

Parker

FRANCIS W. PARKER
CHARTER ESSENTIAL SCHOOL

THEODORE R. SIZER
TEACHERS CENTER

Essential Assessment

Theodore R. Sizer
Teachers Center

FRANCIS W. PARKER
CHARTER ESSENTIAL SCHOOL

Ten Common Principles of the Coalition of Essential Schools

1. Learning to use one's mind well
2. Less is more; depth over coverage
3. Goals apply to all students
4. Personalization
5. Student as worker, teacher as coach
6. Demonstration of mastery
7. A tone of decency and trust
8. Commitment to the entire school
9. Resources dedicated to teaching and learning
10. Democracy and equity

Parker School -- A *Conversation Among Friends*

- An Essential School
 - Founded by Ted Sizer, former Dean of the Graduate School of Education at Harvard, and Leader of the Annenberg Institute at Brown
- Women of the ILT: Deb Merriam, Sue Massucco, Diane Kruse, Ruth Whalen Crockett, Debbie Osofsky, Mandy Levine, Kathy Russo
- Grades 7-12, or ages 12-18 years; 400 students
- Charter School
 - Charter schools are public schools
 - Endorsed in first cohort of charter schools in Massachusetts
 - Opened in 1995

Domain Structure

four integrated subject areas

Arts and Humanities (AH)

Math, Science & Technology (MST)

Spanish

Wellness

Criteria for Excellence -- Skill Areas

Arts & Humanities

Writing
Reading
Research
Oral Presentation
Artistic Expression
Listening and Media Analysis

Math, Science, & Technology

Technical Communication
Mathematical Problem-Solving
Scientific Investigation
Systems Thinking
Technology

Spanish

Interpersonal
Presentational
Interpretive
Communication

Wellness

Self-Awareness
Social Awareness
Self-Management
Relationship Skills
Responsible Decision-making

Parker School Criteria for Excellence in Mathematical Problem-Solving

Problem-Solving

- You understand the problem.
- You identify special factors that influence your approach before you start.
- Your approach is efficient or sophisticated.
- You clearly explain the reasons for your decisions along the way.
- You solve the problem and make a general rule about the solution.
- You extend what you find to a more complicated situation.

Name:

Year 1

Year 2

On Time Late

May Revise by:

Portfolio Eligible YES Not Yet

Mathematical Problem Solving

Division 2 MST: Infectious Disease and Immunity

GERM 8 Nesting Doll Challenge

Exponential or Linear or?

You Decide

Skill Assessed: Mathematical Problem Solving

Due Friday, January 11, 2019

At the END of Class

Mathematical Problem Solving

|-----JB-----|-----A-----|-----M-----|

Setting Up the Problem

- The problem has a title.
- You state the goal of the assignment.
- You clearly identify which nesting dolls you are using.

Beginning

Approaching

Meeting

Process

- You collect and display data.
- You develop equations to model the scenarios.
- You provide a convincing argument as to why your nesting dolls are exponential or linear, or some other function.
- You effectively compare two measurements or 2 sets of dolls.
- You show a clear process for solving the problem with reasons for decisions you make.
- You use captions, headers, statements, arrows, etc. to guide your reader through your process.
- You cross out mistakes, initial thoughts, etc. in such a way that your work can be seen.

Beginning

Approaching

Meeting

Problem Solving Strategies

- You determine how to start the problem.
- You get unstuck when unsure what to do.
- You redirect your process when things are not working.
- You locate errors and correct them.
- You show mistakes and ineffective pathways taken.
- You record questions you have along the way.
- You provide evidence in the form of tables, graphs, equations, and diagrams.
- You verify that your solution makes sense.

Beginning

Approaching

Meeting

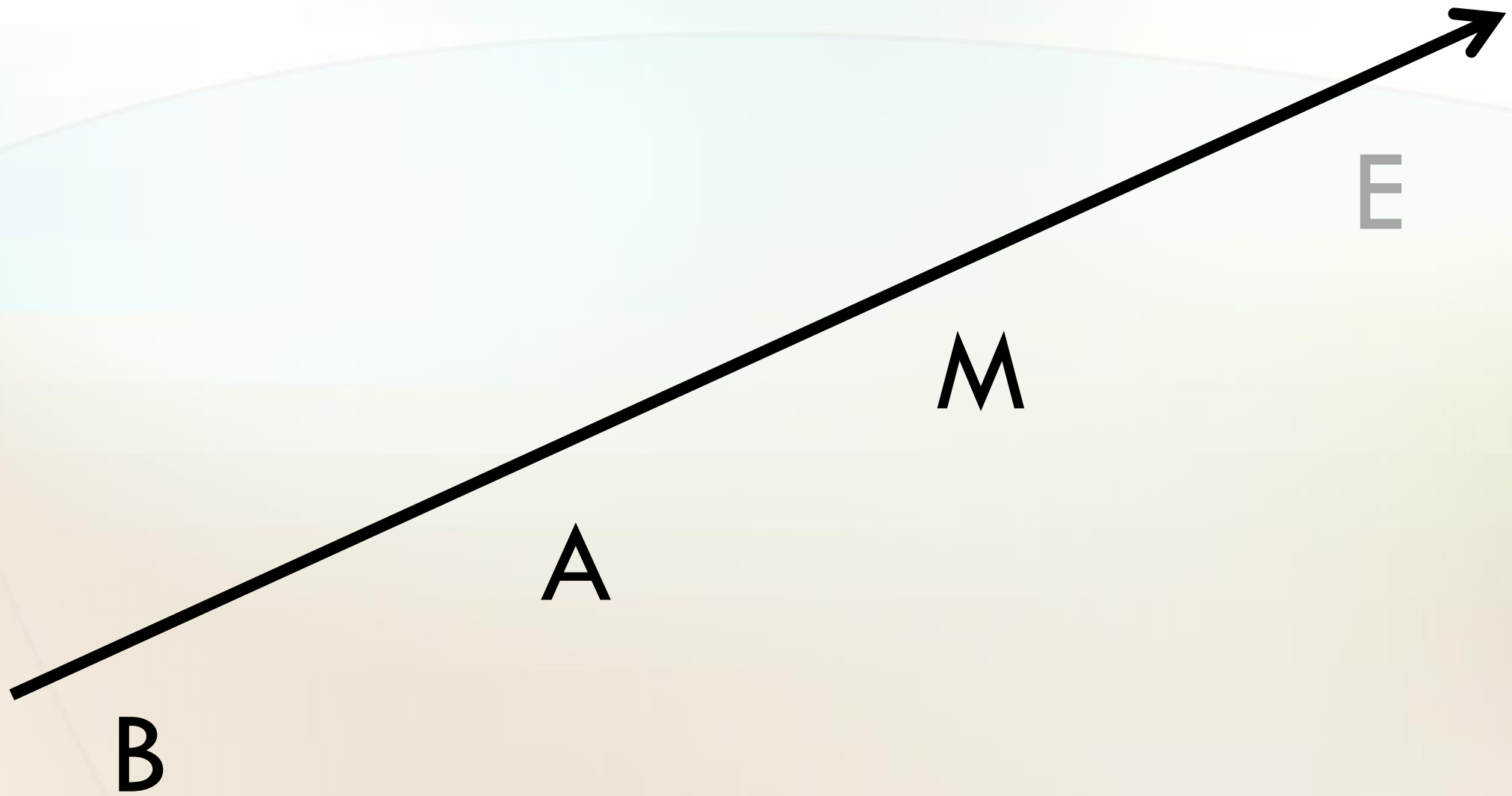
Assessment Language

Meets (M)

Approaches (A)

Beginning (B)

Assessment Journey



Professional Practices

NEASC Standard Three

- Ensure that grading and assessment practices are aligned with the school's beliefs about learning



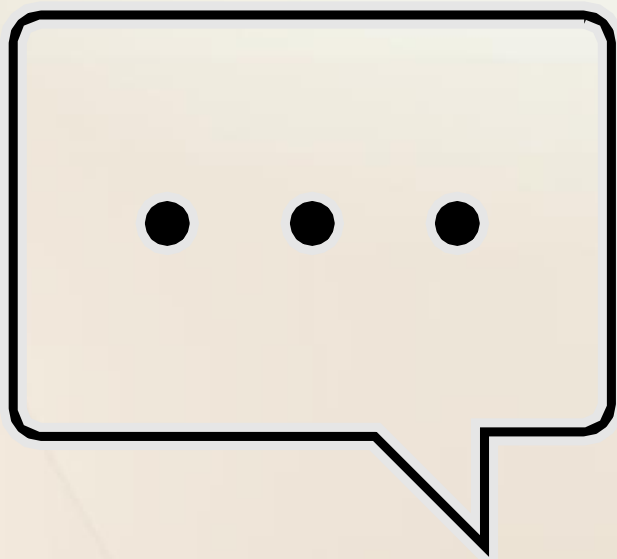
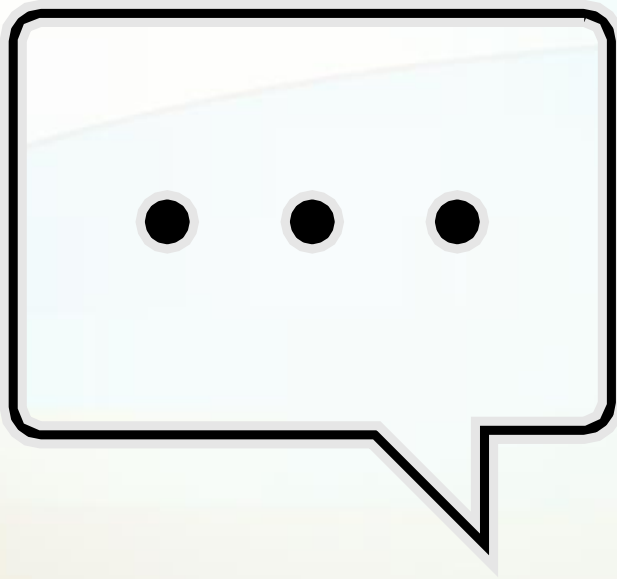
Curriculum, Instruction & Assessment

- Team Teaching for grades seven-ten
- Essential Questions, Projects, Rubrics, Portfolios
- Heterogeneous Classes (no sorting of students by perceived ability)
- Commitment to revision—in student and teacher work

Key Systems moves for Equity

- Making space for achievement to grow; not sorting students by perceived ability
- Parker teachers have *one* academic preparation
 - Some teachers have two preparations (semester-based courses for oldest students)
- Robust !! common planning time
- Use protocols for efficient collaboration
- Educators share the work!

Student Voices



Students reflect on two sample projects

- What the project is
- What I learned
- What I learned about myself as a learner

Hello Ruby

The Union & Confederacy in American Memory

- Project overview
 - Images of project description
 - Short powerpoint product

Parker School Criteria for Excellence in Listening and Media Analysis

Comprehension

- You understand and correctly use the vocabulary and terminology of the medium.
- You summarize or restate the main ideas of what you hear and/or see and identify essential supporting information.
- You identify the elements, form and/or structure of what you hear and/or see.
- You identify the historical and social context of what you hear and/or see.
- You distinguish fact from opinion.

Interpretation

- You compare and contrast different elements/ideas you hear and/or see.
- You identify a purpose and point of view of the work.
- You analyze the positions taken in what you hear and/or see and the evidence offered in their support.
- You make a claim about what you hear and /or see and support it with evidence.
- You are able to determine cause and effect relationships in what you hear and/or see.
- You identify and evaluate the strategies and elements of the work's craft.
- You synthesize information from multiple media sources.
- You make connections between what you hear and/or see and other content (class discussions, readings, or previous knowledge, etc.).
- You make connections between what you hear and/or see and your own experience.

Process

- You generate questions about what you hear and/or see.
- You discuss what you hear and/or see with others.
- You listen or observe in a way that suits the material (taking notes, asking questions, engaging in constructive dialogue).

The Union & Confederacy in American Memory: LaMA & OP

A house divided against itself cannot stand. I believe this government cannot endure, permanently, half slave and half free. I do not expect the Union to be dissolved — I do not expect the house to fall — but I do expect it will cease to be divided. It will become all one thing or all the other.

-- Abraham Lincoln

During the 19th century, the United States endured a vital part of its history, caused by increasing upheaval and divisions within the country, due to the existence and preservation of the enslavement of African Americans. This period led to the Civil War and resulted in an attempt to redefine the country's identity during the period that followed, known as Reconstruction. When discussing this period, historian David Blight notes, "The transfer from slavery to political liberty, practically overnight, had never happened anywhere else in history. This was a bold set of aspirations."

This unit will examine the historical memory of the Civil War and Reconstruction, focusing on the impact of early historical narratives about this period and how they shape and influence our modern understanding of past events. We will use historical records and media to understand how this period is remembered, culminating in listening and media analysis and oral presentation assessments which focus on the legacy and preservation of history.

YOU WILL BE RESPONSIBLE FOR:

- Formative Work: Including, but not limited to...
 - Notes and homework responses
 - In-class activities and responses
 - Glossary (will be turned in with summative work)

- Summative Work (this is what will be assessed):
 - Historical Memory Project
 - Legacy of “The Lost Cause” (Assessed for LaMA)
 - Presentation on your historical analysis (Assessed for OP)

The Reversal of Roles in The Lost Cause

How the Narrative Makes the South the Heroes Against
the North

By Ruby

Civil War at 150: Still Relevant, Still Divisive



The document *Civil War at 150* is a summary of statistics revolving around the views of modern people over the confederacy 150 years after the civil war. It answers questions about opinions on the Confederate flag and Confederate leaders.

The Lost Cause creates a much more positive view of the Confederate flag for many people. Overall, about 9% of people view the flag in a positive light, versus more than three times as many who don't. However, when the study is isolated to only white southerners, the majority say they have a positive reaction to the Confederate flag. With 22% saying they support it while 13% do not. The Lost Cause narrative is a lot more common in white southern communities, and the narrative portrays the flag as being a sign of freedom of state instead of slavery, like it does with other narratives. Hence, communities who hear this narrative feel the flag is a sign of state's rights and have a positive reaction. The slight majority of white southerners (52%) also believe that it is not offensive to praise confederate leaders for their accomplishments. This contrasts from 32% of northerners who say it's okay, which is a significant drop in states where The Lost Cause narrative is rarely perpetuated.

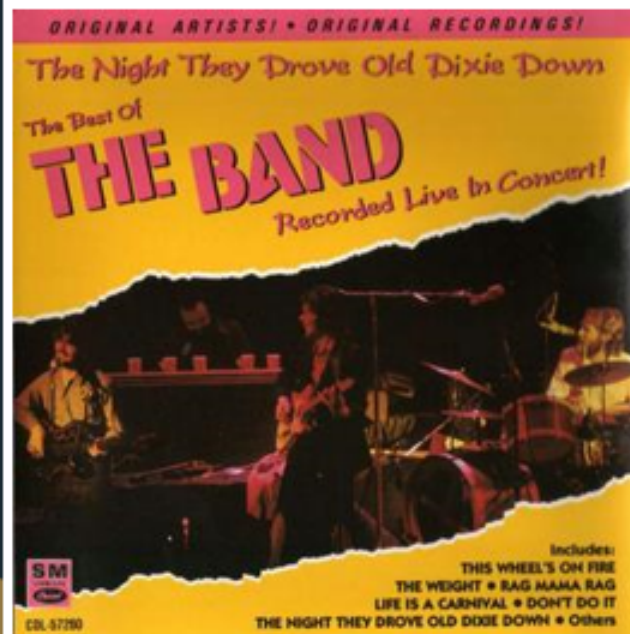
Mitch Landrieu, On the Removal of Four Confederate Monuments in New Orleans



This speech by Mitch Landrieu argues for the removal of monuments celebrating Confederate leaders. He tries to persuade the audience by countering the argument that taking them down would be eliminating important moments in history.

The Lost Cause narrative erases certain parts of America's history, particularly revolving around slavery. As Landrieu points out, while there were monuments established in The Lost Cause era that commemorated Confederate leaders, no memorial was established in remembrance of the suffering of slaves. He reminds the audience that the Vice President of the Confederates himself argued for slavery, and that by keeping these monuments standing, we are denying the intentions of the Confederacy that were expressly stated. Slavery was a major issue in the Civil War, as Landrieu points out, and these statues attempt to paint people as heroes who wanted freedom for all, when this is not actually what they advocated for. The Lost Cause narrative involved making many Confederates into heroes in many different ways, and in doing so erased a lot of details revolving around them and the intentions of the South.

The Night They Drove Old Dixie Down



The Night They Drove Old Dixie Down is a song about a white southerner's perspective of the north's eventual victory in the Civil war. It was written by Robbie Robertson and performed by a Canadian rock band appropriately called "The Band." It is thought of as being one of the most influential songs in the rock and roll world to this day.

The Lost Cause makes the Civil War sound like a tragedy that ripped apart the nation instead of being an effort to unite it. The song talks about a railroad worker who was driven out of the job by the North's attacks. In summary, the verse says that they were innocently doing their thing when they were sabotaged out of nowhere. There is also a verse in which the singer recalls his brother who died in the war. He was killed by the Northerners. He does not ever say what the North was fighting for in either verse, instead painting them as people who attacked just because they felt like attacking. In the chorus when it says "The night they drove Old Dixie down," "Dixie" is a term for the South, so the line means "When the North caused our downfall." It then goes on to say "And the people were singing, they went na la la..." which is the song version of the North laughing in the South's face as they tear up everything. The North are shown to have no good intentions here, they are just wreaking havoc on the South.

The Leopard's Spots: A Romance of the White Man's Burden



The Leopard's Spots is a novel written by a member of the Ku Klux Klan, Thomas Dixon. The novel is the first of three books perpetuating the Klan's ideals. This first novel takes place during the reconstruction period.

White southerners are seen as the victims of the freed slaves in the eyes of The Lost Cause. The story *The Leopard's Spots* dramatically retells reconstruction in a way that makes the north sound like tyrants who exploited the south in every way possible. The north supposedly turned money into a meaningless object, and sent many whites into poverty because they favored black people. It makes the thirteenth amendment sound like a last resort to appease the northerners and slaves because the north would relentlessly attack the south and take everything away from them if they did not comply. It also portrays black people as oblivious and stupid. One black man (who is pointedly not referred to by name) is described as walking with a blissful skip in his step as he goes off to tell a friend of a recent death, implying that he doesn't fully understand what is going on. He eventually decides the preacher is more capable of telling her. Unlike the preacher, his dialogue is spelled incorrectly, making the reader imagine he speaks funny.



The Reversal of Roles in The Lost Cause

How the Narrative Makes the South the Heroes Against
the North

Thanks for Listening!



Reflection with Ruby

- What did you learn?
- What did you learn about yourself as a *learner*?

Hello Trevor

Calculus: How can we quantify and describe change?

Assessment:

What is a derivative?

- Project overview
 - Images of project description
 - Short video

Division 3 MST: Calculus

Project: What exactly IS a derivative?

Skill Assessed: Technical Communication

Imagine that you're taking a calculus course. (I know, it's a stretch.) You come home from school one afternoon in late September to find that your cousin Matilda from Australia has come for a visit. She's just finishing a pre-calculus course (their summer vacation is in the middle of our winter, remember) and wants you to tell her what this calculus stuff is all about so she can decide whether she wants to take the course or not. Well, what would you tell her?

Your task: Create a video (or live presentation) that describes the basic concept of the derivative in 7 minutes or less. What is the derivative of a function? What does the value of a derivative tell us? What is the limit definition of the derivative? Can you explain where it comes from? What is local linearity and how is it important to this topic? How does evaluating limits help us find the derivative of a function?

For a successful project:

Prepare your visuals in advance. Options you might consider:

- Create PowerPoint slides in advance and then record the presentation (or do Screen-Cast-O-Matic to include a voice-over with your slides)
- Do a paper-slide video where you slide prepared visuals into and out of the field of vision while narrating
- Create visuals on a poster or white board and then talk your reader through them
- Do notebook sketches like Vi Hart!

Outline and practice delivering your narration. You should feel comfortable *talking* about this—I am specifically requesting a video or live presentation so that you are NOT turning in a well-edited piece of writing. This assignment should reveal YOUR fluency in speaking about these concepts.

The actual filming should be shot in one take in 7 minutes or less. It's ok to be real and to have a few stumbles, but you should be confident, well planned, practiced, and clear.

Trevor's Derivative video clip

The Derivative

Explained by Trevor Bush



Reflection with Trevor

- What did you learn?
- What did you learn about yourself as a *learner*?

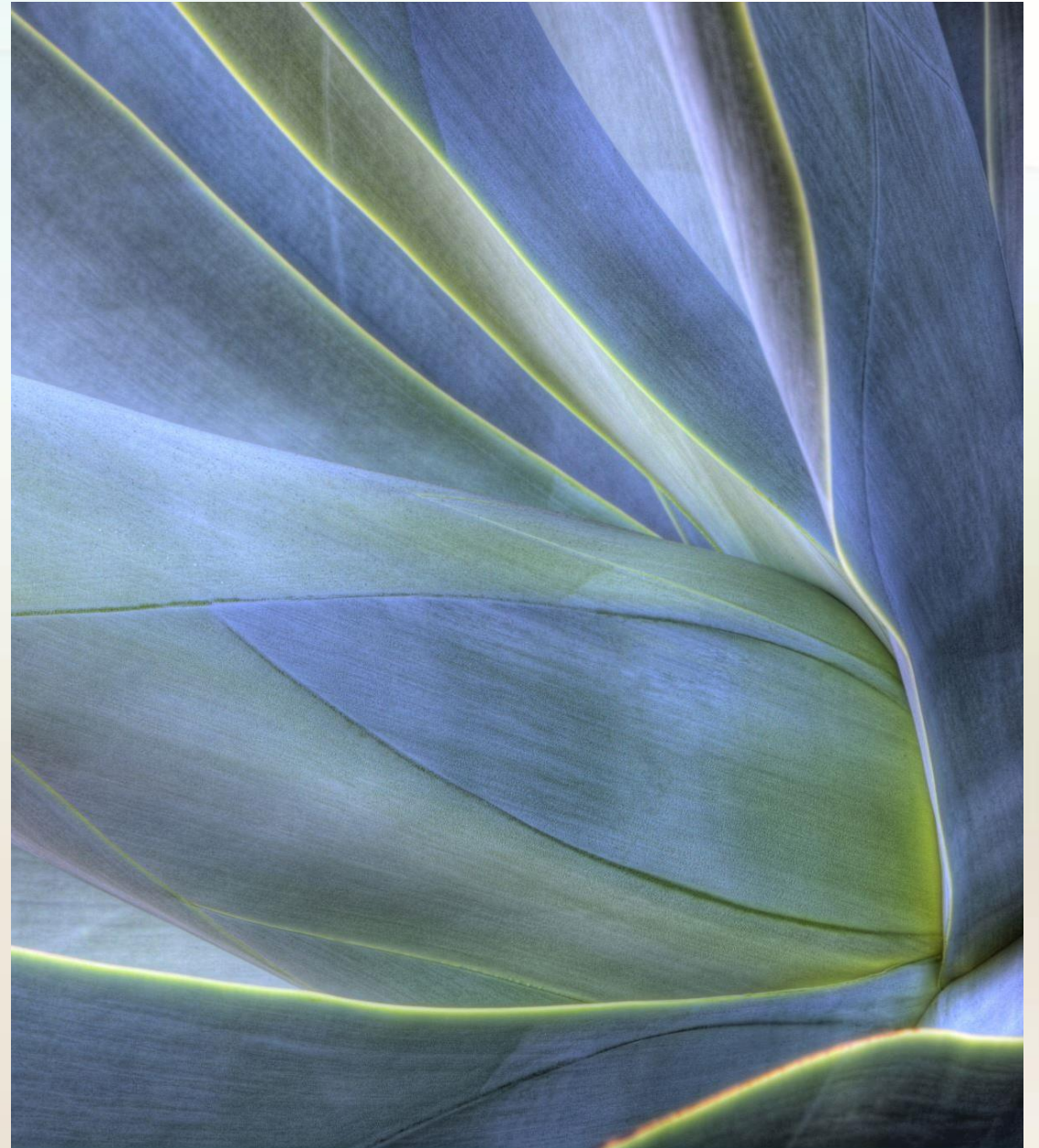
Student Learning

NEASC Standard

- learners demonstrate a depth of understanding over a breadth of knowledge
- discipline-specific, higher order thinking and transferable skills and dispositions
- embeds skills and competencies

An in-Depth Look at Assessment Design

behind the scenes



Designing Units of Study

- Criteria for Excellence skills are embedded in inquiry-based units of study
- Units are
 - Driven by essential questions
 - Collaboratively designed by teams of teachers
 - Informed by state and national standards
- Projects are usually the summative assessments for the unit
- This is NOT happening all the time, every day!

Calculus Course Overview

Fall Semester: Differentiation

How can we quantify and describe change?

Unit 1: Introducing the Derivative

EQ: What exactly is a derivative?

In this unit, we explore the concept of a derivative, starting from problems where we estimate the rate of change, and then gradually getting more and more precise until we can precisely quantify the rate of change in an instant. Mathematical concepts: slope, the difference quotient, limits, and the limit definition of the derivative. You build a toolkit of basic common derivatives. Along the way we also review many topics from precalculus to sharpen your skills.

Assessments:

- Explain the Derivative (Technical Communication)

Division 3 MST: Calculus
Project: What exactly IS a derivative?

Skill Assessed: Technical Communication

Designing the Assessment

- Which concepts must be mastered?
- How do we want students to demonstrate and apply what they know?
- What criteria define excellent performance?
- What will students do with their feedback, and what happens if a student has not yet shown mastery?

Technical Communication Criteria:	Bg	Ap	M	Revise
Your video/presentation is well planned and has a logical flow , with ideas building and interconnecting.				
Your explanations are concise and refrain from repetition, and your language is easy to understand				
You include excellent visual support for the concepts you discuss and specifically, use sketches of curves to help support your points.				
You use formal calculus terminology capably and correctly				
Concepts to Include (not necessarily in this order):				
What information does the value of a derivative provide?				
What is local linearity and how is it important to this topic?				
Given a graph, how do you visualize or sketch what the graph of the derivative will look like?				
How do secant and tangent lines relate to the derivative?				
Why are limits an important part of this concept?				
What is the limit definition of the derivative?				
Where does the limit definition of the derivative come from?				
How can the limit definition be used to calculate the equation for a derivative (show a proof that is more involved than $y = x^2!$)				
Overall Assessment: _____ _____ _____ <div style="display: flex; justify-content: space-around; width: 100%;"> Beginning Approaching Meeting </div>				
Comments:				
On Time/Late Eligible for portfolio? Yes No Not yet Revise by: _____				

The project works on two dimensions:

Parker's Criteria for Excellence in Technical Communication

- A longer-term skill that transcends any particular mathematical content
- Similar to CCSS Mathematical Practices

Math Content Goals

- The specific math concepts and skills students should master
- These may be the Common Core Content Standards, state or national math standards, AP course content, etc.

Technical Communication Criteria:

Your video/presentation is **well planned** and has a **logical flow**, with ideas building and interconnecting.

Your explanations are **concise** and refrain from repetition, and your language is easy to understand

You include **excellent visual support** for the concepts you discuss and specifically, **use sketches of curves** to help support your points.

You use **formal calculus terminology** capably and correctly

Technical Communication Focus

Knowing the math is part—but not all—of the challenge of this assignment.

The other dimension is to **communicate** this knowledge skillfully.

Concepts to Include (not necessarily in this order):

What information does the value of a derivative provide?

What is local linearity and how is it important to this topic?

Given a graph, how do you visualize or sketch what the graph of the derivative will look like?

How do secant and tangent lines relate to the derivative?

Why are limits an important part of this concept?

What is the limit definition of the derivative?

Where does the limit definition of the derivative come from?

How can the limit definition be used to calculate the equation for a derivative (**show a proof** that is more involved than $y = x^2!$)

Math Content Focus

All students taking this course should show mastery of these concepts, even if they struggle with the specific challenge of synthesizing and explaining their knowledge in this project.

Language for the rubric came from Parker's Criteria for Excellence.

When we design rubrics for specific assignments, we adapt the school-wide language and tailor it to the assignment.

The SAME criteria apply across all three divisions in the school, just as the Mathematical Practices apply across all grade levels.

The TASK COMPLEXITY and the CONTENT EXPECTATIONS increase as students grow.

Technical Communication Criteria for Excellence

Content

- Your work is clear, coherent, correct and complete
- You use evidence, examples, and/or data to illustrate your thinking and to support or justify your conclusions
- Your communication is concise, yet also contains sufficient detail

Organization

- You frame the purpose of your work
- You communicate using a format that suits your purpose and audience
- Your discussion has logical flow

Visuals

- You use graphs, charts, tables and diagrams where appropriate
- You integrate visuals into your work and refer to them
- You clearly label graphs, charts, tables and diagrams

Notation

- You show appropriate detail in your calculations
- You make effective use of equations and symbolic notation
- You include correct units for quantities

Conventions

- You use technical vocabulary correctly
- You use a formal tone where appropriate
- You use correct spelling, capitalization, punctuation, grammar and sentence structure

REVISION is a critical feature of Parker's approach to assessment.

Beginning (Bg)	Approaching (Ap)	Meeting (M)	Revise

On	On Time/Late	Eligible for portfolio? Yes No	Not yet	Revise by: _____	_____
----	--------------	--------------------------------	---------	------------------	-------

Revision

- Revision and growth are a built-in part of the assessment system
- Long term goal: to meet standards with increasing autonomy and expertise
- Portfolios document evidence of mastery, making the case for student's readiness to progress

On this project...

- **Content mastery** was required.
 - Students who showed misunderstanding of key concepts re-did those topics until they met standards.
- **Technical communication** might still need work.
 - Students aim to grow this skill longer-term, showing mastery by the time they graduate.

Teacher Feedback takes two forms:

- “Scoring” using the rubric
- Written feedback noting **strength + next steps**

Technical Communication Criteria:	Bg	Ap	M	Revise
Your video/presentation is well planned and has a logical flow , with ideas building and interconnecting.		✓	✓	
Your explanations are concise and refrain from repetition, and your language is easy to understand			✓	
You include excellent visual support for the concepts you discuss and specifically, use sketches of curves to help support your points.		✓	✓	
You use formal calculus terminology capably and correctly			✓	
Concepts to Include (not necessarily in this order):				
What information does the value of a derivative provide?			✓	
What is local linearity and how is it important to this topic?			✓	
Given a graph, how you visualize or sketch what the graph of the derivative will look like?	✓		✓	✗
How do secant and tangent lines relate to the derivative?			✓	
Why are limits an important part of this concept?		✓	✓	✗
What is the limit definition of the derivative?			✓	
Where does the limit definition of the derivative come from?	✓		✓	✗
How can the limit definition be used to calculate the equation for a derivative (show a proof that is more involved than $y = x^2!$)			✓	
Overall Assessment: _____ Approaching <u>Meeting</u>				
	Beginning			

Comments:

I love the potato image at the end! 😊 You are especially strong when you are in the land of algebra, showing steps in your proofs or techniques for evaluating limits or finding the value of the slope with the difference quotient. You made fairly good use of formal terminology and provided some good visual support for your claims. The biggest thing I'd like to see you address in revision is the interconnectedness among these ideas. For instance, consider re-sequencing your work so that you put the difference quotient equation work after the secant/tangent line images and graphs—you can show the parts of the slope calculation from these images, and you can add an image to specifically show how the DQ is really the slope equation. The other really big question: Why do limits matter? While you do a lovely job of explaining how to evaluate limits, you can potentially shorten this section to give yourself more time to explain WHY we desperately need limits in order to define the derivative. Happy to talk about this more if that will help! Finally, please include an explanation of how to visually “read” the derivative graph relative to the original function.

On Time/Late

Eligible for portfolio? Yes No Not yet

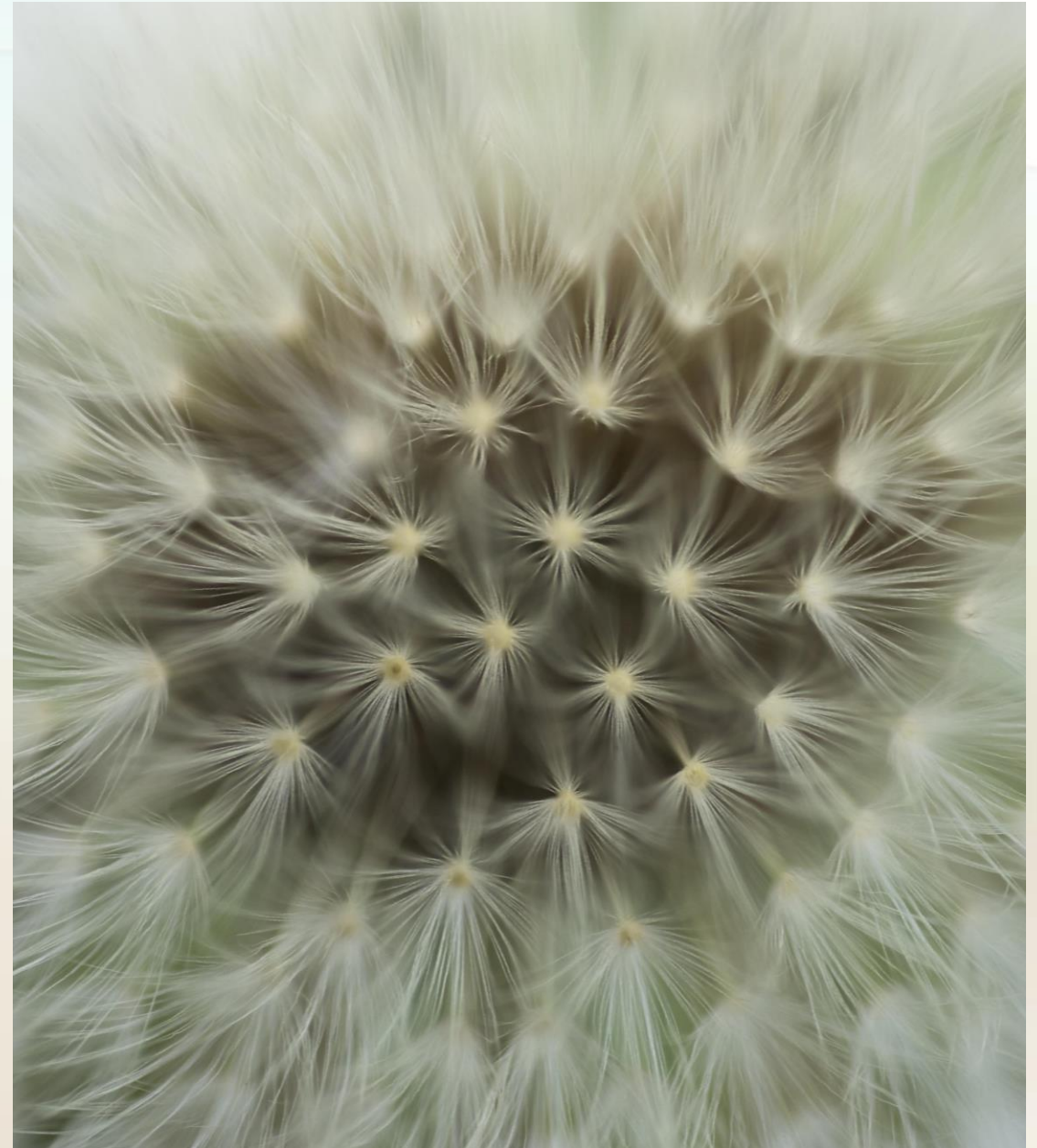
Revise by: 11/25/20

REVISION: You made some strategic changes to streamline or shorten some parts from your first draft (e.g. limits) in order to prioritize some other more important points; well done. The connection to slope from the DQ is much clearer and there is more interconnection among the ideas. Some of the visuals are stronger, too. I like how you underscored the paradox of needing two points to find slope when you want to know the slope at only one point. Well done!

Ideally, each assessment...

- Works for a range of learning needs
- Promotes academic integrity
- Engages students, inviting their creativity
- Encourages self-assessment and reflection

Some final notes

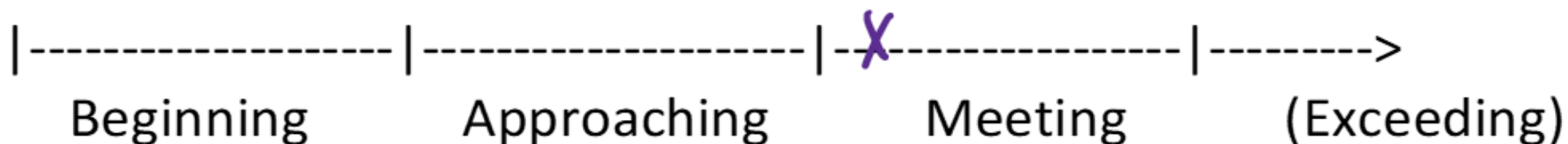


Success is not a scarce resource

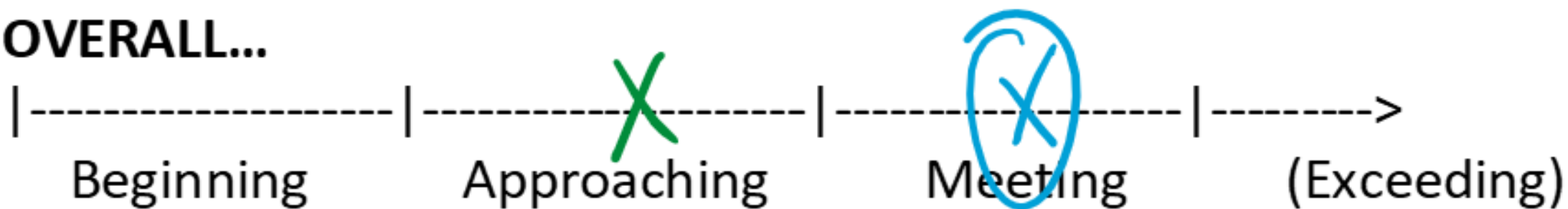
- All students can—and DO—meet standards, taking different paths and paces up the mountain
- What happens when we see achievement as abundant?

The time it takes to reach mastery will vary, as students themselves vary.

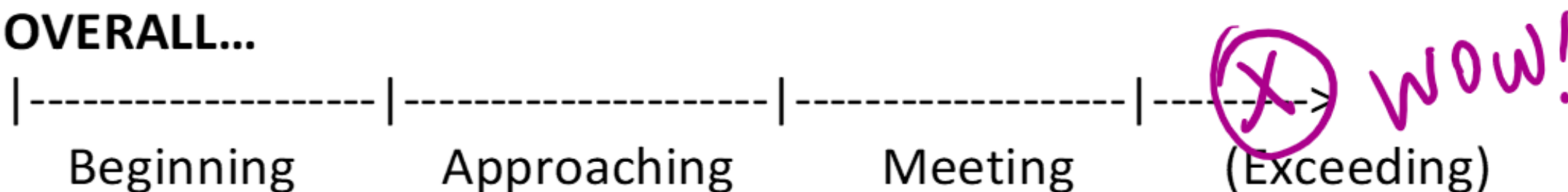
OVERALL...



OVERALL...



OVERALL...



We can hold the *same* overall standards, while meeting widely varying student needs

- A range of students can tackle the same core challenge
 - E.g.: “Provide evidence for your claim.”
- Projects adapted and personalized for different students
 - Modifications
 - Templates and supports
 - Extension/exceeds challenges
- Focus on growth over time provides a way to begin and a way forward

Students use feedback for learning and growth

- In your job as an adult, what do you do with feedback?

- strengths
- next steps
- revise / strengthen
- grow



- Another way to apply authenticity is to consider what we do with educators, is what we also do with students.

And throughout the pandemic...

- Parker's inquiry and standards-based projects allowed work to persist with few adjustments, and to have traction with students in remote conditions
- Teachers share the load--we've always been in this together, we are still in this together

Questions



Parker

FRANCIS W. PARKER
CHARTER ESSENTIAL SCHOOL

THEODORE R. SIZER
TEACHERS CENTER

Progressive education works best in collaboration; for further support, resources, and conversation among friends, contact:

Theodore R. Sizer Teachers Center

FRANCIS W. PARKER
CHARTER ESSENTIAL SCHOOL

Colleen L. Meaney

Director

Theodore R. Sizer Teachers' Center

Francis W. Parker Charter Essential School

49 Antietam Street

Devens, Massachusetts 01434

978.760.9140

cmeaney@theparkerschool.org