courses. Click [here](#) for more information on the mathematics pathways.
- 16) **Students will get partial credit for some questions in math.** On some of the constructed response math questions, students can receive partial credit if they demonstrate understanding of a concept. Students will need to generate a precise and accurate answer in order to earn full point value.
- 17) **In grades 1-6, there will be math questions that assess students' speed and accuracy with basic procedures without a calculator, (i.e., their math fluency).** The list of fluency standards can be found [here](#). Beyond grade 6 will have fluency standards, but there will not be a fluency component of the PARCC assessment.
- 18) **In grades 6 and beyond, PARCC will have calculator and non-calculator sections.** Assessments in grades 3-5 will not allow the use of a calculator. Assessments in grades 6-7 will allow for a four-function plus square root calculator, assessments in grade 8 will allow for a scientific calculator, and assessments in high school will allow for a calculator similar in functionality to a TI-84 graphing calculator. PARCC's calculator policy can be accessed [here](#).
- 19) **Students will have a math reference sheet for grades 5 and higher.** Students in grades 3 and 4 will not be provided a reference sheet. Reference sheets for [grades 5-8](#) and for [high school](#) will be available to students during the assessment.
- 20) **Students who do well on PARCC will know they are ready for college and career.** PARCC will ask students to do the kind of work they will need to do to be ready for college and career. Tennessee public institutions of higher education have agreed to use students' performance on the PARCC assessment as an indicator of readiness for credit bearing work. PARCC will give students and parents clear information about whether they are on track towards meaningful options in life.

If you have additional questions about the PARCC assessment, please go to the PARCC section of the TNCore website at www.TNCore.org or email your questions to TNCore.Questions@tn.gov.

This list represents the best information about the PARCC assessment as of October 2013. As is true of any assessment design process, there may be changes to the PARCC design informed by ongoing feedback and the field test.

Idea Lab

This fall, we tried something called the "The Idea Lab." The purpose was to better understand where teachers are making instructional shifts and where we are seeing gaps in the transition to Common Core State Standards.

The two reasons we are sharing this information with you are:

- To share the findings at the state level in case they help in your own thinking and planning.
- To share our process for creating the Idea lab at the state level to use as guidance if you decide to create something similar in your schools and districts to pull out your own findings.

The process involved three steps:

1. Form a committee and have all committee members engage in a set of common field work (observations, conversations with teachers and students, review of work artifacts)
2. Facilitate a group discussion of progress and gaps and come up with ideas to target those gap areas.
3. Synthesize findings

Here are our Findings at a State Level

MATH	Progress	Gaps
1) Are teachers spending time on the right content?	<ul style="list-style-type: none"> • Pacing guides have generally eliminated the dropped SPIs, especially in grades 3-8. • Common Core State Standards are usually included in district pacing guides, often alongside SPIs. • A sample of pacing guides show an allocation of about 50 percent of instructional time to focus clusters. • There is a feeling that teachers are spending more time on content and understanding and feeling less pressure to cover all standards quickly. • There is some evidence of teachers integrating multiple standards into a single day, instead of completing a standard per day 	<ul style="list-style-type: none"> • Still not enough time on focus content. • Pacing guides show that not enough time is planned to be spent on additional standards. • There is a lack of evidence about whether high school courses have stopped teaching the dropped SPIs and their progress in the transition. • Administrators still want checklist of standards covered. • There is a disconnect between formative assessments and how the focus content is assessed. • Many textbooks have not been adapted to reflect the focus content and spending different amounts of time on different standards.
2) Are students getting regular practice with demanding tasks?	<ul style="list-style-type: none"> • More rigorous math tasks are being used, especially in grades 3-5. • Teachers are more aware of importance of rigor and the importance of analyzing tasks for rigor. • Students are exhibiting more stamina on the 2013 CRA leading to fewer blank responses and students attempting more items. • The released task arcs are useful and recognized as high quality resources. • There seems to be better 	<ul style="list-style-type: none"> • The demand of tasks is still not as rigorous as it could be. • K-2 instructional and assessment tasks are not being widely used. • There appears to be less usage of tasks in middle grades than in elementary. • Task arcs aren't being used as full units; teachers are generally using parts of the task arcs. • Overall, there is a lack of understanding of larger goals or understandings instruction is driving toward with tasks. Teachers might be using a task but

	implementation by teachers who have received more training on the strategies.	towards what end?
3) Are teachers asking questions that assess and advance student understanding?	<ul style="list-style-type: none"> Teachers are asking more questions overall. Many questions are meant to assess students understanding of the topic. There are also more questions being asked that ask students to explain how they got an answer or why their answer is correct or incorrect. 	<ul style="list-style-type: none"> There is a limited use of advancing questions, especially knowing what questions to ask beyond the initial why/how question. Questions often lack purpose – towards what end?

ELA	Progress	Gaps
1) Are students receiving daily practice citing evidence in conversation, writing and/or research?	<ul style="list-style-type: none"> Students are being asked to cite evidence more often in writing and conversation. There is some variation in the frequency and medium used to provide evidence. This shift is especially evident in English language arts classrooms. 	<ul style="list-style-type: none"> Although there has been progress, there are still gaps in citing evidence. This gap is more pronounced in content areas other than English language arts. There seems to be a limited understanding of the purpose of citing evidence and how it can help students better understand both the content and the text.
2) Are teachers selecting appropriately complex texts that reflect the needed balance of informational text and fiction?	<ul style="list-style-type: none"> Teachers are using more nonfiction texts in English language arts classes. There seems to be interest and enthusiasm from both teachers and students about reading nonfiction. The balance of fiction and nonfiction is improving in all grade levels, and there is more reading beyond textbooks in many subjects. 	<ul style="list-style-type: none"> Teachers seem to struggle to with knowing how and where to go to select quality additional texts or other resources when or if they feel the textbook is not complex enough. The biggest area of struggle in determining text complexity seems to be in the qualitative measure; teachers are more familiar with using a quantitative measure and considering the interest and ability of the students.
3) Are students receiving with and feedback on their writing?	<ul style="list-style-type: none"> There is evidence of students writing more in both English language arts and content area classes More assignment in writing are based on a text than previously. Educators show a sense of urgency around improving student writing. 	<ul style="list-style-type: none"> Teachers seem to struggle to understand what to focus on in providing feedback, both in content area classes and English language arts. Content area teachers seem unclear of their role in developing students writing abilities and how to incorporate text based writing.

Next Steps at the State Level:

- We will be developing exercises that focus on these key challenges for the leadership course 202.
- We have shared these findings with CORE Directors and we are working on support tools.
- We will incorporate these focus areas in summer training, especially;
 - Writing
 - Critical Math Content

Process:

As we noted, one of the purposes of this document is to help districts replicate the process to pull out their own findings. The next three pages contain resources for use in using this process for reflection at the local level.

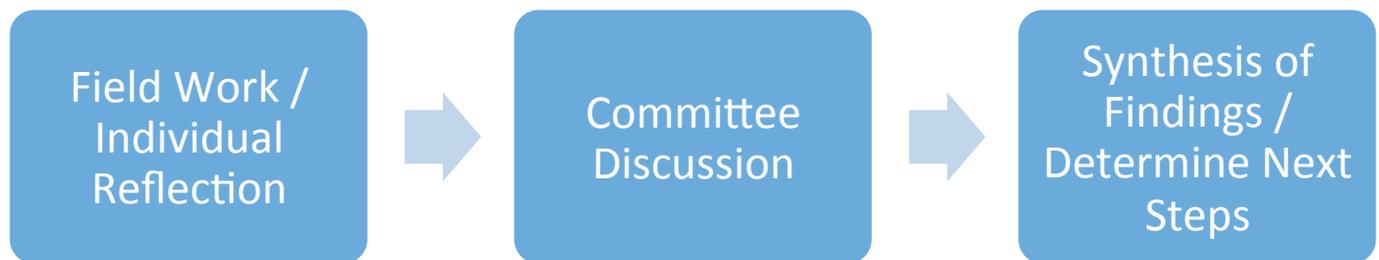
The field work and discussion focused on the following key questions:

ELA

- Are students receiving daily practice citing evidence in conversation, writing and/or research?
- Are teachers selecting appropriately complex texts that reflect the needed balance of informational text and fiction?
- Are students receiving regular practice with and feedback on their writing?

Math

- Are teachers spending time on the right content?
- Are students getting regular practice with demanding tasks?
- Are teachers asking questions that assess and advance student understanding?



Field Work

ELA Field Work: Each committee member chose one exercise from artifact review and hosted a teacher focus group, student focus group and conducted observations.

1. **Artifact review:** (choose one)
 - a. Collect 5 sample assignments in an ELA class and review the tasks closely to determine if they require citing evidence.
 - b. Collect writing assignments across subject areas (ELA, science, ss and CTE) and examine the type of writing required.
 - c. Collect three texts used in an ELA class and evaluate the complexity qualitatively and quantitatively – are these texts appropriately complex for the grade level?
 - d. Collect one writing task and 5 pieces of graded student work. What are the areas of feedback?
2. **Teacher focus group:**
 - a. How are you thinking about planning this year? What kinds of assignments have you been trying to provide students? What about your planning, if anything, has changed since last year?
 - b. How have you selected texts this year? What about the approach to text selection, if anything, has changed? What steps do you go through in selecting a text?
 - c. How are you grading writing this year? What kinds of things are you looking for in student work? Where are you focusing your feedback?
3. **Student questions**
 - a. What are some of the main things you have been learning about this year? What are some of the things that your teacher is focused on teaching you? How do you know your teacher cares about these topics?
 - b. What kinds of things do you read in class? Who selects what you read? What do you notice

- about the things you are reading?
- c. How often are you asked to write in English? Across other subjects? What are your personal strengths and weaknesses in writing? What feedback do you get on your writing?
- d. Have you noticed anything different this year in English class than last year?

4. Teacher observation

- a. Observe 10+ minutes in at least 4 math classrooms and look for trends in:
 - i. Evidence
 - ii. Texts
 - iii. Feedback

Math Field Work:

Math Field Work: Each committee member chose one exercise from artifact review and hosted a teacher focus group, student focus group and conducted observations.

1. Artifact review: (choose one)

- a. Review 2-3 long term plans or pacing guide for a teacher, school or district. Review for focus on focus standards.
- b. Review a collection of tasks that are being used in instruction for a single classroom. What do you notice?
- c. Script the questions asked in 10 minutes of observation for 2-3 different teachers.

2. Teacher focus group:

- a. Where have you spent time this year? How are students doing relative to this time last year? What are the biggest changes you are noticing? What are your biggest fears or concerns about where you are spending time?
- b. How have you been selecting tasks this year? What factors have you considered? What are you finding it harder and easier to find? What, if anything, has changed about how you are using tasks?
- c. How have you been thinking about questions in your planning? What types of questions are you asking? What types of questions are students responding to? How are you evaluating when to ask students and question and when to provide students information?

3. Student question:

- a. What kinds of problems are you doing in your math class? What kinds of problems are you good at? What kinds of problems are harder? What kind of problems do you like best? What kind of problems do you like least?
- b. What kinds of questions does your teacher ask you? What have you learned most about this year? What helped you learn that?
- c. Have you noticed anything different this year than last year in math?

4. Teacher Observation:

- a. Observe 10+ minutes in at least 4 math classrooms and look for trends in:
 - i. Focus
 - ii. Tasks
 - iii. Questions

We convened for a 3 hour discussion, guided by the following questions:

Discussion Guide:

- Start with introductions with some background.
- Discuss goals and establish norms at the outset. Establish the expectations for the timing of the agenda but allow for some flexibility based on where the conversation trends.
- Ask everyone to go around and share striking impressions from field work.
- What is working? Where did people see evidence of progress?
- What is not working? Where did we see gaps against what we'd like to be seeing? (Don't talk about next steps yet – just get the issues out on the table)
- What do we think is driving the progress? - Get really specific here. Why have we seen the progress that we have seen? What made that progress possible?
- What do we think is driving the gaps? (This is the most important question that will be discussed and it is important to get extremely specific. Why are these gaps present?)
- What are the most important gaps to address?
 - What are the lacking knowledge, skills and beliefs that are underneath the pressing gaps?
- How can we address these gaps?
- How can we best celebrate the progress?
- Synthesis at the end of the discussion: Allow each person to share an overall reaction from the day - what are you taking away from our discussion today? What is most exciting to you? What is most surprising?

Promoting Student Growth and Common Core Writing

Tennessee Department of Education
Common Core Leadership Course 202
High School English Language Arts
Grades 9 – 12

English Language Arts Table of Contents

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Course Objectives

Participants will:

- Examine and discuss the common elements of college- and career-level writing
- Study and score student work
- Learn about current research on effective writing practices
- Experience & examine best practices to support student understanding and organization

College Paper Assignment

Writing to Discover

EN-1123: Essay 3

Topic: For this paper, you will select two pioneers in your chosen field—one foundational and one current. Then you will analyze the impact each has made on the field, taking into consideration when they entered the field and what was happening culturally at the time. Ultimately, this is a **character analysis**, but you are using an element of argument in your case for who is a pioneer.

Assignment: This assignment is in two parts. (A.) Research the pioneers. Remember that you are not just finding sources on your pioneers, but on cultural elements of the times as well. Some of the sources can agree with others and yourself, but not all of them; you may also need to find texts that **disagree** and **differ** from one another and, perhaps, with your argument. Each of your sources should be **scholarly** and not merely informational (an encyclopedia or Wikipedia are examples of informational sources). You will also want to be aware of *the type* of source you use; one of the goals of this assignment is that you learn how to **consult authorities** in your field and present **yourself as an authority in conversation** with them.

(B.) Analyze your pioneers and their places in the field. In order to do this, you should **1) present** your pioneers, **(2) discuss** the work they've done and cultural implications/ramifications, **(3) evaluate** the pioneers' effectiveness within the field, and **(4) work toward an argument** of your own (not necessarily in that order). You must find a way to present yourself as a **reliable commentator** on the field and the pioneers; this means you will need to be **well informed** on the topic (you should actually read your sources rather than just finding quotes that support your claim). Since you are **creating an argument** through your discussion of these texts, you will need to do more than merely summarize their points (though you may need to do some of that). Remember, you are partaking in a **conversation** with experts within your field.

For example, if my chosen discourse community is writing centers, I could choose Stephen North and Andrea Lunsford as my pioneers. North is foundational, and Lunsford is current. My research will find that North focused on presenting writing centers in a specific way—non-fix it shop—and Lunsford focuses on collaboration within centers, colleges, and universities. I would examine sources that not only agree with me, but also might agree with my pioneers. I would also examine some that disagree with my choice of North and Lunsford, or disagree with their claims (I wouldn't just look in the writing center community; I could find information within Education and university structures.). From these sources, I will make the argument

(thesis statement!) that perceptions of writing centers in American university culture influenced my pioneers' perceptions and effects on the field itself.

Purpose: To improve your proficiency in the writing that you will do post-graduation and within your major coursework and to learn more about your chosen profession.

Audience: Your peers in this class and me.

Assessment: The final draft of this assignment will be evaluated on general levels: how effective your introduction is, how well you organize the entire essay and individual internal paragraphs, how well you use primary and secondary support (examples and details) to describe your specified topic and support your thesis, and how well the overall paper is edited for grammar, mechanics, and spelling. [Content-30%, Organization-30%, Vocabulary-20%, Grammar-10%, Mechanics-10%]

You will be given class time for workshops; please take them seriously.

Traps to Avoid:

- Failing to assert a clear and strong judgment
- Failing to support judgments with details and evidence
- Overusing first or second person (i.e. "I," "me," "my," "we," "us," "our," or "you"); this usually leads to issues with sentence variety
- Writing to a generic audience

Additional Information:

- Your annotated bibliography and paper must be in the style that is used in your field.
- Your paper must be **at least** 4 pages in length (not counting a resource page).
- The Writing Studio is here to help!

College Paper Sample

Student's Name

Professor's Name

EN 1123-15

16 February 2013

Finding Harmony within Opposition: Balancing the Methods

Of Allen Lane and Colin Robinson in the Modern World of Publishing

Behind every book cover lays a secondary story: the story of how the written work came to be bound. Publishing houses represent a complicated mediation between artistry and business, economics and passionate creation. Because of the dual nature of this business, the publisher's story contains much conflict and criticism. While the majority in the book business believes that a publisher should primarily aim to bring in revenue and satisfy reader interest, the minority still cries out for artistic integrity. Many criticize publishers' attempts to maximize profit by encouraging authors to adjust their work towards a 'desirable' and constrictive product. This debate between book marketability and integrity is stamped across the history of book publishing. Ultimately, the way a publisher approaches this eternal debate depends on the situational context of the era. Publishing thus represents an evolving field that caters to the needs of the time. Two men whose preferred publishing methods fall on opposite sides of the spectrum, Allen Lane of Penguin Books and Colin Robinson of OR Books, are publishing pioneers of their generation. Whether discovering means to mass-market paperback books for the price of a pack of cigarettes or courageously founding an independent publishing company that caters to an exclusive audience, these men have defined the futures of their craft.

Allen Lane, founder of Penguin Books, ingeniously pushed the reading world into a paperback frenzy, creating an era of literacy in which the written word was inexpensive, the projected audience of readers was expanded, and marketing was key to profit. At the time of his bold endeavor, those involved in the book business were aware of a deprived “reading public at the cheaper end of the market” (McCleery). However, no measures had been taken to reach this unaddressed audience since paperback books, a cost-effective solution, were “regarded at the time as ‘dirty rubbish’ by respectable publishers” (Cavendish). Lane’s environment thus differed greatly from the intellectual movement that defines our current era; the lay reading population was limited to intellectuals and those most passionate about learning from the written word. Lane first sympathized with the unread folk upon discovering that the Exeter station bookstall had nothing of worth to read, leaving him without any means to while away his time on the train. A traumatic experience for book enthusiasts, this deprivation of readily available reading material led to an epiphany that would define the future of book sales: the need for widespread reproduction of paperback novels at a bare-minimum price. This risky business venture opposed common publication methods of the time. An innovator in his field, Lane’s mass-marketing approach placed him as the “center as an initiator of events” that transcends generations, directly affecting our interactions with literature today (McCleery). By catering to those less inclined to read, Lane’s venture may receive credit for starting a literature frenzy- a heightened sense of humanity’s capability to gain enjoyment and knowledge from reading- that leads individuals today to spend the afternoon idling away time beneath piles of paperbacks in the local bookstore.

With the support of his two younger brothers, Dick and John, Allen Lane’s vision of inexpensive, easily accessible paperback reprints led to the establishment of a new company:

Penguin Books. According to J.E. Morpurgo, the author of the biography *Allen Lane: King Penguin*, Lane established an “institution of national and international importance, like the *Times* or the *BBC*” (Cavendish).

College and Career Readiness Anchor Standards for Writing

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Source: Common Core State Standards Initiative
<http://www.corestandards.org/ELA-Literacy/CCRA/W>

3rd Grade (Research Simulation Task)

You have read two texts about famous people in American history who solved a problem by working to make a change.

Write an article for your school newspaper describing how Eliza and Carver faced challenges to change something in America.

- In your article, be sure to describe in detail why some solutions they tried worked and others did not work.
- Tell how the challenges each one faced were the same and how they were different.

Notes:

6th Grade (Narrative Writing Task)

In the passage, the author developed a strong character named Miyax. Think about Miyax and the details the author used to create that character. The passage ends with Miyax waiting for the black wolf to look at her.

Write an original story to continue where the passage ended. In your story, be sure to use what you have learned about the character Miyax as you tell what happens to her next.

Notes:

10th Grade (Literary Analysis Task)

Use what you have learned from reading “Daedalus and Icarus” by Ovid and “To a Friend Whose Work Has Come to Triumph” by Anne Sexton to write an essay that provides an analysis of how Sexton transforms “Daedalus and Icarus.”

As a starting point, you may want to consider what is emphasized, absent, or different in the two texts, but feel free to develop your own focus for analysis.

Develop your essay by providing textual evidence from both texts. Be sure to follow the conventions of standard English.

Notes:

Score	Development	Focus & Organization	Language	Conventions
4	In response to the task and the stimuli, the writing: <ul style="list-style-type: none"> utilizes well-chosen, relevant, and sufficient evidence¹ from the stimuli to thoroughly and insightfully develop the topic. thoroughly and accurately explains and elaborates on the evidence provided, demonstrating a clear, insightful understanding of the topic and the stimuli. 	In response to the task and the stimuli, the writing: <ul style="list-style-type: none"> contains an effective and relevant introduction. utilizes effective organizational strategies to create a unified whole and to aid in comprehension. effectively clarifies relationships among ideas and concepts to create cohesion. contains an effective and relevant concluding statement or section. 	The writing: <ul style="list-style-type: none"> illustrates consistent and sophisticated command of precise language, domain-specific vocabulary, and literary techniques² appropriate to the task. illustrates sophisticated command of syntactic variety for meaning and reader interest. utilizes sophisticated and varied transitional words and phrases. effectively establishes and maintains a formal style and an objective tone. 	The writing: <ul style="list-style-type: none"> demonstrates consistent and sophisticated command of grade-level conventions of standard written English.³ may contain a few minor errors that do not interfere with meaning.
3	In response to the task and the stimuli, the writing: <ul style="list-style-type: none"> utilizes relevant and sufficient evidence¹ from the stimuli to adequately develop the topic. adequately and accurately explains and elaborates on the evidence provided, demonstrating a sufficient understanding of the topic and the stimuli. 	In response to the task and the stimuli, the writing: <ul style="list-style-type: none"> contains a relevant introduction. utilizes adequate organizational strategies to create a mostly unified whole and to aid in comprehension. clarifies most relationships among ideas and concepts, but there may be some gaps in cohesion. contains a relevant concluding statement or section. 	The writing: <ul style="list-style-type: none"> illustrates consistent command of precise language, domain-specific vocabulary, and literary techniques² appropriate to the task. illustrates consistent command of syntactic variety for meaning and reader interest. utilizes appropriate and varied transitional words and phrases. establishes and maintains a formal style and an objective tone. 	The writing: <ul style="list-style-type: none"> demonstrates consistent command of grade-level conventions of standard written English.³ contains some minor and/or major errors, but the errors do not significantly interfere with meaning.
2	In response to the task and the stimuli, the writing: <ul style="list-style-type: none"> utilizes mostly relevant but insufficient evidence¹ from the stimuli to partially develop the topic. Some evidence may be inaccurate or repetitive. explains some of the evidence provided, demonstrating only a partial understanding of the topic and the stimuli. There may be some level of inaccuracy in the explanation. 	In response to the task and the stimuli, the writing: <ul style="list-style-type: none"> contains a limited introduction. demonstrates an attempt to use organizational strategies to create some unification, but ideas may be hard to follow at times. clarifies some relationships among ideas and concepts, but there are lapses in focus. contains a limited concluding statement or section. 	The writing: <ul style="list-style-type: none"> illustrates inconsistent command of precise language, domain-specific vocabulary, and literary techniques.² illustrates inconsistent command of syntactic variety. utilizes basic or repetitive transitional words and phrases. establishes but inconsistently maintains a formal style and an objective tone. 	The writing: <ul style="list-style-type: none"> demonstrates inconsistent command of grade-level conventions of standard written English.³ contains many errors that may significantly interfere with meaning.
1	In response to the task and the stimuli, the writing: <ul style="list-style-type: none"> utilizes mostly irrelevant or no evidence¹ from the stimuli, or mostly/only personal knowledge, to inadequately develop the topic. Evidence is inaccurate or repetitive. inadequately or inaccurately explains the evidence provided, demonstrating little understanding of the topic and the stimuli. 	In response to the task and the stimuli, the writing: <ul style="list-style-type: none"> contains no or an irrelevant introduction. demonstrates an unclear organizational structure; ideas are hard to follow most of the time. fails to clarify relationships among ideas and concepts; concepts are unclear and/or there is a lack of focus. contains no or an irrelevant concluding statement or section. 	The writing: <ul style="list-style-type: none"> illustrates little to no use of precise language, domain-specific vocabulary, and literary techniques.² illustrates little to no syntactic variety. utilizes no or few transitional words and phrases. does not establish or maintain a formal style and an objective tone. 	The writing: <ul style="list-style-type: none"> demonstrates limited command of grade-level conventions of standard written English.³ contains numerous and repeated errors that seriously impede meaning.

¹ Evidence includes facts, extended definitions, concrete details, quotations, or other information and examples as appropriate to the task and the stimuli.

² Literary techniques are only expected at grades 11-12.

³ Conventions of standard written English include sentence structure, grammar, usage, spelling, capitalization, and punctuation.



The 2013 TCAP Writing Assessment: Statewide Results and Instructional Implications for Common Core Writing

Introduction:

In 2013, Tennessee realigned its writing assessment program to:

- assess the Common Core State Standards for English language arts,
- incorporate the three key instructional shifts of building knowledge through informational texts, reading complex texts, and responding with textual evidence, and
- help prepare teachers and students for the content and format of the PARCC assessments.

The February 2014 Tennessee Comprehensive Assessment Program Writing Assessment will emphasize the same shifts while attempting to approach more closely the format of the PARCC assessment, which will assess both reading and writing starting in the 2014-15 school year.

Key Results and Instructional Implications: The following table outlines the major trends from student results¹ of the February 2013 TCAP Writing Assessment and provides examples of how teachers may choose to adjust their instruction. **Please note these results are drawn from statewide data and may not be representative of students in your district or school.**

Key Results	Instructional Implications
Overall, Conventions was the highest scoring trait , followed by Language/Style.	Since students generally experience more success with form (<i>how</i> students write, as measured by Language and Conventions), more emphasis could be placed on improving content (<i>what</i> students write, as measured by the Focus/Organization and Development ² traits). However, students still need practice in all traits.
Overall, students struggled the most in Support/Elaboration . Only 1.5 percent of 8 th Graders and 0.9 percent of 11 th Graders received a score of 4 (on a 1-4 scale) in Support/Elaboration.	Students appear to need more practice in the skill of writing to sources, including: <ul style="list-style-type: none"> • Selecting relevant and significant details and ideas from a text • Supporting claims and explanations with specific evidence from texts • Synthesizing textual evidence from multiple sources into a coherent explanation or argument
A large number of student responses (7,470) were too limited to evaluate and therefore unscorable. In most of these cases, students simply copied the text instead of writing an original essay.	There may be many different issues at play for students with unscorable responses. Teachers may consider diagnosing and providing direct instruction in the following skill areas: <ul style="list-style-type: none"> • Reading foundational skills and comprehension • Structuring a paragraph that provides textual evidence • Practice with the format of online testing
Significant achievement gaps exist for students with disabilities, English language learners, and students who qualify for free- or reduced-priced lunch.	The same subgroups of students that tend to perform lower on TCAP exams also performed lower on the Writing Assessment. These students may need intervention and extra remediation in reading and writing.

¹ For more detail, see the data appendix at the end of this memo.

² In the revised 2013-14 rubrics, Support/Elaboration is now called Development, and Language/ Style is now called Language.

Next steps to prepare students for the TCAP Writing Assessment and PARCC during the 2013 – 2014 school year: The following next steps provide tips and potential instructional practices to help teachers prepare students:

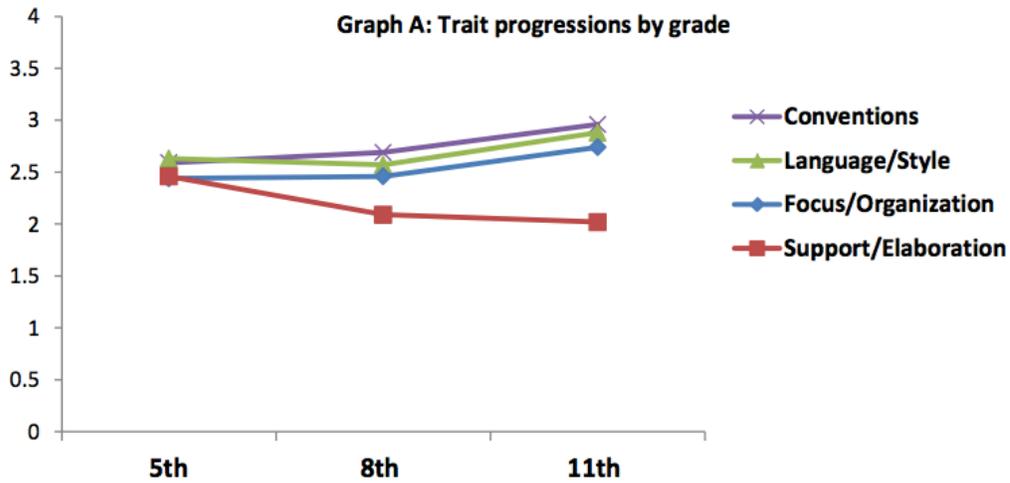
1. Become familiar with the format of the 2013-14 TCAP Writing Assessment. This [memo](#) has further details. We will continue to update information on www.TNCore.org and through TNCore Updates. Click [here](#) to sign-up for the TNCore Update.
2. Review the score reports for your incoming students; analyze their strengths and weaknesses by trait and provide instruction in the common areas of deficit. Use the sample writing tasks the Tennessee Department of Education will release as extra practice for your students, and give them feedback using the [revised rubrics](#) . Sample writing tasks will be released as optional assessment resources in the fall and spring on www.TNCore.org.
3. Use the resources from module 5 in the 4-12 ELA Common Core summer training materials to create your own prompts for your students. Modules 2 and 5 also provide strategies for building student skill in comprehending complex texts and writing to sources. You can find summer training materials [here](#).
4. Learn more about PARCC prose constructed responses by reviewing the [sample items and draft rubrics](#).
5. Consider focusing writing instruction on the following key Common Core Writing Standards (note that Anchor Standards apply to *all* grades k-12).

Anchor Standard
CCSS.ELA-Literacy.CCRA.W.1 Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
CCSS.ELA-Literacy.CCRA.W.2 Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
CCSS.ELA-Literacy.CCRA.W.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-Literacy.CCRA.W.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
CCSS.ELA-Literacy.CCRA.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.
CCSS.ELA-Literacy.CCRA.W.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Data Appendix

Table 1: Scores by Trait (1-4 scale)

	Focus/Organization		Support/Elaboration		Language/Style		Conventions	
	Average	% scoring a 3 or 4	Average	% scoring a 3 or 4	Average	% scoring a 3 or 4	Average	% scoring a 3 or 4
5 th grade	2.44	41.3%	2.46	42.0%	2.63	56.6%	2.59	51.0%
8 th grade	2.46	45.5%	2.09	23.3%	2.57	50.3%	2.69	57.4%
11 th grade	2.74	67.9%	2.02	27.6%	2.88	73.5%	2.96	75.5%
Overall	2.54	50.9%	2.20	31.2%	2.69	59.7%	2.74	60.7%



Note: this graph traces student performance on each trait across all three tested grades. Conventions and Language/Style remain the highest two traits and these scores go up slightly over three grades. Support/elaboration is the lowest scoring trait and scores drop from 5th to 11th grades.

**Table 2:
Students Receiving Condition Code D: Too Limited to Evaluate (scored as a zero in all four traits)**

	Overall number	Overall %	5 th	8 th	11 th
D: Too Limited to Evaluate	7,470	3.6%	2,661	4,596	213

Supporting Rigorous English Language Arts Teaching and Learning

TCAP ELA Phase 1 Writing Task

Analysis

Please read “It’s Not Me, It’s You” by Annie Murphy Paul.¹ Paul is a journalist and author who writes about the biological and social sciences.

After you have read the text, write an essay that analyzes how Dweck and Paul each use and refine the meaning of the term intelligence over the course of their articles. Be sure to also discuss the similarities and differences between their definitions. Cite strong and thorough evidence from both texts to support your analysis. Follow the conventions of standard written English. Write your essay in the space provided in the next pages.

You may use this area for notes ONLY. Use the lined pages to write your essay.

¹ Paul, A.M. “It’s not me, it’s you.” From *The New York Times*, 10/7/2012 © 2012 *The New York Times*. All rights reserved. Used by permission and protected by the Copyright Laws of the United States. The printing, copying, redistribution, or retransmission of this Content without express written permission is prohibited.

The Secret to Raising Smart Kids

by Carol S. Dweck

1 A brilliant student, Jonathan sailed through grade school. He completed his
2 assignments easily and routinely earned As. Jonathan puzzled over why
3 some of his classmates struggled, and his parents told him he had a special
4 gift. In the seventh grade, however, Jonathan suddenly lost interest in
5 school, refusing to do homework or study for tests. As a consequence, his
6 grades plummeted. His parents tried to boost their son’s confidence by
7 assuring him that he was very smart. But their attempts failed to motivate
8 Jonathan (who is a composite drawn from several children). Schoolwork,
9 their son maintained, was boring and pointless.

10 Our society worships talent, and many people assume that possessing
11 superior intelligence or ability—along with confidence in that ability—is a
12 recipe for success. In fact, however, more than 30 years of scientific
13 investigation suggests that an overemphasis on intellect or talent leaves
14 people vulnerable to failure, fearful of challenges and unwilling to remedy
15 their shortcomings.

16 The result plays out in children like Jonathan, who coast through the early
17 grades under the dangerous notion that no-effort academic achievement
18 defines them as smart or gifted. Such children hold an implicit belief that
19 intelligence is innate and fixed, making striving to learn seem far less
20 important than being (or looking) smart. This belief also makes them see
21 challenges, mistakes and even the need to exert effort as threats to their
22 ego rather than as opportunities to improve. It causes them to lose
23 confidence and motivation when the work is no longer easy for them.

24 Praising children’s innate abilities, as Jonathan’s parents did, reinforces this
25 mind-set, which can also prevent young athletes or people in the workforce
26 and even marriages from living up to their potential. On the other hand, our
27 studies show that teaching people to have a “growth mind-set,” which
28 encourages a focus on effort rather than on intelligence or talent, helps make
29 them into high achievers in school and in life.

30 **The Opportunity of Defeat**

31 I first began to investigate the underpinnings¹ of human motivation—and
32 how people persevere after setbacks—as a psychology graduate student
33 at Yale University in the 1960s. Animal experiments by psychologists

34 Martin Seligman, Steven Maier and Richard Solomon of the University of
35 Pennsylvania had shown that after repeated failures, most animals
36 conclude that a situation is hopeless and beyond their control. After such
37 an experience, the researchers found, an animal often remains passive
38 even when it can affect change—a state they called learned
39 helplessness.

40 People can learn to be helpless, too, but not everyone reacts to setbacks
41 this way. I wondered: Why do some students give up when they encounter
42 difficulty, whereas others who are no more skilled continue to strive
43 and learn? One answer, I soon discovered, lay in people’s beliefs about why
44 they had failed.

45 In particular, attributing poor performance to a lack of ability depresses
46 motivation more than does the belief that lack of effort is to blame. In 1972,
47 when I taught a group of elementary and middle school children who
48 displayed helpless behavior in school that a lack of effort (rather than lack of
49 ability) led to their mistakes on math problems, the kids learned to keep
50 trying when the problems got tough. They also solved many of the problems
51 even in the face of difficulty. Another group of helpless children who were
52 simply rewarded for their success on easy problems did not improve their
53 ability to solve hard math problems. These experiments were an early
54 indication that a focus on effort can help resolve helplessness and
55 engender² success.
56

57 Subsequent studies revealed that the most persistent students do not
58 ruminate³ about their own failure much at all but instead think of mistakes as
59 problems to be solved. At the University of Illinois in the 1970s I, along with
60 my then graduate student Carol Diener, asked 60 fifth graders to think out
61 loud while they solved very difficult pattern-recognition problems. Some
62 students reacted defensively to mistakes, denigrating their skills with
63 comments such as “I never did have a good rememory,” and their problem-
64 solving strategies deteriorated.

65 Others, meanwhile, focused on fixing errors and honing their skills. One
66 advised himself: “I should slow down and try to figure this out.” Two
67 schoolchildren were particularly inspiring. One, in the wake of difficulty,
68 pulled up his chair, rubbed his hands together, smacked his lips and said, “I
69 love a challenge!” The other, also confronting the hard problems, looked up
70 at the experimenter and approvingly declared, “I was hoping this would be
71 informative!” Predictably, the students with this attitude outperformed their

72 cohorts in these studies.

73 **Two Views of Intelligence**

74 Several years later I developed a broader theory of what separates the two
75 general classes of learners—helpless versus mastery-oriented. I realized
76 that these different types of students not only explain their failures differently,
77 but they also hold different “theories” of intelligence. The helpless ones
78 believe that intelligence is a fixed trait: you have only a certain amount, and
79 that’s that. I call this a “fixed mind-set.” Mistakes crack their self-confidence
80 because they attribute errors to a lack of ability, which they feel powerless to
81 change. They avoid challenges because challenges make mistakes more
82 likely and looking smart less so. Like Jonathan, such children shun effort in
83 the belief that having to work hard means they are dumb.

84 The mastery-oriented children, on the other hand, think intelligence is
85 malleable and can be developed through education and hard work. They
86 want to learn above all else. After all, if you believe that you can expand
87 your intellectual skills, you want to do just that. Because slipups stem from a
88 lack of effort, not ability, they can be remedied by more effort. Challenges
89 are energizing rather than intimidating; they offer opportunities to learn.
90 Students with such a growth mind-set, we predicted, were destined for
91 greater academic success and were quite likely to outperform their
92 counterparts.

93 We validated these expectations in a study published in early 2007.
94 Psychologists Lisa Blackwell of Columbia University and Kali H. Trzesniewski
95 of Stanford University and I monitored 373 students for two years during the
96 transition to junior high school, when the work gets more difficult and the
97 grading more stringent, to determine how their mind-sets might affect their
98 math grades. At the beginning of seventh grade, we assessed the students’
99 mind-sets by asking them to agree or disagree with statements such as
100 “Your intelligence is something very basic about you that you can’t really
101 change.” We then assessed their beliefs about other aspects of learning and
102 looked to see what happened to their grades.

103 As we had predicted, the students with a growth mind-set felt that learning
104 was a more important goal in school than getting good grades. In addition,
105 they held hard work in high regard, believing that the more you labored at
106 something, the better you would become at it. They understood that even
107 geniuses have to work hard for their great accomplishments. Confronted
108 by a setback such as a disappointing test grade, students with a growth
109 mind-set said they would study harder or try a different strategy for
110 mastering the material.

111 The students who held a fixed mind-set, however, were concerned about
112 looking smart with little regard for learning. They had negative views of
113 effort, believing that having to work hard at something was a sign of low
114 ability. They thought that a person with talent or intelligence did not need to
115 work hard to do well. Attributing a bad grade to their own lack of ability,
116 those with a fixed mind-set said that they would study less in the future, try
117 never to take that subject again and consider cheating on future tests.

118 Such divergent⁴ outlooks had a dramatic impact on performance. At the start of
119 junior high, the math achievement test scores of the students with a
120 growth mind-set were comparable to those of students who displayed a fixed
121 mind-set. But as the work became more difficult, the students with a growth
122 mind-set showed greater persistence. As a result, their math grades overtook
123 those of the other students by the end of the first semester—and the gap
124 between the two groups continued to widen during the two years we followed
125 them.

126 Along with Columbia psychologist Heidi Grant, I found a similar relation
127 between mind-set and achievement in a 2003 study of 128 Columbia
128 freshman premed students who were enrolled in a challenging general
129 chemistry course. Although all the students cared about grades, the ones
130 who earned the best grades were those who placed a high premium on
131 learning rather than on showing that they were smart in chemistry. The focus
132 on learning strategies, effort and persistence paid off for these students.

133 Confronting Deficiencies

134 A belief in fixed intelligence also makes people less willing to admit to errors
135 or to confront and remedy their deficiencies in school, at work and in their
136 social relationships. In a study published in 1999 of 168 freshmen entering
137 the University of Hong Kong, where all instruction and coursework are in
138 English, three Hong Kong colleagues and I found that students with a growth
139 mind-set who scored poorly on their English proficiency exam were far more
140 inclined to take a remedial English course than were low-scoring students
141 with a fixed mind-set. The students with a stagnant⁵ view of intelligence were
142 presumably unwilling to admit to their deficit and thus passed up the
143 opportunity to correct it.

144

145 A fixed mind-set can similarly hamper communication and progress in the
146 workplace by leading managers and employees to discourage or ignore
147 constructive criticism and advice. Research by psychologists Peter Heslin and

148 Don VandeWalle of Southern Methodist University and Gary Latham of the
149 University of Toronto shows that managers who have a fixed mind-set are
150 less likely to seek or welcome feedback from their employees than are
151 managers with a growth mind-set. Presumably, managers with a growth
152 mind-set see themselves as works-in-progress and understand that they
153 need feedback to improve, whereas bosses with a fixed mind-set are more
154 likely to see criticism as reflecting their underlying level of competence.
155 Assuming that other people are not capable of changing either, executives
156 with a fixed mind-set are also less likely to mentor their underlings. But after
157 Heslin, VandeWalle and Latham gave managers a tutorial on the value and
158 principles of the growth mind-set, supervisors became more willing to coach
159 their employees and gave more useful advice.

160 Mind-set can affect the quality and longevity of personal relationships as
161 well, through people’s willingness—or unwillingness—to deal with
162 difficulties. Those with a fixed mind-set are less likely than those with a
163 growth mind-set to broach problems in their relationships and to try to
164 solve them, according to a 2006 study I conducted with psychologist Lara
165 Kammrath of Wilfrid Laurier University in Ontario. After all, if you think that
166 human personality traits are more or less fixed, relationship repair seems
167 largely futile. Individuals who believe people can change and grow,
168 however, are more confident that confronting concerns in their
169 relationships will lead to resolutions.

170 **Proper Praise**

171 How do we transmit a growth mind-set to our children? One way is by telling
172 stories about achievements that result from hard work. For instance, talking
173 about math geniuses who were more or less born that way puts students in a
174 fixed mind-set, but descriptions of great mathematicians who fell in love with
175 math and developed amazing skills engenders a growth mind-set, our
176 studies have shown. People also communicate mind-sets through praise.
177 Although many, if not most, parents believe that they should build up a child
178 by telling him or her how brilliant and talented he or she is, our research
179 suggests that this is misguided.

180 In studies involving several hundred fifth graders published in 1998, for
181 example, Columbia psychologist Claudia M. Mueller and I gave children
182 questions from a nonverbal IQ test. After the first 10 problems, on which
183 most children did fairly well, we praised them. We praised some of them for
184 their intelligence: “Wow . . . that’s a really good score. You must be smart at
185 this.” We commended others for their effort: “Wow . . . that’s a really good

186 score. You must have worked really hard.”

187 We found that intelligence praise encouraged a fixed mind-set more often
188 than did pats on the back for effort. Those congratulated for their intelligence,
189 for example, shied away from a challenging assignment—they wanted an
190 easy one instead—far more often than the kids applauded for their effort.
191 (Most of those lauded for their hard work wanted the difficult problem set from
192 which they would learn.) When we gave everyone hard problems anyway,
193 those praised for being smart became discouraged, doubting their ability. And
194 their scores, even on an easier problem set we gave them afterward, declined
195 as compared with their previous results on equivalent problems. In contrast,
196 students praised for their effort did not lose confidence when faced with the
197 harder questions, and their performance improved markedly on the easier
198 problems that followed. . . .

¹ **underpinnings:** foundations

² **engender:** produce or cause

³ **ruminare:** think or ponder at length

⁴ **divergent:** widely differing

⁵ **stagnant:** unchanging; not developing

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Grade 11–12/Text 1

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It's Not Me, It's You

by Annie Murphy Paul

1 We've all been there: you feel especially smart and funny when talking to a
2 particular person, only to feel hopelessly unintelligent and inarticulate in the
3 presence of another.

4 You're not imagining things. Experiments show that when people report feeling
5 comfortable with a conversational partner, they are judged by those partners and
6 by observers as actually being more witty.

7 It's just one example of the powerful influence that social factors can have on
8 intelligence. As parents, teachers and students settle into the school year, this
9 work should prompt us to think about intelligence not as a "lump of something
10 that's in our heads," as the psychologist Joshua Aronson puts it, but as "a
11 transaction among people."

12 Mr. Aronson, an associate professor at New York University, has been a leader
13 in investigating the effects of social forces on academic achievement. Along with
14 the psychologist Claude Steele, he identified the phenomenon known as
15 "stereotype threat." Members of groups believed to be academically inferior—
16 African-American and Latino students enrolled in college, or female students in
17 math and science courses—score much lower on tests when reminded
18 beforehand of their race or gender.

19 The pair's experiments in the 1990s, and the dozens of studies by other
20 researchers that followed, concluded that the performance of these students
21 suffered because they were worried about confirming negative stereotypes about
22 their group.

23 In a 1995 article in the *Journal of Personality and Social Psychology*, Professors
24 Steele and Aronson found that black students performed comparably with white
25 students when told that the test they were taking was "a laboratory problem-
26 solving task." Black students scored much lower, however, when they were
27 instructed that the test was meant to measure their intellectual ability. In effect,
28 the prospect of social evaluation suppressed these students' intelligence.

29 Minorities aren't the only ones vulnerable to stereotype threat. We all are. A
30 group of people notably confident about their mathematical abilities—white male
31 math and engineering majors who received high scores on the math portion of
32 the SAT—did worse on a math test when told that the experiment was intended
33 to investigate "why Asians appear to outperform other students on tests of math

34 ability.”

35 And in a study published earlier this year in the journal Learning and Individual
36 Differences, high school students did worse on a test of spatial skills when told
37 that males are better at solving spatial problems because of genetic differences
38 between males and females. The girls were anxious about confirming
39 assumptions about their gender, while the boys were anxious about living up to
40 them.

41 The evolving literature on stereotype threat shows that performance is always
42 social in nature. Even alone in an exam room, we hear a chorus of voices
43 appraising, evaluating, passing judgment. As social creatures, humans are
44 strongly affected by what these voices say.

45 In a 2002 study led by Roy F. Baumeister, a psychologist now at Florida State
46 University, participants were given an I.Q. test and then a personality inventory.
47 Some of the participants were randomly selected to receive false feedback from
48 the personality inventory, informing them that they were “the sort of people who
49 would end up alone in life.”

50 The participants then took another test. Those who had been told they would be
51 loveless and friendless in the future answered significantly fewer questions
52 correctly than on the earlier test.

53 If the threat of social exclusion can decrease the expression of intelligence, so
54 can a perceived threat to physical safety. It’s common to blame disadvantaged
55 children’s poor academic performance on their “environment.” By this we usually
56 mean longstanding characteristics of their homes and neighborhoods. But
57 research on the social aspects of intelligence suggests that much more
58 immediate aspects of kids’ surroundings can also affect their I.Q.’s.

59 In a study conducted on the troubled South Side of Chicago, for example,
60 students whose neighborhoods had been the site of a homicide within the
61 previous two weeks scored half a standard deviation lower on a test of
62 intelligence.

63 This research has important implications for the way we educate our children.
64 For one thing, we should replace high-stakes, one-shot tests with the kind of
65 unobtrusive and ongoing assessments that give teachers and parents a more
66 accurate sense of children’s true abilities. We should also put in place techniques
67 for reducing anxiety and building self-confidence that take advantage of our
68 social natures. And we should ensure that the social climate at our children’s
69 schools is one of warmth and trust, not competition and exclusion.

70 Professor Aronson calls the doltishness induced by an uncomfortable social
71 situation “conditional stupidity.” We should use that insight to create the
72 conditions for brilliance.

Paul, A.M. “It’s not me, it’s you.” From *The New York Times*, 10/7/2012 © 2012 *The New York Times*. All rights reserved. Used by permission and protected by the Copyright Laws of the United States. The printing, copying, redistribution, or retransmission of this Content without express written permission is prohibited.

Grade 11-12/Text 2

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Reflecting on Student Work: Low, Medium, and High

Directions: After you've read your students' work, sort the essays into one of three piles: Low, Medium, and High. Then complete the questions below.

How many essays did you place in each pile?

Low	Medium	High

What are the strengths of your students' papers? List 2-3.

What are the weaknesses of your students' papers? List 2-3.

Interact with two people you haven't met yet and give/share an answer to this question: What would you and your teachers need to do to get all of your students into the "high" pile?

Grades 11 - 12 Training Set Item

Training Set Directions

After you have read and reviewed the texts, anchor responses and annotations for this item, you may complete this training set.

This item-specific training set was developed to help you practice scoring responses before you begin to score your students' work. Unlike the individual trait anchors, you will review these responses for all four traits. Responses within the training set have also been placed in random order, unlike anchor responses.

There are five responses in the training set. After reading each response, write down your score for all four traits (Development, Focus & Organization, Language, and Conventions). There is space available after each response for you to provide a score. Once you have finished scoring, you may go on to the next response and repeat this process.

You are highly encouraged to use the anchor responses and appropriate rubrics for this item as you move through the training set and score responses. Keep in mind that your copies of the texts may also help in assessing these training responses.

An answer key has been provided on the last page of this training set. Once you have finished scoring the training set, you may compare your score with the true score for each response.

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Training Set: Response #1

Everyone wants a smart kid. Everyone wants their child to do the best in school and have a successful future. What if your child doesn't do well? What if he/she isn't the "smart" kid you always wanted? Perhaps looking at children's individual attitudes toward intelligence and academic performance can provide some answers to these questions. Annie Murphy Paul and Carol S. Dweck both researched the different learning techniques students use in order to help benefit the learners of the future.

Intelligence is a gift. Some children are just smarter than others. However, the two authors recently stated have two different views on what "intelligence" is. Carol S. Dweck believes intelligence can stem from how you view your learning. She divided her students into two groups which were determined by the underlying reason that children receive praise; effort or ability. Dweck states that, "attributing poor performance to a lack of ability depresses motivation more than does the belief that lack of effort is to blame." The first group, praised for their natural ability or talent, are easily discouraged when they can't figure out a problem. The resulting fixed mind-set causes children to, "avoid challenges because challenges make mistakes more likely and looking smart less so" and also to, "shun effort in the belief that having to work hard means they are dumb." This is only one of the two attitudes that Dweck describes. The other group, praised for effort and gumption, acquired a growth mind-set, meaning they were challenged when faced with a difficult problem but continued to work until they figured it out. In regards to students with a growth mind-set, Dweck goes on to say, "the most persistent students do not ruminate about their failure much at all but instead think of mistakes as problems to be solved." The primary difference here is that the fixed mind-set group views intelligence as static and unchangeable while the growth mind-set group considers it the result of diligent effort and perseverance. In other words, as my volleyball coach would say, "Hard work beats talent when talent doesn't work hard." Essentially, a child's self-motivation (or lack of it) can make a significant difference in how well he/she might do on any academic task.

Alternatively, Annie Murphy Paul believed intelligence was much more dependent on situational factors. These factors, such as race or gender, fall into the category of what associate professor Joshua Aronson calls "stereotype threat." When told that the questions were "testing your intelligence" or "males score higher than females," each group that had been cast as inferior by comparison typically scored lower. This can be considered a sort of self-fulfilling prophecy. Paul cites a study to illustrate this point, saying, "...black students performed comparably with white students when told that the test they were taking was 'a laboratory problem-solving task.' Black students scored much lower, however, when they were instructed that the test was meant to measure their intellectual ability." Rather than focusing on the task at hand, these children have become distracted by preconceived notions about their ability, and unfortunately, their

performance suffers as a result. Paul clarifies this point saying, “In effect, the prospect of social evaluation suppressed these students’ intelligence.” It seems that the seeds of self-doubt are always within us, but Paul is showing just how easy it can be to make them grow into a shadowy forest of apprehension. As Paul points out, “Minorities aren’t the only ones vulnerable to stereotype threat. We all are.” One study instilled doubt in certain participants, regardless of race or gender. Following an I.Q. test and personality inventory, some participants were, “randomly selected to receive false feedback from the personality inventory, informing them that they were ‘the sort of people who would end up alone in life.’” After this disheartening revelation, another I.Q. test was administered and “Those who had been told they would be loveless and friendless in the future answered significantly fewer questions correctly than on the earlier test.” The key lesson here is that children will perform better if they are doing so in a comfortable environment, what Paul calls a social climate “of warmth and trust, not competition and exclusion.” She further explains that a beneficial atmosphere for education, “should also put in place techniques for reducing anxiety and building self-confidence to take advantage of our social natures.” Although most of the studies cited in this text show a negative result from social influences, Paul argues that positive results can be yielded as well.

Both Dweck and Paul do have something in common about their studies despite their differences recently brought up. Both mentioned praise in their studies. In Dweck's study, she said, "we found intelligence praise encouraged a fixed mind-set more often than did pats on the back for effort." Dweck was referring to praising a child after working out a hard problem and saying he/she succeeded by virtue of "being smart" rather than "working hard." Conversely, Paul talked about how stereotypes or even simple misinformation can affect how well individuals perform on any given task. This view is condensed in her statement that, “performance is always social in nature,” and that, “the threat of social exclusion can decrease the expression of intelligence.” Both authors talked about intelligence and how praise can negatively or positively affect a child's perception of his/her own ability. Dweck and Paul would almost certainly agree that children learn best not when worrying about their GPA or someone else's expectations, but rather when they simply focus on learning for the sake of learning. By applying the methods and theories outlined in these two articles, the intelligence levels of future learners can continue to grow and advance limitlessly.

Scores

Development:

Focus & Organization:

Training Set: Response #2

Both Dweck and Paul understand intelligence but, have very specific differences in their own perspectives. For instance, Paul considers intelligence more like a social transaction among people. Dweck on the other hand, bases intelligence on classes with categories such as; gender or race. To most Dweck's is more toward a stereotype, but had ran several statistics to back this theory up. One of those is around line 26 where black students scored much lower than most. Paul's is different in the fact that is based more on your rebutation or reception among others. For example lines 5 and 6 talk about how people feel different among others or while being judged.

Scores

Development:

Focus & Organization:

Training Set: Response #3

In their essays, Dweck and Paul make a point that intelligence is greatly affected by outside influences. Dweck states that intelligence is affected by the type of praise a child receives, while Paul states that intelligence is affected by social influences such as stereotypes. They both show how the word intelligence can't have a set meaning, but is abstract and can be described in many different ways. Both studies were similar in the outside influence being a factor of intelligence, one giving praise and the other derogatory comments. This is the main difference, because even though they are opposite ways of speaking, both make the students feel self-conscious & worried about how they will be looked at. Dweck's theory of "fixed mind-set," however also shows that the students are less likely to try to do well where as Paul's theory just shows the student being to self-conscious to focus. The structures of their essays are also similar as they both lead with a situation, move on to the point of intelligence, show studies to support their theories, and then suggest ways to avoid either "fixed mind-set" or "conditional stupidity."

The overall views of Dweck and Paul are very similar in how intelligence is affected, but different in the specifics of what intelligence is affected by such as praise or stereotyping.

Scores

Development:

Focus & Organization:

Training Set: Response #4

The word "intelligence" was used in two similar, but yet very different ways over the course of these two texts. Carol S. Dweck used it as something molded mainly by how a person was raised and his/her attitude. With Dweck, the compliments a child is given, when it comes to school work, for example, can change that child's confidence, which also changes intelligence. Annie Murphy Paul, however, used it as how a person feels at a particular point and time. If a person feels comfortable, according to Paul's definition, his/her IQ can be relatively higher than if he/she were in an uncomfortable position. There are some similarities between the two authors' theories in regards to intelligence, but for the most part, they have very contrasting ideas about the subject.

In Dweck's "The Secret to Raising Smart Kids," she talks about her ideas of intelligence in kids and what can affect it, negatively and positively. She defines two different ways of thinking about one's own intelligence, called a "fixed mind-set" and a "growth mind-set." Kids with a fixed mind-set tend to hold themselves back, while others who develop a growth mind-set tend to want to advance. Dweck backs up this theory stating, "Confronted by a setback such as a disappointing test grade, students with a growth mind-set said they would study harder or try a different strategy for mastering the material." On the opposite side of the mind-set spectrum, Dweck continues, "Attributing a bad grade to their own lack of ability, those with a fixed mind-set said that they would study less in the future, try never to take that subject again and consider cheating on future tests." It's clear that most parents, and people in general, would prefer that children have an attitude more closely resembling the growth mind-set than the fixed mind-set. In a nutshell, Dweck defines intelligence as a mental mind-set that can be changed by how one think about one's own intelligence.

In Paul's "It's Not, It's You," intelligence is described a little bit differently. Instead of a mind-set, Paul talks about how who one is interacting with can alter one's intelligence. For example, one might think oneself smarter while talking to a friend rather than talking to a superior. Paul makes this clear early in her article saying, "Experiments show that when people report feeling comfortable with a conversational partner, they are judged by those partners and by observers as actually being more witty." Paul did a study on the bad side of South Chicago and found that if there were a murder in a child's area, he/she didn't score as high as he/she normally would for a couple weeks. There is a statement in the passage that says, "We should also put in place techniques for reducing anxiety and building self-confidence that take advantage of our social natures." What that is saying is that we need to find a way to cure ourselves of anxiety so we can focus as much as we can. When children tell themselves that they are going to fail a test, they tend to do bad on it, but when they're optimistic about it, it reassures them of their intelligence and they can do much better.

Confidence plays a big role in both definitions. If a person is comfortable, his/her confidence should skyrocket and so should his/her IQ, according to Paul. The same is with Dweck. If a student's confidence isn't put down every time he/she makes a mistake, he/she will be more able to focus on work and his/her IQ should go up. Both definitions have huge similarities and huge differences, but overall they say the same thing. Even though Dweck and Paul have different ideas about how people think about intelligence, both do agree on one thing: intelligence is not set. One's level of intelligence can change depending on who one is talking to and how one thinks about it. No one is just born with a certain level of intelligence; it can fluctuate depending on certain factors. You're only as intelligent as the people around you and yourself let you be.

Scores

Development:

Focus & Organization:

Training Set: Response #5

Dweck and Paul both have strong opinions on the idea of intelligence and how one might obtain it. Dweck thought the effort put forth in learning was superior to natural ability. Paul was straight forward in explaining that intelligence is more likely beheld in comfortable environments. Racial and stereotypical aspects can affect a learning environment when seen in a negative light.

Dweck bases intelligence on effort while Paul associates it with uncomfortable racial stereotypes. Both highlighted the importance of effort and the reasons to stay away from rewarding a student based on ability or stereotype. The differences were the sources of influence. Dweck explains that to reward an accomplished student builds his/her standards too high and his/her arrogance blinds them of ability, especially when placed in front of an obstacle. Paul states that students are more likely to put forth effort when you disregard their race or gender and refrain from discouraging their neutral testing environment.

Both writers reinforce the separation between ability and effort, supporting that intelligence is not defined by who you are as a person, but how much value and effort you enforce on yourself. Basically, teachers, parents, and other overseers have a unique opportunity to influence their children or students' grades, positively or negatively. Both writers encourage a neutral, warm environment that supports hard work and effort. This isn't just for the classroom, but it is crucial to enforce equality in every environment. Paul states, "If the threat of social exclusion can decrease the expression of intelligence, so can a perceived threat to physical safety." (line 53)

There has to be a compromise between recognizing ability and supporting effort, especially in a learning environment. Although the authors varied their reasons for this academic discrimination, the results are the same, and obvious for that matter.

Scores

Development:

Focus & Organization:

Training Set Key

Training Set: Response #1:

Development: 4

Focus and Organization: 4

Language: 4

Conventions: 4

Training Set: Response #2:

Development: 1

Focus and Organization: 1

Language: 2

Conventions: 2

Training Set: Response #3:

Development: 2

Focus and Organization: 2

Language: 3

Conventions: 3

Training Set: Response #4:

Development: 3

Focus and Organization: 3

Language: 4

Conventions: 4

Training Set: Response #5:

Development: 1

Focus and Organization: 2

Language: 3

Conventions: 3

Scoring Students' Work

Directions:

- 1) Pick one essay from each of your "Low," "Medium," and "High" piles.
- 2) Label each with an L, M, or H on top for easy reference
- 3) Find a partner and swap your pile of three papers
- 4) Score your partner's papers using the rubric and anchor papers.
- 5) Fill in the scores in the table below and calculate the trait averages.
- 6) When you and your partner are finished, exchange papers and this score sheet. Discuss your findings with each other:
 - Did anything surprise you about the scores?
 - Do you disagree on any of the score points?
 - Based on the average scores, what is the greatest area of need for your students? Does this correspond with the areas of need you identified earlier when reflecting on student work?

	Low	Medium	High
Development			
Focus and Organization			

Average Development Score:

Average Focus and Organization Score:

Creating Text-Dependent Questions for Close Analytic Reading of Texts

An effective set of text-dependent questions delves systematically into a text to guide students toward extracting the key meanings or ideas found there. Text-dependent questions typically begin by exploring specific words, details, and arguments, and then move on to examine the impact of those specifics on the text as a whole. Along the way, they target academic vocabulary and specific sentence structures as critical focus points for gaining comprehension.

While there is no set process for generating a complete and coherent body of text-dependent questions for a text, the following process is a good guide that can serve to generate a core series of questions for close reading of any given text.

Step One: Identify the Core Understandings and Key Ideas of the Text

As in any good reverse engineering or “backwards design” process, teachers should start by reading and annotating the text, identifying the key insights they want students to understand from the text. Keeping one eye on the major points being made is crucial for fashioning an overarching set of successful questions and critical for creating an appropriate culminating assignment.

Step Two: Start Small to Build Confidence

The opening questions should be ones that help orient students to the text. They should also be specific enough so that students gain confidence to tackle more difficult questions later on.

Step Three: Target Vocabulary and Text Structure

Locate key text structures and the most powerful words in the text that are connected to the key ideas and understandings, and craft questions that draw students’ attention to these specifics so they can become aware of these connections. Vocabulary selected for focus should be academic words (“Tier Two”) that are abstract and likely to be encountered in future reading and studies.

Step Four: Tackle Tough Sections Head-on

Find the sections of the text that will present the greatest difficulty and craft questions that support students in mastering these sections (these could be sections with difficult syntax, particularly dense information, and tricky transitions or places that offer a variety of possible inferences).

Step Five: Create Coherent Sequences of Text-dependent Questions

Text-dependent questions should follow a coherent sequence to ensure that students stay focused on the text, so that they come to a gradual understanding of its meaning.

Step Six: Identify the Standards That Are Being Addressed

Take stock of what standards are being addressed in the series of questions and decide if any other standards are suited to being a focus for this text (forming additional questions that exercise those standards).

Step Seven: Create the Culminating Assessment

Develop a culminating activity around the key ideas or understandings identified earlier that (a) reflects mastery of one or more of the standards (b) involves writing, and (c) is structured to be completed by students independently.

Eleven Elements of Effective Adolescent Writing Instruction

This report identifies 11 elements of current writing instruction found to be effective for helping adolescent students learn to write well and to use writing as a tool for learning. It is important to note that all of the elements are supported by rigorous research, but that even when used together, they do not constitute a full writing curriculum.

1. **Writing Strategies**, which involves teaching students strategies for planning, revising, and editing their compositions
2. **Summarization**, which involves explicitly and systematically teaching students how to summarize texts
3. **Collaborative Writing**, which uses instructional arrangements in which adolescents work together to plan, draft, revise, and edit their compositions
4. **Specific Product Goals**, which assigns students specific, reachable goals for the writing they are to complete
5. **Word Processing**, which uses computers and word processors as instructional supports for writing assignments
6. **Sentence Combining**, which involves teaching students to construct more complex, sophisticated sentences
7. **Prewriting**, which engages students in activities designed to help them generate or organize ideas for their composition
8. **Inquiry Activities**, which engages students in analyzing immediate, concrete data to help them develop ideas and content for a particular writing task
9. **Process Writing Approach**, which interweaves a number of writing instructional activities in a workshop environment that stresses extended writing opportunities, writing for authentic audiences, personalized instruction, and cycles of writing
10. **Study of Models**, which provides students with opportunities to read, analyze, and emulate models of good writing
11. **Writing for Content Learning**, which uses writing as a tool for learning content material

Source: *Writing Next: Effective Strategies to Improve Writing of Adolescents in Middle and High Schools* (Graham and Perin, 2007). <http://all4ed.org/wp-content/uploads/2006/10/WritingNext.pdf>

Research Overview —Writing Sources

Key Steps



1. **Prepare:**
 - a.) Analyze the prompt to pose or clarify a question about text(s)
 - b.) Gather and analyze textual evidence
 - c.) Create a thesis. Test it: does it answer the question? Is it supported by evidence?
 - d.) Create an outline
2. **Draft:** Put your ideas into sentences and paragraphs. Explain and support your ideas.
3. **Revise:** Consider your reader's needs and expectations. Have you successfully communicated/argued your point?
4. **Edit:** Correct errors in conventions; ensure correct citation
5. **Publish**

Based on <http://writing.mit.edu/wcc/resources/writers/writingprocess>

Gather and analyze textual evidence through graphic organizers

	Text One	Text Two
Purpose		
How is purpose conveyed?		

Reflections and Looking Ahead

1. What are 1-2 take-aways that you have from this Literacy module?
2. What are you going to do between now and Class 2 to support your students in writing?
3. Based on what you learned today, what are you going to share with your teachers?

Promoting Student Work in Challenging Math Content

Tennessee Department of Education
Common Core Leadership Course 202
High School Mathematics
Grades 9 – 12

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Course Objectives

Participants will:

- Consider the expectations of CCSS tasks for students;
- Examine what we presently know about student understanding statewide and in our buildings;
- Deepen content knowledge in a targeted skill deficit;
- Prepare to support teachers in their work to improve student outcomes.

Class One Agenda

Participants will:

- Review state-wide data from last year's CRA;
- Complete an assessment task on critical content in Algebra I;
- Focus on content and key understandings in Algebra I;
- Analyze student work from bridge to practice;
- Plan a conversation to have with a teacher about trends in student work and next steps.

Statewide Constructed Response Data, 2012

Middle School Band

Grade 6 CRA Summary

<u>Task 1</u> Mall Task		<u>Task 2</u> Lunchroom Tiles Task		<u>Task 3</u> Water Pumps Task		<u>Task 4</u> Packing Crates Task	
6.RP.A.1	25.2	6.RP.A.3	36.7	6.RP.A.1	42.7	6.EE.A.1	62.0
6.RP.A.3b	24.2	6.RP.A.3c	40.5	6.RP.A.3	67.2	6.RP.A.1	45.0
6.RP.A.3d	23.3	MP3	52.2	6.RPA.3b	74.8	6.RP.A.3	18.6
MP3	16.1	MP7	31.6	MP4	81.0	MP1	35.6
MP4	32.1			MP6	43.1		

Grade 7 CRA Summary

<u>Task 1</u> Pet Adoptions Task		<u>Task 2</u> Snack Mix Task		<u>Task 3</u> Lunch Time Snacks Task		<u>Task 4</u> Car Wash Task	
7.RP.A.2a	30.1	7.RP.A.1	46.4	7.RP.A.2b	7.1	7.RP.A.2a	18.4
7.RP.A.3	35.5	7.RP.A.2b	42.1	7.RP.A.2*	5.2	MP1	4.7
MP3	26.3	7.RP.A.2c	16.2	MP7	5.7	MP3	5.8
MP4	50.1	MP4	51.8				
MP6	6.9	MP6	5.4				

Grade 8 CRA Summary

<u>Task 1</u> Cell Phone Plan		<u>Task 2</u> Fire Department		<u>Task 3</u> Bacteria Growth		<u>Task 4</u> Marcus's Lemonade Stand	
8.F.A.2	20.3	8.F.A.1	18.7	8.F.A.3	33.0	8.EE.B.6*	10.6
MP1	38.0	MP4	23.0	MP1	39.3	MP3	18.1
				MP6	30.3	MP7	34.1

"The number to the right of the standard is the percentage of students receiving all possible points for that standard for the particular task. Typically, each standard for each task was worth one point, but in some instances it was worth two points."

Statewide Constructed Response Data, 2012

Review and Reflection Questions (Small Group Discussion)

Where did students do well? Where did they struggle? Consider both content and practice standards.

Extension Question

How might these results impact the direction of work of HS teachers?

Grade 6 Summative CRA Findings and Implications

Task 1 Mall Task		Task 2 Lunchroom Tiles Task		Task 3 Water Pumps Task		Task 4 Packing Crates Task	
6.RP.A.1	25.2	6.RP.A.3	36.7	6.RP.A.1	42.7	6.EE.A.1	62.0
6.RP.A.3b	24.2	6.RP.A.3c	40.5	6.RP.A.3	67.2	6.RP.A.1	45.0
6.RP.A.3d	23.3	MP3	52.2	6.RP.A.3b	74.8	6.RP.A.3	18.6
MP3	16.1	MP7	31.6	MP4	81.0	MP1	35.6
MP4	32.1			MP6	43.1		

"The number to the right of the standard is the percentage of students receiving all possible points for that standard for the particular task. Typically, each standard for each task was worth one point, but in some instances it was worth two points."

Content Results:

Looking across the data for content from grade 6, within the Ratio and Proportion domain the strongest scores occurred on task 3 where students were assessed on their ratio understanding in the context of equivalent fractions. Students were less proficient on 6.RP.A.1 and 6.RP.A.3 when asked to use ratio reasoning to explain a solution. For the content standard 6.EE.A.1, 62 percent of students correctly wrote and evaluated a numerical expression containing whole-number exponents.

Practice Results:

The highest rate of success for the mathematical practices was MP4 (Model with Mathematics) in task 3 where 81 percent of students demonstrated mastery. In this task, students correctly modeled proportional relationships from numbers in a given table. However, only 32 percent of students were able to correctly model (MP4) in task 1 where they had to show a unit conversion without the support of a data table. Additionally, only 16.1 percent of grade 6 students demonstrated proficiency in task 1 on MP3 (Make sense of problems and persevere in solving them). Students need opportunities and exposure to rigorous problem-solving experiences. Teachers can model and incorporate last year's CRA tasks into instructional time to create this learning environment.

The following is intended to help illustrate the standards in the RP domain:

Previous TN standards concerning rate and ratio solicited knowledge-level thinking where students solved problems procedurally. Current Common Core content and practice standards for rate and ratio solicit reasoning-level thinking requiring students to solve problems analytically and through explanations in addition to procedural processes.

Example: On the Packing Crates task, students first calculated the volumes of a small crate and a large crate. A lower-level assessment item would follow up by asking the students to write the ratio of the volumes. Instead, students were asked, “Is the ratio of the volumes of the smallest packing crate to the largest packing crate 1:5? Use ratios and/or ratio language to explain why or why not.”

To be able to accurately answer the questions, students need to have multiple opportunities to build proficiency with the following ratio types:

- **Part-to-Part:** In a classroom there are 13 girls and 9 boys, both of these numbers are parts of another whole. They can be written as $\frac{13}{9}$, representing a ratio of thirteen to seven. However, this is not a fraction, even though the fraction bar is used. You must look at how it is used in the context of the problem to determine if it is a part-to-part ratio.
- **Part-to-Whole:** In a classroom there are 13 girls and 9 boys with a total of 22 students, both 13 and 9 are parts of the whole. This can be written as $\frac{13}{22}$ for girls to whole, or $\frac{9}{22}$ for boys to whole. This can be thought of as a true fraction called thirteen twenty-seconds.
- **Ratios as Quotients:** If you can buy 5 pencils for \$1.50, the ratio of money for pencils is 5 pencils for \$1.50. The cost per pencil is the unit rate, or the cost per pencil is \$.30.
- **Ratios as Rates:** The difference between a ratio and a rate is that a rate describes a ratio relationship in terms of how two different units are involved with each other.
- **Ratios compared with fractions:** Ratios and fractions are related concepts but do not mean the same thing. It depends on the context of the problem if it is a fraction or if the fraction bar is simply used to symbolically represent the relationship between two quantities.
- **Multiplicative Comparison:** It is vitally important to develop proportional reasoning that students understand that ratios represent a multiplicative relationship and not an additive relationship. In ratios, the multiplicative relationship is a comparison between two quantities and that they are different from the two measures of the ratio composition.
- **Composed Unit:** Two types – iterating and partitioning of the composed unit. With the pencil example, 5 pencils for \$1.50, 10 pencils for \$3, 15 pencils for \$4.50 is iterating; 1 pencil for \$.30, 2 pencils for \$.60 is partitioned. Any number of pencils can be calculated by determining the composed unit or the unit rate.

Example:

Consider comparing the lengths of two worms. Worm A is 6 inches and Worm B is 4 inches (Fig. 1.7). Students could compare the worms additively (How much longer/shorter are the worms?). Students could compare the worms multiplicatively (see below).

- How many times longer is worm A than worm B? (Worm A is $1\frac{1}{2}$ times the length of worm B.)
- The length of worm B is what part, or fraction, of the length of worm A? (Worm B is $\frac{2}{3}$ the length of worm A.)

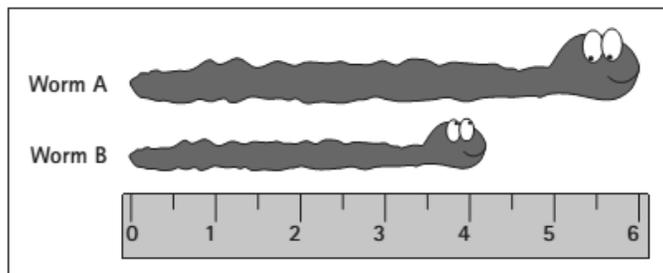
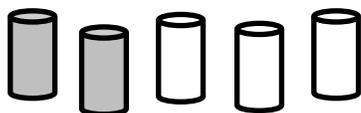


Fig. 1.7. Comparing the lengths of two worms

A multiplicative comparison is a ratio; an additive comparison is not. In general, forming a multiplicative comparison involves asking, “How many times greater is one thing than another?” or “What part or fraction is one thing of another?”

Source: National Council of Teachers of Mathematics, 2010

Typical Ratio Problem: Write the ratio of apple concentrate to water. (Apple concentrate in gray cans.)



Under traditional assessment, a student who writes the ratio 2:3 is awarded credit for getting the right answer. However, we cannot assume that a student who writes 2:3 understands that for every 2 cans of apple concentrate, there are 3 cans of water. To assess ratio understanding, take the problem further by asking the student if apple juice made with 4 cans of concentrate and 6 cans of water will have the same amount of “apple-taste.” A student who does not have ratio understanding may say that the apple juice made from the 4:6 ratio has more of an “apple-taste” because it was made with more concentrate. Students will need to experience problems such as these to develop ratio understanding.

Helpful Resources

- Phase I CRA Tasks and Scoring Guides 2012-13 on www.TNCore.org:
 - [Comparing Cars](#)
 - [Triangles and Stars](#)
 - [Birthday Candy](#)
- Phase II CRA Tasks and Scoring Guides 2012-13 on www.TNCore.org:
 - [Playground](#)
 - [Three Trips](#)
 - [Comparing Squares](#)
 - [Courtyard](#)
- Summative CRA Tasks and Scoring Guides 2012-13 on www.TNCore.org:
 - [Mall](#)
 - [Lunchroom Tiles](#)
 - [Water Pumps](#)
 - [Packing Crates](#)
- [Task Analysis Guide](#) on www.TNCore.org
- [PARCC Model Content Frameworks](#) on www.parcconline.org
- [Learning Progressions](#) on www.turnonccmath.net

A Plan for the 6th Grade Professional Learning Community

Step One:	Access your teacher or grade level data from the Measurement Inc. portal at https://state2.measinc.com/WP/SignIn.aspx . <i>(Note: you may need to get login information from your school testing coordinator or principal.)</i>
Step Two:	Work through all four tasks for your grade level available at http://tncore.org/math/assessment/sample_assessments.aspx . For tasks that had low scores for your students, score a few anchor papers to become familiar with the task and expectations for student performance. Anchor papers are included in the scoring guides located here: http://tncore.org/math/assessment/scoring_resources.aspx .
Step Three:	Review data across your grade level: Look for strengths and weaknesses across content and practice standards. What trends do you notice? (For example, our students were strong in task 2 on 3.OA.A.4 and weak in 3.OA.B.5 in task 4; our students were strong in MP3 in task 1 and weakest in MP7 in task 3.) Look for particular tasks that had strong or low overall scores. (For example, our students scored strongest on task 1 and lowest on task 4.)
Step Four:	In light of the data and the tasks, identify specific points where your students most likely experienced difficulty. Things to consider might be: <ul style="list-style-type: none"> • How is the task presented to students in terms of language, graphs, diagrams, and tables? • How are students expected to respond to the task (i.e. through words, diagrams, or equations)? • In what ways were the students to make use of the practice standards in this task?
Step Five:	Build a series of lessons with high-level tasks in an upcoming unit and collect student work from at least three students that are in different places in their learning. After the unit, analyze the student work for understanding of these students. Consider how to use understandings from previous grades to build understanding. The curricular resources page on TNCore.org offers instructional tasks and task arcs by grade level that may be helpful to you in writing a unit plan: http://tncore.org/math/curricular_resources.aspx .

Grade 7 Summative CRA Findings and Implications

Task 1 Pet Adoptions Task		Task 2 Snack Mix Task		Task 3 Lunch Time Snacks Task		Task 4 Car Wash Task	
7.RP.A.2a	30.1	7.RP.A.1	46.4	7.RP.A.2b	7.1	7.RP.A.2a	18.4
7.RP.A.3	35.5	7.RP.A.2b	42.1	7.RP.A.2*	5.2	MP1	4.7
MP3	26.3	7.RP.A.2c	16.2	MP7	5.7	MP3	5.8
MP4	50.1	MP4	51.8				
MP6	6.9	MP6	5.4				

"The number to the right of the standard is the percentage of students receiving all possible points for that standard for the particular task. Typically, each standard for each task was worth one point, but in some instances it was worth two points."

Content Results:

Looking across the data for content from grade 7, the strongest scores were found in Task 2 on standards 7.RP.A.1, computing the unit rate, and 7.RP.A.2b, determining the constant of proportionality. The lowest scores were on standard 7.RP.2* on task 3. Students were asked to state the meaning of the constant of proportionality in the context of the problem and use scaling or visual representations to offer a valid explanation as to why the two equations represent the same proportional relationship.

Practice Results:

Looking at Task 4, since less than 20 percent of students earned a content point on the Car Wash Task, it makes sense that MP1 represented the lowest rate of success for the mathematical practices coinciding with the low success rate on the content for this task. However, considering the higher rate of success for earning content points for both tasks 1 and 2, it is significant that less than 7 percent of students received credit for MP6, attending to precision.

The following is intended to help illustrate the expectations for content standard 7.RP.A.2 a,b,c:

7.RP.A.2a Decide whether two quantities are in a proportional relationship, *e.g.*, by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.

Examples:

In Task 1 Part (a) Pet Adoptions and Task 4 Part (a), students needed to explain why the graph(s) represented a proportional relationship. Students could satisfy this requirement by:

- Reasoning that the points in the graph fall on a straight line passing through the origin
- Using all ordered pairs in the graph to create quotients by dividing x by y (or y by x) consistently to produce equivalent results for each ordered pair
- Using ordered pairs to form ratios that can be expressed as equivalent fractions
- Using a table to reason that the first coordinates increase (or decrease) by a multiple, that same behavior is observed in the second coordinates for each row of the table.

7.RP.A.2b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

Examples:

- In Task 2 Part (b) students are asked to find and explain the constant of proportionality for the Snack Mix. Students can accomplish this by:
 - Expressing the amount of tablespoons per 1 serving
 - Expressing the number of servings per 1 tablespoon
 - Noting that the number of tablespoons is $\frac{1}{2}$ the number of servings.
- In Task 3 Part (b) students explain the meaning of the constant of proportionality by:
 - Expressing the constant as \$1.25 per 1 snack
 - Expressing the constant as 1 dollar per 0.8 snacks

7.RP.A.2c Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p , the relationship between the total cost and the number of items can be expressed as $t = pn$.

Example:

- In Task 2 Part (c) students are asked to write the equation expressing the proportional relationship between m , servings of snack mix, and b , tablespoons of butter. Students can accomplish this by:
 - Writing $m = 2b$
 - Writing $b = \frac{1}{2}m$
 - Writing an equivalent equation

Essential Understandings (from the National Council of Teachers of Mathematics)

- Reasoning with ratio involves attending to and coordinating two quantities.
- A ratio is a multiplicative comparison of two quantities, or it is the joining of two quantities in a composed unit.
- Forming a ratio of a real world attribute involves isolating that attribute from other attributes and understanding the effect of changing each quantity on the attribute of interest.
- A number of mathematical connections link ratios and fractions:
 - Ratios are often expressed in fractional notation, although ratios and fractions do not have identical meaning.
 - Ratios are often used to make “part-part” comparisons, but fractions are not.
 - Ratios and fractions can be thought of as overlapping sets.
 - Ratios can often be meaningfully interpreted as fractions.
- Ratios can be meaningfully reinterpreted as quotients.
- A proportion is a relationship of equality between two ratios. In a proportion, the ratio of two quantities remains constant as the corresponding values of the quantities change.
- Proportional reasoning is complex and involves understanding that –
 - Equivalent ratios can be created by iterating and/or partitioning a composed unit;
 - If one quantity in a ratio is multiplied or divided by a particular factor, then the other quantity must be multiplied or divided by the same factor to maintain the proportional relationship; and
 - The two types of ratios – composed units and multiplication comparisons – are related.
- A rate is a set of infinitely many equivalent ratios.
- Several ways of reasoning, all grounded in sense making, can be generalized into algorithms for solving proportional problems.

Helpful Resources

- Instructional Tasks on www.TNCore.org:
 - [Collecting Plant Species Task](#)
 - [Capture-Recapture Task](#)
 - [Walking Task](#)
 - [Coupon Book Sales Task](#)
 - [Salsa Task](#)
- Phase I CRA tasks from 2012-2013 available on www.TNCore.org:
 - [Basketball Scores](#)
 - [Orange Juice For Sale](#)
 - [Deshawn's Run](#)
 - [Farmer's Market](#)
- Phase II CRA tasks from 2012-13 available on www.TNCore.org:
 - [Broken Light Bulbs](#)
 - [Lemonade Stand](#)
 - [Used Video Games](#)
 - [Babysitting Fees](#)
- [Task Analysis Guide](#) on www.TNCore.org
- [PARCC Model Content Frameworks](#) on www.parcconline.org
- [Learning Progressions](#) on www.turnonccmath.net

A Plan for the 7th Grade Professional Learning Community

Step One:	Access your teacher or grade level data from the Measurement Inc. portal at https://state2.measinc.com/WP/SignIn.aspx . (Note: you may need to get login information from your school testing coordinator or principal.)
Step Two:	Work through all four tasks for your grade level available at http://tncore.org/math/assessment/sample_assessments.aspx . For tasks that had low scores for your students, score a few anchor papers to become familiar with the task and expectations for student performance. Anchor papers are included in the scoring guides located here: http://tncore.org/math/assessment/scoring_resources.aspx .
Step Three:	Review data across your grade level: Look for strengths and weaknesses across content and practice standards. What trends do you notice? (For example, our students were strong in task 2 on 3.OA.A.4 and weak in 3.OA.B.5 in task 4; our students were strong in MP3 in task 1 and weakest in MP7 in task 3.) Look for particular tasks that had strong or low overall scores. (For example, our students scored strongest on task 1 and lowest on task 4.)
Step Four:	In light of the data and the tasks, identify specific points where your students most likely experienced difficulty. Things to consider might be: <ul style="list-style-type: none"> • How is the task presented to students in terms of language, graphs, diagrams, and tables? • How are students expected to respond to the task, (i.e. through words, diagrams, or equations)? • In what ways were the students to make use of the practice standards in this task?
Step Five:	Build a series of lessons with high-level tasks in an upcoming unit and collect student work from at least three students that are in different places in their learning. After the unit, analyze the student work for understanding of these students. Consider how to use understandings from previous grades to build understanding. The curricular resources page on TNCore.org offers instructional tasks and task arcs by grade level that may be helpful to you in writing a unit plan: http://tncore.org/math/curricular_resources.aspx .

Grade 8 Summative CRA Findings and Implications

Task 1		Task 2		Task 3		Task 4	
Cell Phone Plan		Fire Department		Bacteria Growth		Marcus's Lemonade Stand	
8.F.A.2	20.3	8.F.A.1	18.7	8.F.A.3	33.0	8.EE.B.6*	10.6
MP1	38.0	MP4	23.0	MP1	39.3	MP3	18.1
				MP6	30.3	MP7	34.1

"The number to the right of the standard is the percentage of students receiving all possible points for that standard for the particular task. Typically, each standard for each task was worth one point, but in some instances it was worth two points."

Content Results:

Looking across the data for grade 8, the strongest performance for a content standard was on 8.F.A.3 for task 3, where students were asked to determine whether or not a graph represented a linear function and explain their reasoning. The greatest challenge for content was on task 4 with standard 8.EE.B.6, where students are to use similar triangles to explain why the slope of a line is the same between any two distinct points.

Practice Results:

The strongest performance for math practices was on MP1, also on task 3, where students used an appropriate method to determine if the graph represented a linear function and if the equation given in the task represented the graph. The greatest challenge for practice was for MP3, also on task 4, where students were to explain slope using similar triangles.

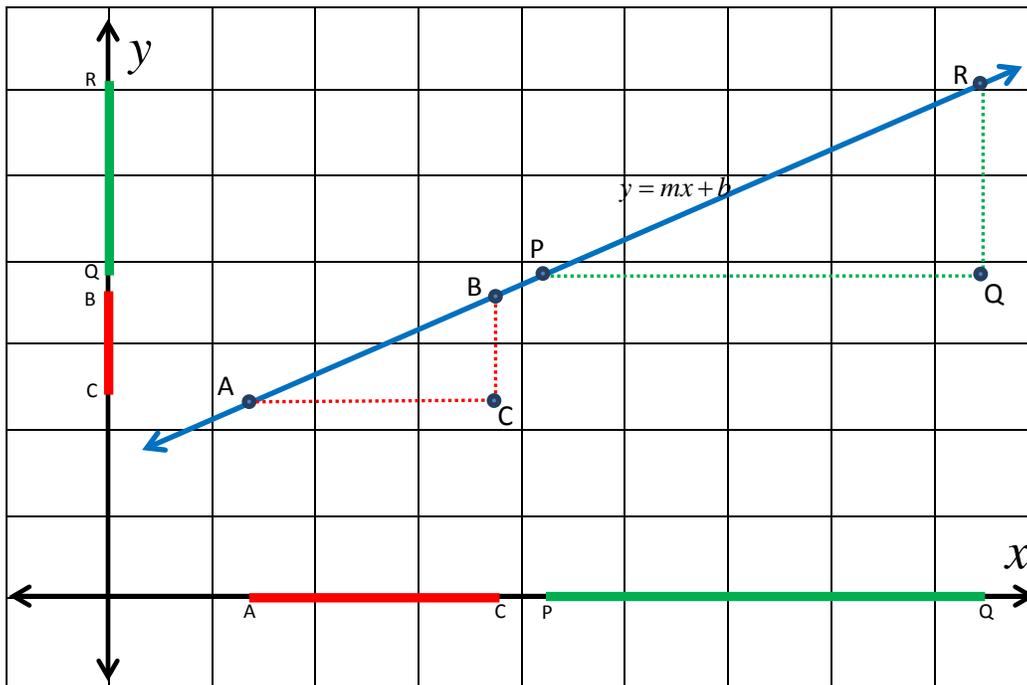
The following is intended to help illustrate the content standard 8.EE.B.6:

8.EE.B.6 Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b .

Students worked with scale drawings and proportional reasoning in 7th grade. Students will benefit from building on this understanding that when polygons are similar, their corresponding sides are proportional. Teachers can use this critical understanding as a foundation to support learning this standard. Teachers can also connect the idea of dilations and similar figures in the 8th grade geometry standards.

The rate of change of a function describes how one variable quantity changes with respect to another. It is critical that students understand the meaning of slope as a constant rate of change, which distinguishes this family of functions from other types of functions. A function's

rate of change is one of the key determining factors in determining the kinds of real-world phenomena the function is able to model (from the National Council of Teachers of Mathematics).



Notice that $\triangle ABC \sim \triangle PRQ$. Any two right triangles created this way will be similar. Therefore, their corresponding sides will be proportional: $\frac{BC}{AC} = \frac{RQ}{PQ}$. Because the ratios of “rise” to “run”

are equal for any two triangles drawn, the slope of the line will be the same between any two distinct points on the line. The change in the vertical distance with respect to the change in the horizontal distance will always be equal for any two distinct points on the line.

Students may need to see some examples with coordinate values to see the relationships between the sides of the triangles. However, it is important that students generalize their observations to reach the conclusion as defined by the standards for any two distinct points on a non-vertical line.

Essential Understandings (from the National Council of Teachers of Mathematics)

- A rate of change describes how one variable quantity changes with respect to another—in other words, a rate of change describes the covariation between two variables.
- Linear functions are characterized by a constant rate of change. Reasoning about the similarity of “slope triangles” allows deducing that linear functions have a constant rate of change and a formula of the type $f(x) = mx + b$ for constants m and b .

Helpful Resources

- Instructional Tasks on www.TNCore.org
 - [Water Tank](#)
 - [Distance from Memphis](#)
 - [Sally’s Car Loan](#)
- CRA assessment tasks and scoring guides from 2012-13 on www.TNCore.org
 - [Two Different Graphs](#) (Phase I)
 - [Roofline](#) (Phase II)
- [Task Analysis Guide](#) on www.TNCore.org
- [PARCC Model Content Frameworks](#) on www.parcconline.org
- [Learning Progressions](#) on www.turnonccmath.net

A Plan for the grade 8 Professional Learning Community

Step One:	Access your teacher or grade level data from the Measurement Inc. portal at https://state2.measinc.com/WP/SignIn.aspx . (Note: you may need to get login information from your school testing coordinator or principal.)
Step Two:	Work through all four tasks for your grade level available at http://tncore.org/math/assessment/sample_assessments.aspx . For tasks that had low scores for your students, score a few anchor papers to become familiar with the task and expectations for student performance. Anchor papers are included in the scoring guides located here: http://tncore.org/math/assessment/scoring_resources.aspx .
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Algebra I: Cellular Growth Task

In a cellular regeneration experiment, Jaydon Laboratories found that for cells put in containers with a particular growth medium, the number of cells at the end of each week was double the number of cells at the end of the previous week.

- A. The data for the first 6 weeks of the experiment are shown in the table. Fill in the blanks to complete the table for weeks 7-10.

Week	Number of cells in medium
1	15
2	30
3	60
4	120
5	240
6	480
7	
8	
9	
10	

- B. Assume that as the experiment continues, the number of cells at the end of each week continues to double the number of cells at the end of the previous week. Let w_n represent the number of cells in the growth medium in week n .

Use the tiles to write a **recursive definition** for the sequence that represents the number of cells in the growth medium at the end of each week.

An integer	A real number	2	15	30
+	−	×	÷	w_{n-1}
$n \geq 0$	$n \geq 1$	$n \geq 2$	$n \geq 6$	$n \geq 15$

$$w_1 = \boxed{}$$

$$w_n = \boxed{} \boxed{} \boxed{}$$

where n is $\boxed{}$, such that $\boxed{}$.

- C. Let W_n represent the number of cells in the growth medium at the end of week n . Which of these statements are true about the **explicit formula** for W_n ?

Select **all** that apply.

- | | |
|-------------------------------------------------------------------|-----------------------------------------------------------------------|
| <input type="checkbox"/> $w_n = 15 + 15 \times 2(n - 1)$ | <input type="checkbox"/> $w_n = 15 + 15 \times 2(n)$ |
| <input type="checkbox"/> $w_n = 15 \times 2^{n-1}$ | <input type="checkbox"/> $w_n = \frac{1}{2} \times 15 \times 2^{n-1}$ |
| <input type="checkbox"/> $w_n = \frac{1}{2} \times 15 \times 2^n$ | <input type="checkbox"/> $n \geq 1$, where n is an integer |
| <input type="checkbox"/> $n \geq 1$, where n is a real number | <input type="checkbox"/> n can be any real number |

- D. Consider the table of data about the cellular regeneration experiment.

1. If the number of cells continues to grow according to the pattern shown in the table, at what week number will the number of cells exceed one billion?



A large rectangular box for writing the answer to question 1. In the top-left corner, there is a small icon of a hand holding a pen, indicating where to start writing.

2. Explain how the process you used to find the week number relates to either the recursive model or the explicit model you constructed in the previous questions.



A large rectangular box for writing the answer to question 2. In the top-left corner, there is a small icon of a hand holding a pen, indicating where to start writing.

Source: http://www.ccsstoolbox.com/parcc/PARCCPrototype_main.html

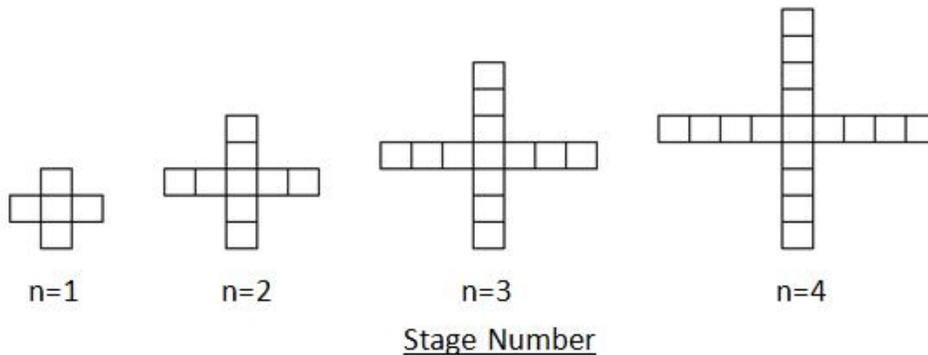
Review and Reflection Questions (Small Groups)

1. Compare your solution paths.
2. Discuss which practices you used to complete the task.
3. What is essential for students to understand to successfully complete this task?

Algebra One Task – Unpack and Analyze

Linear Growth

A. Recursive Formulas



Examine the growth of tiles and complete the following table.

n	1	2	3	4	5
a_n					

Review and Reflection:

- How can you write a recursive formula for our tile pattern?
(Hint: Use CURRENT = PREVIOUS + M)

B. Explicit Formulas

Complete the table using the examples provided.

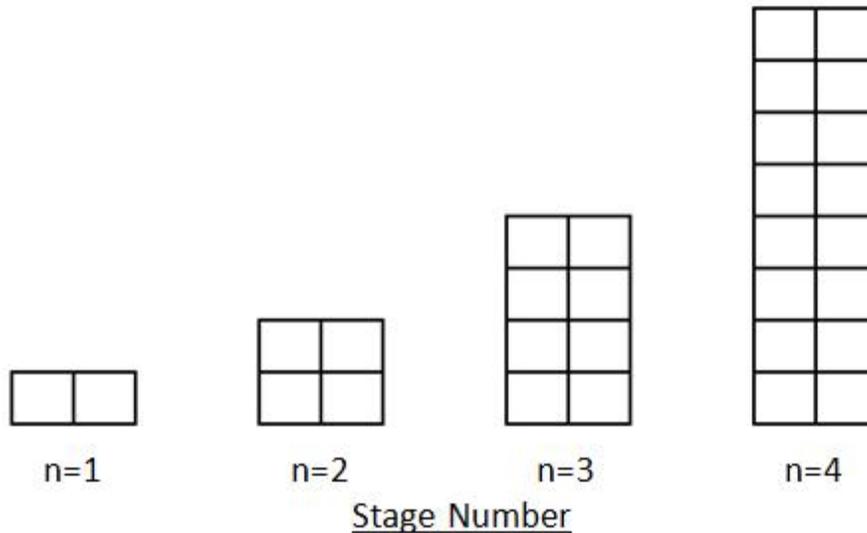
n	1	2	3	4	5	6
a_n	5 + 4(0)	5 + 4(1)	5 + 4(2)			

- How can you write the explicit formula for our tile pattern?

Algebra One Task – Unpack and Analyze

Exponential Growth

A. Recursive Formulas



Examine the growth of tiles and complete the following table.

n	1	2	3	4	5
a_n					

Review and Reflection:

- How can you write a recursive formula for our tile pattern?

B. Explicit Formulas

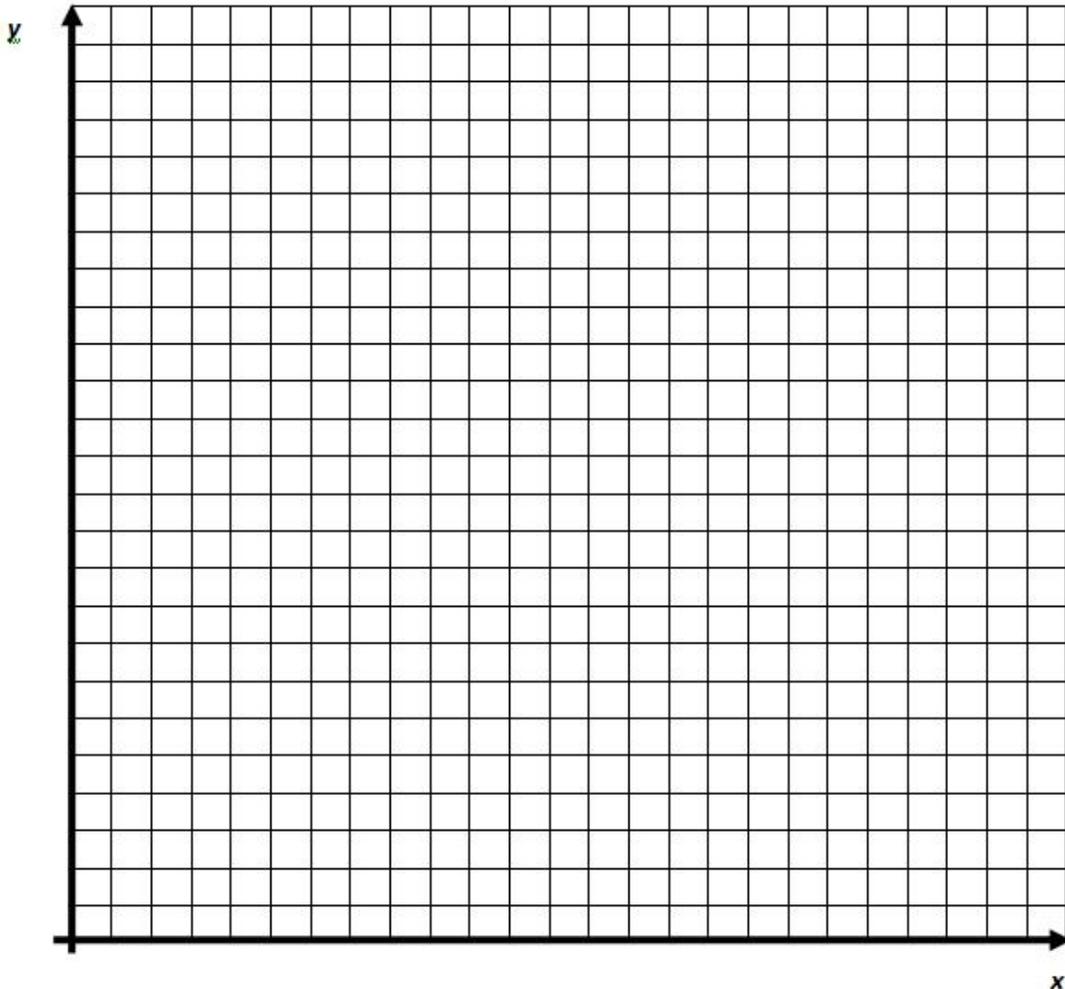
Complete the table using the examples provided.

n	1	2	3	4	5	6
a_n	$2(2^0)$	$2(2^1)$	$2(2^2)$			

- How can you write the explicit formula for our tile pattern?

Review and Reflection:

1. Try to write an explicit formula for this tile pattern.



What do you notice about the two graphs?

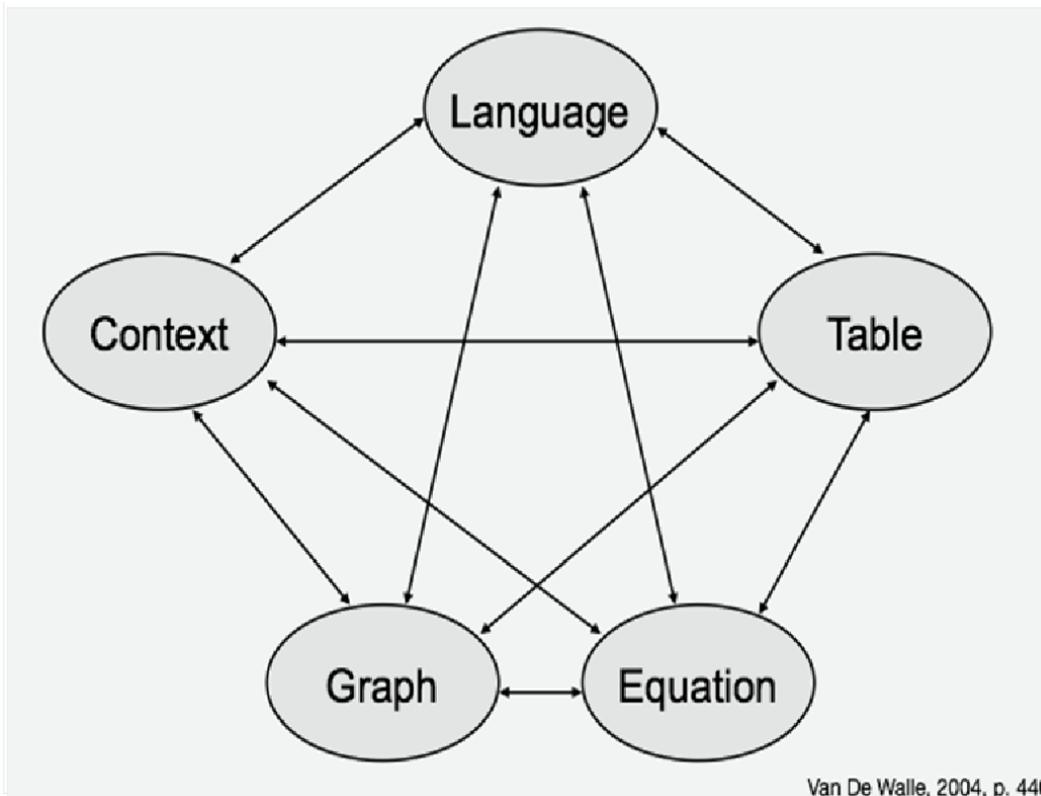
Which type of growth will eventually be greater? Do you think this will always be the case for linear and exponential growth? Why or why not?

Conceptual Understanding

Knowledge that has been learned with understanding provides the basis of generating new knowledge and for solving new and unfamiliar problems. When students have acquired conceptual understanding in an area of mathematics, they see connections among concepts and procedures and can give arguments to explain why some facts are consequences of others. They gain confidence, which then provides a base from which they can move to another level of understanding.

Kilpatrick, J., Swafford, J., & Findell, B. (2001). Adding it up: Helping children learn mathematics. Washington, DC: National Academy Press

Making Connections between Representations



Analyzing Student Work

Review and Reflections:

1. What are trends you notice across the student work? (Be specific.)

Strengths:

Challenges:

2. Do you believe that students have the understanding about the Exponential Growth that they need to have? Why or why not?

Analyzing Student Work (continued)

Recording Expectations for Students and Teachers

What are student expectations for completing the tasks successfully?

What are the teacher expectations for making sure students complete the task successfully?

Planning the Conversation

Key Points to Remember:

1. Keep the focus of the conversation founded in student work and student thinking.
2. Ask questions will encourage reflections and model the importance of asking questions for learning.
3. Press for evidence and specificity.

Sample Questions:

- What trends did you find in the student work? Strengths and challenges? (Press for evidence.)
- What insights does this give you about where your students are in relation to the goals? (Be specific.)
- What would it take to move students closer to the understanding they need? (Be specific.)
- What will you do differently as a result of looking at student work? (Be specific.)
- What can I help you with? (Be specific.)

Plan Your Conversation:

Characteristics of Questions that Support Students' Exploration

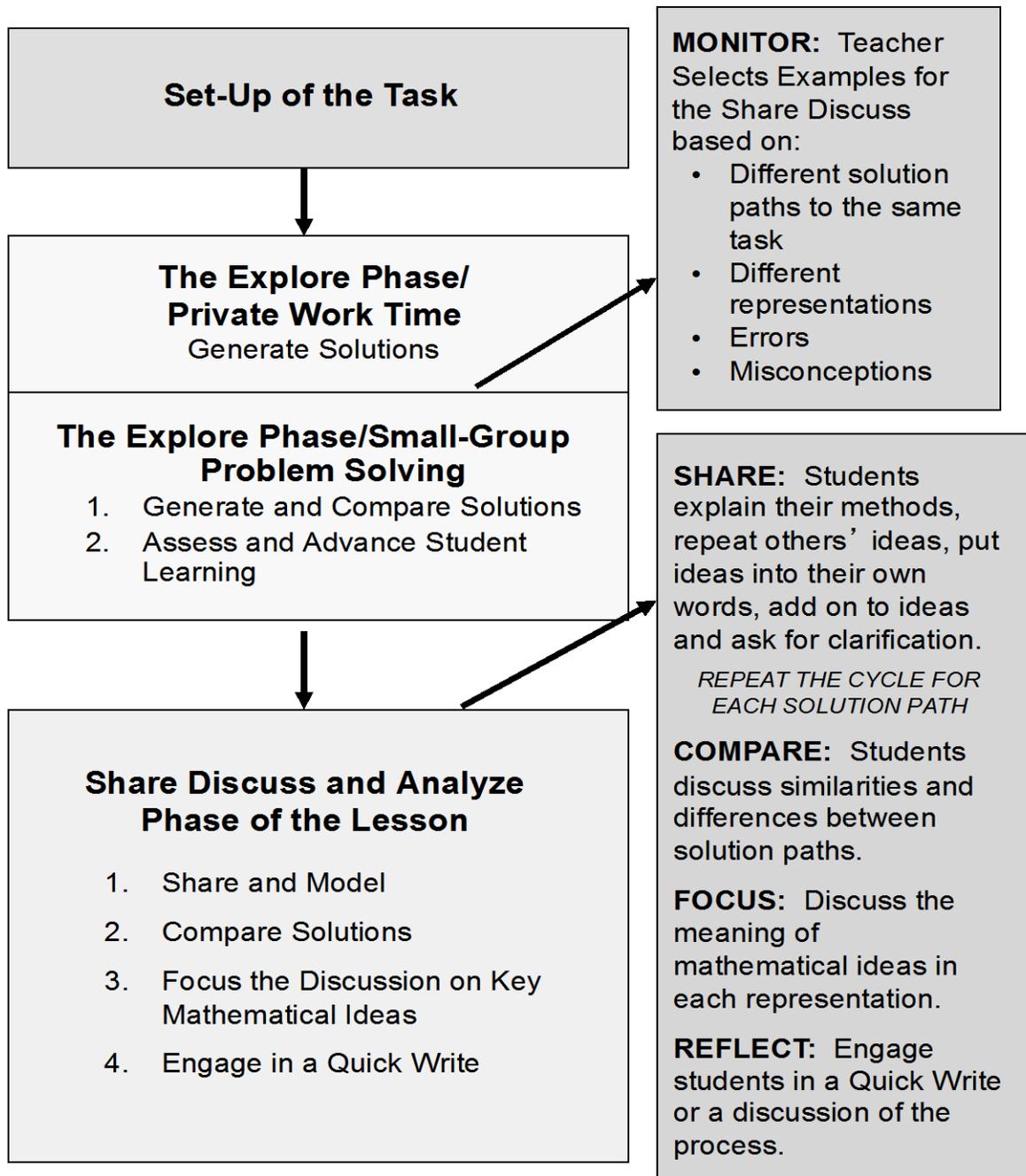
Assessing Questions

- Based closely on the work the student has produced.
- Clarify what the student has done and what the student understands about what s/he has done.
- Provide information to the teacher about what the student understands.

Advancing Questions

- Use what students have produced as a basis for making progress toward the target goal.
- Move students beyond their current thinking by pressing students to extend what they know to a new situation.
- Press students to think about something they are not currently thinking about.

Structures and Routines of a Lesson



Reflections and Looking Ahead

1. What are 1-2 take-aways that you have from this math module?
2. What are you going to do between now and Class 2 to support your students with challenging math content?
3. Based on what you learned today, what are you going to share with your teachers?

Appendix

Tennessee Department of Education
Common Core Leadership Course 202

Tennessee Department of Education

Common Core Leadership Course 202

Contact Information:

With questions, please contact:

- TNcore.questions@tn.gov or
- Your facilitators

Your facilitators today were:

Name: _____ Email: _____

Name: _____ Email: _____

**Tennessee Department of Education
Common Core Leadership Course 202**

Notes:

Tennessee Department of Education

Common Core Leadership Course 202

Notes:

Tennessee Department of Education

Common Core Leadership Course 202

Notes:
