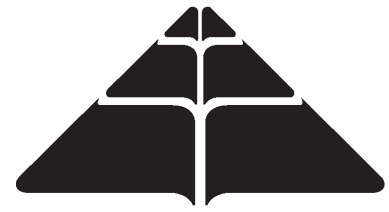
Beginning With the End in Mind

Chris Jakicic



Solution Tree

Beginning With the End in Mind

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Targets for Today:

- Examine what quality products look like when high-performing teams identify what all students must know and do to be prepared for the next learning steps.
- Investigate ways teams can develop pacing guides that allow time for responding to their data and supporting students with extra time and support.
- Understand how formative and summative assessments provide different information for teams to know what to do next for their students.

What Do You Believe?

	SA	A	D	SD
We are testing kids too much.				
Before I assess, I already know which kids will have difficulty (will fail).				
The data we gather on students helps me to know exactly what my students have learned and what I will need to teach them next.				
I have enough time to respond to the needs my assessments uncover.				

What's Your Assessment Vision?

- It's important that you know where you're going if you want to go effectively and efficiently.
- Engaging teachers in the visioning process can assure "buy in."
- This step can help everyone see the expectations for assessment more clearly.

Our Assessment Vision			
Assessment Area	**Our Current Reality**	**Our Ideal Picture**	**What We Need to Do to Get There**
What We Assess			
What Kinds of Data We Need			
How We Find Time For Response			
How We Plan the Response			

Critical Questions Teams Ask

- What do we want students to know and be able to do?
- How will we know if they can?
- What will we do if they can't?
- What will we do if they already can?

What We Assess

Essential standards are ones that all students must know and be able to do by the end of the year. Common formative assessments are based on these standards. (They often are called power or priority standards.) You guarantee that students who do not **(yet)** master these standards receive **time and support**.

Criteria for Essential Standards

Endurance: knowledge and skills that are valued beyond a single test date. Examples are 1) point of view and 2) place value.
Leverage: knowledge and skills that are valued in multiple disciplines. Examples are 1) reading informational text in other subject areas and 2) unit rate problems in math that are used for science.
Readiness: knowledge and skills that are necessary for success in the next grade level or next unit of instruction. Examples are: 1) letter-sound recognition and 2) logarithms.

Deepen Knowledge About Expectations on High Stakes Tests

- Teams should study any released documents that discuss what the standards mean.
- Teams should align their essential standards to the blueprints from high stakes tests.
- Teams should examine released items to gather information about the expectations for rigor.

Vertical Alignment

When each team has completed the process of choosing a draft set of essential standards, it is important that they take time to talk with those teachers before and after their grade level or course to make sure that there isn't too much redundancy or gaps in what's being assessed and guaranteed.

How This Should Change Team Practices

- The amount of time teams have to teach the essential standards should increase.
- This time can be used to each, assess, and re-teach these standards.
- This means that there will be less time devoted to "nice to know" standards.
- Interventions are focused on essential standards.

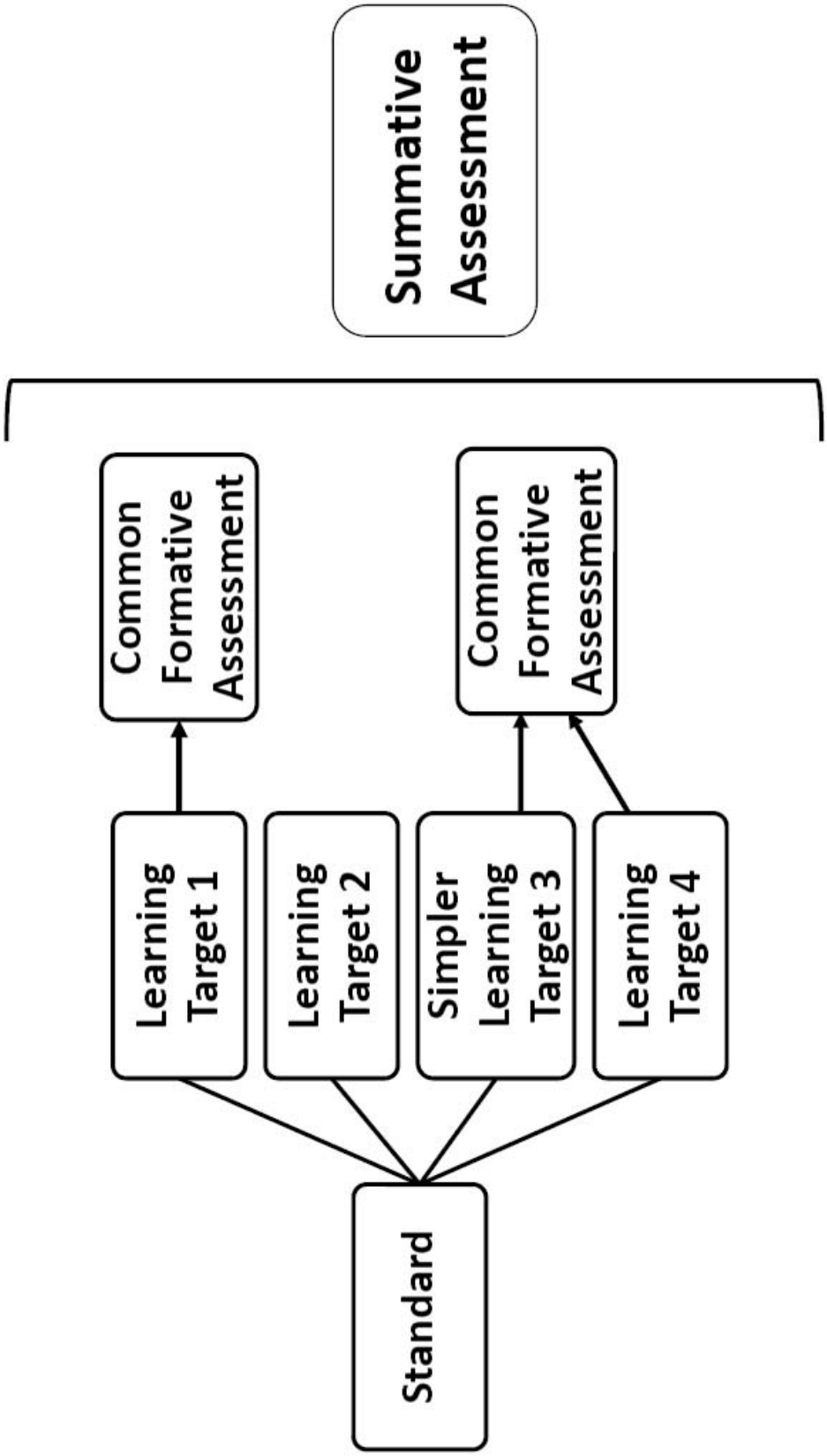
What Products Should Include

1. A list of standards that represents approximately one-third of the curriculum
2. Understanding of the rigor of the standards selected
3. Evidence that time to teach and respond has been included in the pacing guide or curriculum map

Summative assessment is the attempt to summarize student learning at some point in time. Summative assessments are not designed to give feedback useful to teachers and students during the learning process. (**Fair Test Examiner**, 1999)

Formative Assessment: "An assessment functions formatively to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers to make decisions about next steps in instruction *that are likely to be better, or better founded*, than the decisions they would have made in the absence of evidence." —**Wiliam**, 2011, *Embedded Formative Assessment*, p. 48

Common Formative Assessments: are **team-designed**, intentional measures used for the purpose of monitoring student attainment of **essential learning targets** throughout the instructional process. (**Bailey, Jakicic, & Spiller**, *Collaborating for Success With the Common Core*, 2013)



Unwrapping Template				
Standard: Compare and contrast a firsthand and secondhand account of the same event or topic, describe the difference in focus and the information provided.				
What Will Students Do?	With What Knowledge or Concept?	In What Context?	DOK	Common Formative Assessment
Compare and Contrast	A firsthand and secondhand account	Two texts about the same event or topic	2	Complete a Venn diagram.
(Know)	The terms: firsthand and secondhand		1	
(Identify)	A firsthand account and secondhand account		2	Give students two texts written from different points of view and have them determine if they are firsthand and secondhand and cite text evidence.
Describe	The difference in focus between a firsthand and secondhand account	Two texts about the same event or topic	3	
Describe	The difference in information provided	Two texts about the same event or topic	3	
Summative Assessment: Students will be given two new pieces of informational text—one a firsthand account—the other a secondhand account. They first determine which is firsthand and which is secondhand and complete a Venn diagram to compare and contrast. They will also answer constructed response questions about the difference in focus and the difference in information.				

Cell Unit Standards			
Standard(s) to be addressed: Conduct an investigation to provide evidence that living things are made up of cells: either one cell or many different cells. (MS-LS-1.1) Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. (MS-LS-1.2)			
Context/conditions (what text, problem type, or situation will students encounter?):	Students have been introduced to the use of a microscope and have learned the steps to the scientific method. In this unit they will use both of those skills. They've used models to explain phenomena but have not developed their own model before.		
	Learning Target	**DOK**	**Assessment**
Concepts or information that students need to know:	• Definition of a cell	1	
	• Know what makes something living	1	
	• Unicellular organisms vs. multicellular organisms	2	F-Explain the difference
	• Cell organelles	1	
	• Define and describe osmosis and diffusion	2	F-Constructed response—explaining the difference
	• Plant versus animal cells	2	S-Provide slides of plant and animal cells and have students identify
	Big Idea: All living things are made up of cells. More complex animals and plants have many different kinds of cells. Cells have parts called organelles that carry out a variety of functions.		

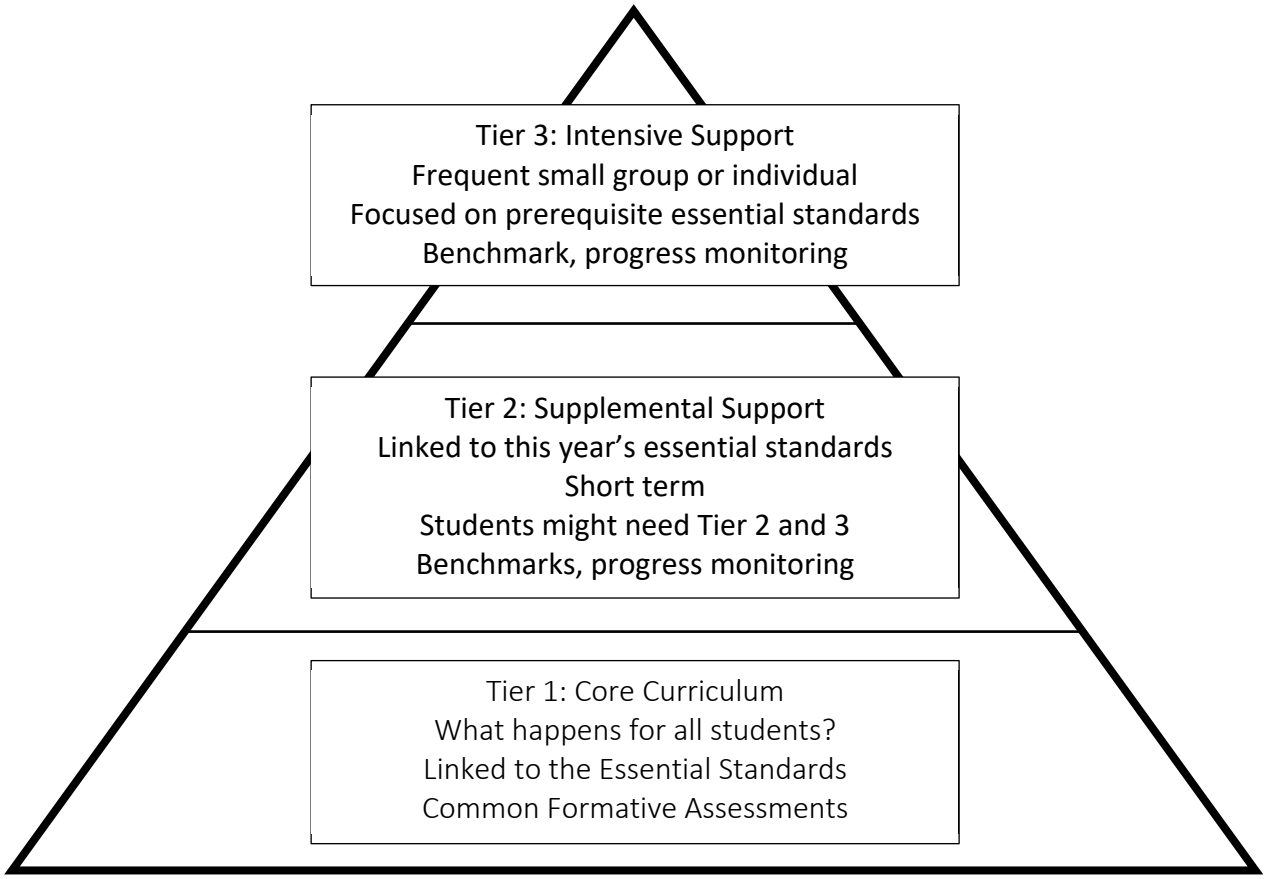
Skills students will demonstrate	• Distinguish living and non-living things	2	F-Provide a table with evidence and have students determine if the item is living or non-living
	• Develop and use a model to describe the function of a cell as a whole	2	
	• Develop and use a model to describe how parts of a cell contribute to the function	3	S-Final Project
	• Explain how osmosis and diffusion affect cell transport	3	S-Have students draw a model to explain cell transport with osmosis and diffusion
Academic Language/Vocabulary	Cell Nucleus, chloroplasts mitochondria, cell wall cell membrane		

Unwrapping Template				
Standard: Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problems.				
What Will Students Do?	With What Knowledge or Concept?	In What Context?	DOK	Common Formative Assessment
Solve	Problems involving multiplication of a fraction by a whole number	Mathematical problems	1	
Solve	Problems involving multiplication of a fraction by a whole number	Word problems around real world situations	2	
Use	Visual fraction models	To represent the problems	2	
Use	Equations	To represent the problems	2	
Use	One or more math practices to explain reasoning	Critique the reasoning of others	3	
Summative Assessment:				

Unwrapping Template				
Standard: Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient, identify false statements and fallacious reasoning. (RI.9-10.8)				
What Will Students Do?	With What Knowledge or Concept?	In What Context?	DOK	Common Formative Assessment
Delineate	The argument and specific claims	In a piece of informational text	DOK 2	
Evaluate	The argument and specific claims	In a piece of informational text	DOK 3	
Assess	Valid reasoning	In the text	DOK 3	
Identify	False statements	In the text	DOK 3	
Identify	Fallacious reasoning	In the text	DOK 3	
Summative Assessment:				

What Should Products Look Like?

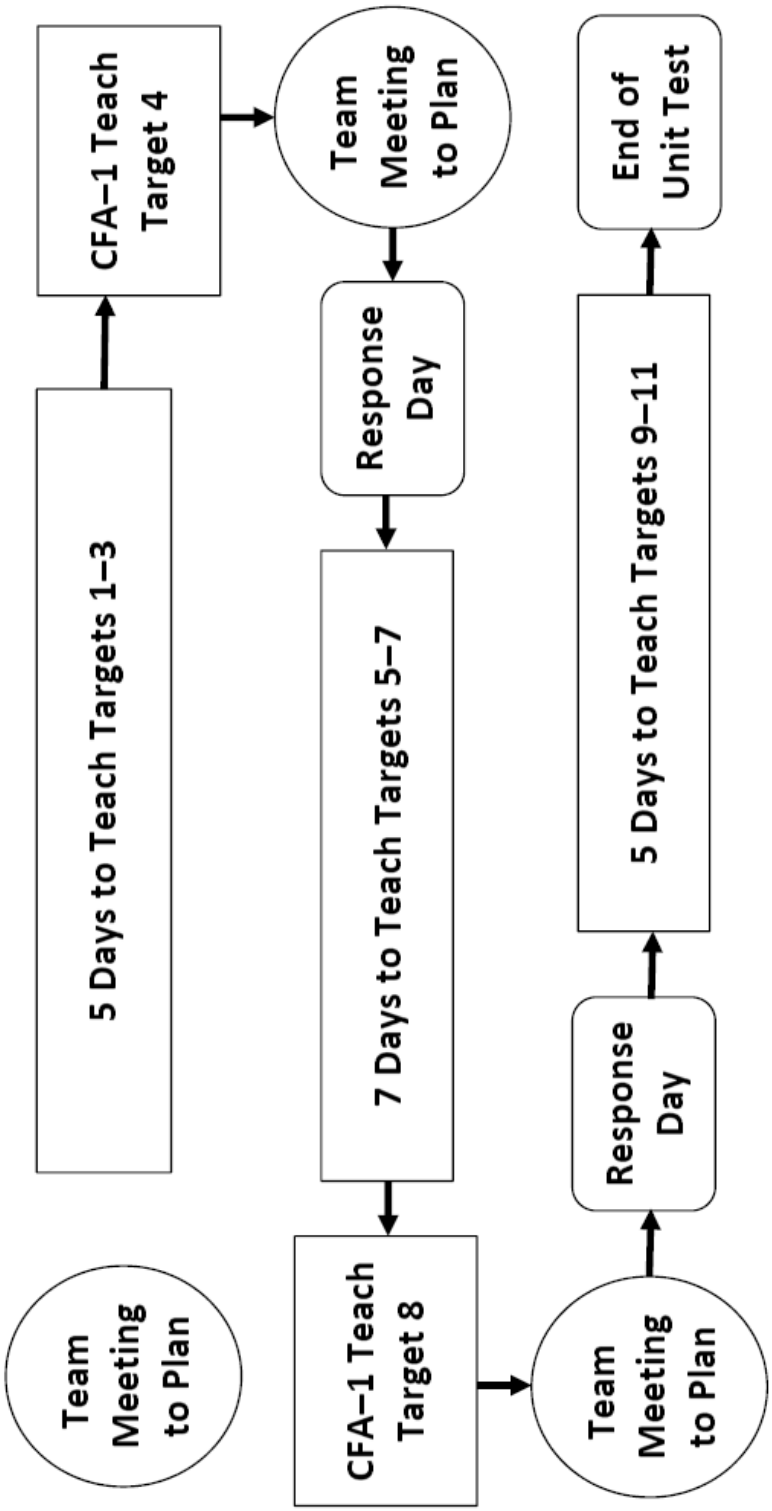
- We recommend teams use the language of the standards while unwrapping them in order to make sure rigor isn't reduced.
- Learning targets should be identified and the DOK listed for each so that teams can agree on what the target actually looks like for students.
- Targets that are implied should be listed.
- A draft of what the summative and formative assessments should look like should be included.



Time Considerations for Tier 2 and 3

- The response must occur at a time when there is not new instruction happening.
- The time for Tier 2 and 3 should be distinct. Some students need both.
- The plans for each of the three tiers should be based on data about the students. Not for Tier 3 students have the same need for response.

Developing a Unit Plan to Include Common Formative Assessments



Essential Standards Pacing Guide—Third Grade ELA

Essential Standards	Unit 1	Unit 2	Unit 3
Reading Foundations	•Read with specific accuracy and fluency to support comprehension •Decode multisyllable words.	•Read with specific accuracy and fluency to support comprehension	•Read with specific accuracy and fluency to support comprehension
Evidence of Mastery	CFA-multi-syllable words		Fluency sample
Reading Comprehension	Answer questions to demonstrate understanding of a literary text, referring explicitly to the text as the basis for the answers.	Distinguish their own point of view from that of the narrators or characters	Describe the relationship between a series of historical events using language that relates to time, sequence and cause/effect.
Evidence of Mastery		CFA-citing text evidence	
Writing	Narrative writing— •Establish a situation and introduce a narrator and/or characters •Organize an event sequence that unfolds naturally	Narrative Writing— •Establish a situation and introduce a narrator and/or characters; •Organize an event sequence	Use temporal words and phrases to signal event order
Evidence of Mastery		Write an introductory paragraph	
Language	Determine the meaning of academic terms.		
Evidence of Mastery			

What Should Our Pacing Guide Look Like?

- Must reflect that essential standards need more time to teach and assess.
- There are lots of ways to develop a pacing guide.
- Decide if you will use standards or targets.
- Consider how long units will be.
- Include time to give and respond to assessments.
- Determine if the curriculum should spiral.

Building a Pacing Guide

- Identify the units by name if appropriate.
- Estimate the number of instructional days the unit will take including time for assessment.
- List the learning targets that will be taught in that unit.
- For each learning target determine if you expect mastery.
- If mastery is expected, identify when the CFA will be given.

Be Clear That:

- Pacing guides/curriculum maps should still reflect opportunities for students to learn **all** of the standards.
- If a team highlights the essential standards in their pacing guide but doesn't change how they allocate time, they will likely not see any improvement in student learning.
- Instead they should collaboratively decide how to allocate time to assess and respond and publish it in their curriculum map/pacing guide.
- The team must build in time for the response after every assessment.

Formative Assessments:

- Allow teams to know by student, BY TARGET, what help students need.
- Learning targets are listed on the assessment so that students connect them to the questions being asked.
- Should be short and focused for a quick response.

Protocol for Using Common Formative Assessment Data

Steps	Team Notes
1. Set the stage. • Establish the purpose of the meeting. • Review norms (focusing on data norms).	Two minutes
2. Review the focus of the assessment. • Identify the essential learning targets we assessed and which questions we designed to assess each of them. • Review the expectations for proficiency (for example, two out of three correct on a multiple-choice assessment, or a level 3 on the rubric). • Discuss any questions we had when we scored student work.	Two minutes
3. Discuss the data. • For each target, identify how many students will need additional time and support.	Five minutes Each team member must participate in this discussion.
4. Determine student misconceptions and errors. • For each target, identify which students need help. • Once we've identified the students who need help, regroup them by specific need (for example, students who made a calculation error versus students who chose the wrong solution pathway).	Ten minutes Be careful to do this step one essential learning target at a time.
5. Determine instructional strategies. • Decide whether we will develop small groups for reteaching or if we will use a re-engagement lesson with the whole class. • Each teacher should share his or her original instructional strategy so that we can see if one strategy worked better for certain students. • For each target and for each mistake or misconception, develop a plan to help students move ahead on their learning of that target. • If necessary, go back to best practice information about how to teach the concept or about what strategies work best for struggling students. Consult instructional coaches or specialists if necessary.	Fifteen minutes Make sure that all team members have the same understanding of what this will look like.
6. Develop the items that we will use to monitor whether students met the learning target after this response. This will provide information about which students still need help on this essential target.	Ten minutes This reassessment may be done orally or may be a version of the original assessment.

Protocol for Using Common Summative Assessment Data

Steps	Team Notes
1. Set the stage. • Establish the purpose of the meeting. • Determine the desired outcome. • Review norms (focusing on data norms).	Three minutes
2. Review the focus of the assessment, addressing the following questions. • How are the data from this assessment organized? • What learning targets or standards were measured? • How do we determine proficiency?	Five minutes Ensure input from all participants.

3. Discuss the data.
• Working individually, each teacher should examine the data, looking for fact statements and not drawing any inferences or conclusions.
• Take turns sharing the facts; the recorder takes notes.
• Once everyone has listed the facts, the group then begins to develop inferences and conclusions.
  ◦ How many students were proficient, not proficient, and beyond proficient?
  ◦ Discuss patterns in the data such as how clusters of students (by subgroup, by teacher) performed, how any specific interventions affected growth, and how changes in pacing or instructional strategies affected performance.
• If we are using this assessment for screening or progress monitoring, identify the students who need continued support and those who need less support.
	Fifteen to twenty minutes
	Record the facts first and then the inferences and conclusions.

4. Develop the action plan. • Develop the plans for how to use the data to work with flexible student groups, change pacing if needed, and consider any instructional strategies to add.	Fifteen to twenty minutes
5. Set goals for improvement. • Discuss what we learned from these data and what follow-up assessments we will use. • Consider any obstacles or stumbling blocks the discussion identified. • Discuss ongoing efforts and strategies designed to ensure quality initial instruction. • If appropriate, review the SMART goal this assessment measures, and tweak as necessary.	Eight to ten minutes Identify no more than three strategies to directly impact achievement in this area.
6. Determine agreed-on actions and results indicators. • What indicators will we use to determine the effectiveness of the results of this action plan? • How will we know if this plan is effectively improving student achievement?	Five minutes Record decisions and summarize for the group.

Grade 2 Reading Common Formative Assessment

Name:_____ Date:_____

Learning Target 1: I can identify the main topic of a multiparagraph text. Learning Target 2: I can identify the focus of specific paragraphs within the text.

Directions: After reading the text about elephants, answer the following questions using complete sentences.

1. What is the main topic of the whole text?

2. What paragraph talks mainly about an elephant's trunk?

3. What does paragraph 4 mainly talk about?

4. Elephants use their tusks in many ways. Which paragraph tells about this?

"T" Time for Elephants 2nd Grade ELA

Three interesting things about an elephant begin with the letter T—trunk, tusk, and teeth.

1	An elephant's trunk has over forty thousand muscles and tendons. The trunk is a combination of the nose and the upper lip. An elephant uses its trunk for picking things up. It also uses its trunk for smelling.
2	An elephant has two tusks. The tusks are made of ivory. The tusks grow from the elephant's upper jaw. An elephant has thee two "teeth instead of incisor teeth. The tusks grow throughout an elephant's life. An elephant uses its tusks to drill for water and to dig up food.
3	All African elephants have tusks. Only some Asian male elephants have tusks. Some female Asian elephants also have tusks, but they are very small and hidden inside the mouth.
4	An elephant also has four other teeth. These teeth are molars. An elephant has one upper molar and one lower molar on each side of its mouth. Because an elephant eats a lot of plants, its molars get ground down. The molars move in to replace the old molars about every ten years. An elephant gets up to six sets of molars over it's lifetime.

8th Grade Social Studies

Learning Target: Cite textual evidence for analysis of primary source documents.

Read the primary source document below and complete the attached template.

August 6, 1945
THE WHITE HOUSE
Washington, D.C.
STATEMENT BY THE PRESIDENT OF THE UNITED STATES

Sixteen hours ago an American airplane dropped one bomb on Hiroshima and destroyed its usefulness to the enemy. That bomb had more power than 20,000 tons of TNT. It had more than two thousand times the blast power of the British "Grand Slam" which is the largest bomb ever yet used in the history of warfare.

The Japanese began the war from the air at Pearl Harbor. They have been repaid many fold. And the end is not yet. With this bomb we have now added a new and revolutionary increase in destruction to supplement the growing power of our armed forces. In their present form these bombs are now in production and even more powerful forms are in development.

It is an atomic bomb. It is a harnessing of the basic power of the universe. The force from which the sun draws its power has been loosed against those who brought war to the Far East.

Before 1939, it was the accepted belief of scientists that it was theoretically possible to release atomic energy. But no one knew any practical method of doing it. By 1942, however, we knew that the Germans were working feverishly to find a way to add atomic energy to the other engines of war with which they hoped to enslave the world. But they failed. We may be grateful to Providence that the Germans got the V-1's and V-2's late and in limited quantities and even more grateful that they did not get the atomic bomb at all.

The battle of the laboratories held fateful risks for us as well as the battles of the air, land, and sea, and we have now won the battle of the laboratories as we have won the other battles. Beginning in 1940, before Pearl Harbor, scientific knowledge useful in was pooled between the United States and Great Britain, and many priceless helps to our victories have come from that arrangement. Under that general policy the research on the atomic bomb was begun. With American and British scientists working together we entered the race of discovery against the Germans.

The United States had available the large number of scientists of distinction in the many needed areas of knowledge. It had the tremendous industrial and financial resources necessary for the project and they could be devoted to it without undue impairment of other vital war work. In the United States the laboratory work and the production plants, on which a substantial start had already been made, would be out of reach of enemy bombing, while at that time Britain was exposed to constant air attack and was still threatened with the possibility of invasion. For these reasons Prime Minister Churchill and President Roosevelt agreed that it was wise to carry on the project here. We now have two great plants and many lesser works devoted to the production of atomic power. Employment during peak construction numbered 125,000 and over 65,000 individuals are even now engaged in operating the plants. Many have worked there for two and a half years. Few know what they have been producing. They see great quantities of material going in and they see nothing coming out of these plants, for the physical size of the explosive charge is exceedingly small.

We have spent two billion dollars on the greatest scientific gamble in history -- and won.
But the greatest marvel is not the size of the enterprise, its secrecy, nor its cost, but the achievement of scientific brains in putting together infinitely complex pieces of knowledge held by many men in different fields of science into a workable plan. And hardly less marvelous has been the capacity of industry to design and of labor to operate, the machines and methods to do things never done before so that the brainchild of many minds came forth in physical shape and performed as it was supposed to do. Both science and industry worked under the direction of the United States Army, which achieved a unique success in managing so diverse a problem in the advancement of knowledge in an amazingly short time. It is doubtful if such another combination could be got together in the world. What has been done is the greatest achievement of organized science in history. It was done under pressure and without failure.

We are now prepared to obliterate more rapidly and completely every productive enterprise the Japanese have above ground in any city. We shall destroy their docks, their factories, and their communications. Let there be no mistake; we shall completely destroy Japan's power to make war.

It was to spare the Japanese people from utter destruction that the ultimatum of July 26 was issued at Potsdam. Their leaders promptly rejected that ultimatum. If they do not now accept our terms they may expect a rain of ruin from the air, the like of which has never been seen on this earth. Behind this air attack will follow sea and land forces in such number that and power as they have not yet seen and with the fighting skill of which they are already well aware.

The Secretary of War, who has kept in personal touch with all phases of the project, will immediately make public a statement giving further details.

His statement will give facts concerning the sites at Oak Ridge near Knoxville, Tennessee, and at Richland, near Pasco, Washington, and an installation near Santa Fe, New Mexico. Although the workers at the sites have been making materials to be used producing the greatest destructive force in history they have not themselves been in danger beyond that of many other occupations, for the utmost care has been taken of their safety.

The fact that we can release atomic energy ushers in a new era in man's understanding of nature's forces. Atomic energy may in the future supplement the power that now comes from coal, oil, and falling water, but at present it cannot be produced on a bases to compete with them commercially. Before that comes there must be a long period of intensive research. It has never been the habit of the scientists of this country or the policy of this government to withhold from the world scientific knowledge. Normally, therefore, everything about the work with atomic energy would be made public.

But under the present circumstances it is not intended to divulge the technical processes of production or all the military applications. Pending further examination of possible methods of protecting us and the rest of the world from the danger of sudden destruction.

I shall recommend that the Congress of the United States consider promptly the establishment of an appropriate commission to control the production and use of atomic power within the United States. I shall give further consideration and make further recommendations to the Congress as to how atomic power can become a powerful and forceful influence towards the maintenance of world peace.

Source: Harry S. Truman Library, "Army press notes," box 4, Papers of Eben A. Ayers.

Primary Source Documents

Learning Target: Cite textual evidence to support analysis of primary source documents.

Question	Answer	Evidence from Document to Support Answer
1. What kind of document is this?		
2. When was this document written?		
3. What do you know about what was happening at this time in history?		
3. Who is the author of this document?		
4. Who is the audience for this document?		
5. What is one question the author left unanswered?		No answer needed