




# Math CFA Artifacts Cal Aero 23-24



ILT Meeting 10/10/23



# Checklist for Math CFA

-  Find your grade level's/Dept.'s slide
-  Insert CFA and include the Essential Standard, Learning Target & Success Criteria in the text box.
-  Be prepared to discuss how your team responded to the CFA regarding PLC questions 3 & 4.





## Essential Standard

Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number 1-20, count out that many objects.

## Learning Target

I can count objects and write that number.

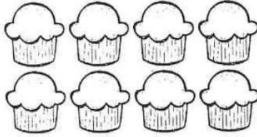
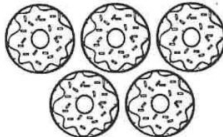
## Success Criteria

- 1) Count the number of objects.
- 2) Write the number of objects.

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

**EXIT TICKET**

Count and record number of objects.

\_\_\_\_\_


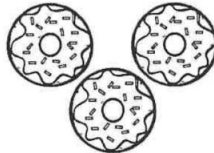
\_\_\_\_\_

**K.CC**  
B.4, B.5

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

**EXIT TICKET**

Count and record number of objects.

\_\_\_\_\_

\_\_\_\_\_

**K.CC**  
B.4, B.5

## Small Group Instruction



Small group instruction is differentiated!

### Interventions:

- Math Talks
- Counting Collections
- Rote counting
- Count with manipulatives (multi-modal)

### Enrichment:

- Have students do similar activities however extend to numbers 11-20.

# Kindergarten





# Essential Standard

0A 1.3 Apply properties of operations as strategies to add and subtract.3 Examples: If  $4 + 3 = 7$  is known, then  $3 + 4 = 7$  is also known.

# Learning Target

I can apply properties of operations as strategies to add and subtract.

# Success Criteria

1. Look at the problem
2. Identify the operation being used.
3. Identify the parts and whole on each side of the equal sign.
4. Find the missing part using what we know about related facts

**Math**  
**0A.1.3**

I can apply properties of operations as strategies to add and subtract..

**Success Criteria:**

1. Look at the problem.
2. Identify the **operation** being used.  
**Addition or Subtraction?**
3. Identify the **Parts** and **Whole** on each side of the **equal sign**. **=**  

What number goes in the box to make this number sentence true?
4. Find the missing part using what we know about related facts.  
 They always have the same **three** numbers.  
 $4+3=7$  so,  $3+4=7$  3 is our missing part

# Aviator Time

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

**I.OA**  
**B.3**

## Exit Ticket

Write the missing numbers in the following equations.

$9+4 = 4+ \underline{\quad}$

$7+2 = 2+ \underline{\quad}$



# First Grade



# Essential Standard: 2.OA.4

Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

## Learning Targets:

I can use addition to find the total number of objects in a rectangular array and write an equation to express the total as a sum.

## Success Criteria:

1. Use addition to find the total number of objects arranged in a rectangular array with up to 5 rows and up to 5 columns.
2. Write an equation to express the total as a sum of equal addends.

Topic 4-2, 4-3

## Math Essential Standard 2.OA.4

Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Student Learning Target:



- I can use addition to find the total number of objects in a rectangular array and write an equation to express the total as a sum. (2.OA.4)

Success Criteria: *I know I am successful when I can...*

- use addition to find the total number of objects arranged in a rectangular array with up to 5 rows and up to 5 columns.
- write an equation to express the total as a sum of equal addends.



$$4 + 4 + 4 + 4 = 16$$



$$3 + 3 + 3 + 3 = 12$$

EXIT SLIP

Name:	Date:	<b>2.OA.4</b>
<b>Arrays</b> Write a number sentence for each array.		<b>I can...</b> use addition to find the total number of objects in rectangular arrays.
		How well do you understand this skill? 
_____	_____	<b>A</b>

# Second Grade



## Essential Standard

3.OA.1 Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .

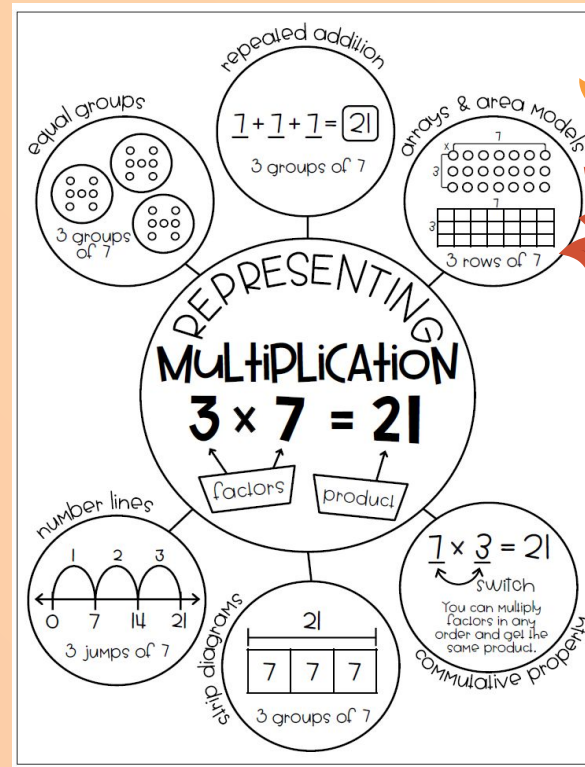
## Learning Target

I can interpret products of whole numbers.

## Success Criteria

Interpret products of whole numbers.


Describe the context of a multiplication problem.



Name \_\_\_\_\_ Date \_\_\_\_\_ **A**

3.OA.1 Operations and Algebraic Thinking My Score \_\_\_\_\_

There were 3 boxes with 6 markers in each box.

- How many groups were there? \_\_\_\_\_
- How many objects were in each group? \_\_\_\_\_
- What multiplication sentence does the array below show?  

  
\_\_\_\_\_
- What multiplication problem is represented?  $8+8+8+8$   
 \_\_\_\_\_
- How many groups were there?  
 \_\_\_\_\_
- How many objects were in each group?  
 \_\_\_\_\_
- Write a story problem where there are 9 groups with 4 in each group.  
 \_\_\_\_\_

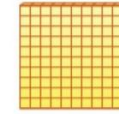
## Interventions

- Show Math Grizz Video
  - [How To Use Equal Groups To Multiply Third Grade - YouTube](#)
- Brain Pop Jr- Arrays
  - Watch Video, do activity on matching arrays to the picture.
  - Easy/Hard Quiz given to check understanding after reteaching.



# Third Grade

- **Essential Standard:** 4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **Learning Target:** I can multiply a whole number up to 4 digits by a 1 digit number using strategies and illustrations to explain
- **Success Criteria:** I will know that I am successful when I can:
  - Use place value blocks to draw an array to find the product
  - Use “Breaking Apart” to find the product



<p style="text-align: center;"><math>6 \times 21</math></p> <p>Use Place Value Blocks to draw an array to find the product. Make sure your answer is regrouped into place value order.</p>	<p style="text-align: center;"><math>5 \times 281</math></p> <p>Use Place Value Blocks to draw an array to find the product.</p>
<p style="text-align: center;"><math>6 \times 21</math></p> <p>Use Breaking Apart to find the product. Show your work.</p>	<p style="text-align: center;"><math>5 \times 281</math></p> <p>Use Breaking Apart to find the product. Show your work.</p>

PLC Question 3: What will we do if the students are not learning it?

PLC Question 4: What will we do when students have learned it?

12

# Fourth Grade







Learning Target: I can fluently multiply multi-digit whole numbers.

## Essential Standard

5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.

## Learning Targets:

I can fluently multiply multi-digit whole numbers.

## Success Criteria:

1. I can fluently multiply one digit by one digit numbers
2. I can multiply multi-digit numbers by one digit numbers
3. I can multiply multi-digit numbers by 2 digit numbers
4. I can solve word problems using multi-digit multiplication
5. I can create and solve my own word problems using multi-digit multiplication

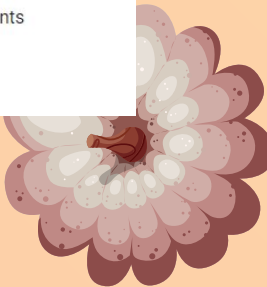
## Interventions and Enrichment:

- Students who struggled on this CFA needed extra support with the algorithm. We worked with these students in small group and individually to identify and correct their errors. Multiplication Pal is a website that walks students through the steps to create either a student entered or computer generated problem. We also used EdPuzzle videos (Math with Mr J), Quizziz, and Common Core Sheets to provide extra practice. Many of these students are also still struggling to memorize multiplication facts.
- Extension activities included the Enrichment pages from our math program, error analysis, and word problems.



26 x 18 *	1 point
Your answer	<input type="text"/>
515 x 35 *	1 point
Your answer	<input type="text"/>
946 x 33 *	1 point
Your answer	<input type="text"/>
498 x 42 *	1 point
Your answer	<input type="text"/>
Donuts come in trays of 24. Last month, a bakery sold 389 trays of donuts. *	1 point
How many donuts did the store sell last month?	
Your answer	<input type="text"/>
The students used 35 boxes of graham crackers to make s'mores. Each box *	1 point
had 208 graham crackers. How many graham crackers did the students use?	
Your answer	<input type="text"/>

# Fifth Grade









- Starting...
- Getting there...
- Got it!

## Essential Standards

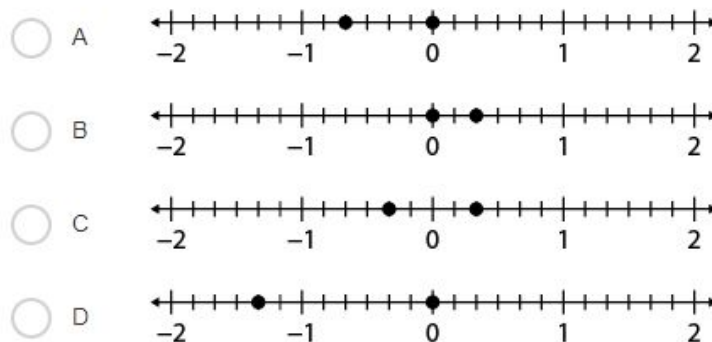
**7.NS.1.b,c,d** Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram

## Learning Target

- 1) I am learning how to plot integers on a number line.
- 2) I am learning to define absolute value
- 3) I am learning how to find the sum of integers with the same or opposite signs

### Question 1

Which number line shows two numbers that are located exactly  $\frac{2}{6}$  units from  $-\frac{2}{6}$ ?



## Success Criteria

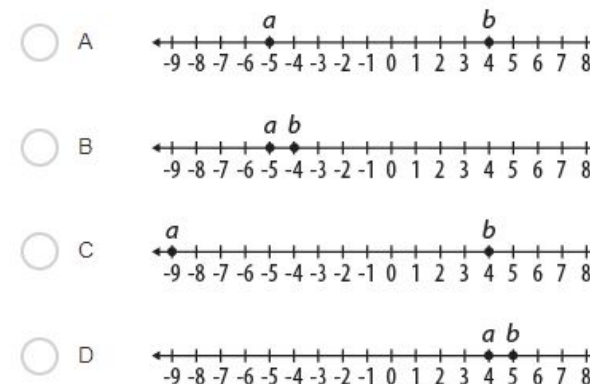
- 1) I can compare and order integers by graphing them on a number line.
- 2) I can define absolute value of an integer as the distance between the number and zero on a number line.
- 3) I can add integers with different signs.

### Question 2

The expression below represents the distance between two points on a number line.

$$|-5 - 4|$$

Which number line shows the two points?



### Question 3

Evaluate:

$$2 + (-3) =$$

- A 5
- B 1
- C -1
- D -5

- 
- Starting...
  - Getting there...
  - Got it!

## Essential Standard

**8.EE.7** Solve linear equations in one variable.

## Learning Target

I am learning to solve linear equations in one variable.

## Success Criteria

- 1) I can give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions.
- 2) I can solve linear equations with rational number coefficients.
- 3) I can expand expressions using the distributive property
- 4) I can collect like terms.
- 5) I can solve linear equations with variables on both sides.

### Question 1

How many solutions are there to this equation?

$$3(3x - 1) = 6x - 3$$

- A no solutions
- B one solution
- C two solutions
- D infinite solutions

### Question 2

Which of these equations has NO solution?

- A  $3(2x + 7) = 6(x + 4) - 3$
- B  $3(6x - 5) = 3(6x - 5) + x$
- C  $8(x - 3) + 14 = 2(4x + 5)$
- D  $13x - 7 = 12(x - 1) + x + 5$

### Question 3

Alex simplified an equation as far as he could and determined that his equation has an infinite number of solutions. Which simplified equation leads Alex to this conclusion?

- A  $x = 0$
- B  $5 = -5$
- C  $5 = 5$
- D  $x = 5$

# Eighth Grade Math





# Seventh Grade ELA

(RI 7.6) I am learning.. How to determine the author's purpose within a text.

**I can...** Identify the author's purpose (PIE) for writing a text.

CFA #1 (RI 7.6) Analysis

Teacher	Question #1	Question #2
Wise - period 2	77.8%	55.6%
Duran - 1 (Honors)	96.9%	90.6%
Duran - 2 (Blended)	82.1%	78.6%
Duran - 3 (RSP)	71.9%	65.6%
Duran - 4 (Blended)	92.3%	92.3%
Duran - 5	73.9%	82.6%
Too - (Collab)	69.2%	69.2%
<b>Combined</b>	<b>80.6%</b>	<b>76.4%</b>

It seems like students understand what the author's purpose is, but they struggle to find the evidence to support the AP.  
**Plan:** highlight quotes that show AP, for example in reading FYI articles. Reteach only in periods that need it (under 80%).  
**Plan for follow-up CFA (just for supporting evidence to AP). NEXT WEEK THURS OCT 5TH.**

## CFA #1 (RI 7.6)

(RI 7.6) I can determine the author's purpose.  
The quiz will be open for 15 MINUTES.



Locked mode is on. Only respondents using managed Chromebooks can open this quiz.

[Remove](#)

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### 7 Things Really Bold People Do

Boldness is a leadership trait to be mastered. Here are actions that make bold people admirable.

The day I went off to college, a friend gave me this quote, which is questionably attributed to Johann Wolfgang von Goethe. Over the years, it has inspired me, and I have seen it posted on the walls and bulletin boards of

Which of the following BEST describes the author's purpose for writing "7 Things Really Bold People Do"?

- To entertain readers with stories of bold people
- To call into question the decisions of bold people
- To persuade people to add these actions to their daily routines
- To scold people for taking bold actions

Select ONE sentence from below that BEST shows the author's main purpose for writing the text:

- "The day I went off to college, a friend gave me this quote, which is questionably attributed to Johann Wo..."
- "Try adding these seven actions to your daily repertoire, and see how much faster the magic of boldness ..."
- "Given the right set of circumstances, many will take action to better the world around them."
- "Sadly, far more people wait for someone who is bold to lead the way."





**MS-PS1-4** Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.

Learning Target:

Students will be able to explain how the temperature and state of a pure substance depend on the kinetic energy of the particles that make it up.

Success Criteria:

1a. I can define the temperature of a substance and relate it to the average kinetic energy and motion of its particles.

1b. I can distinguish between the transfer of thermal energy and temperature.

1c. I can explain how changes in thermal energy of a substance affect the overall volume of the substance.

1d. I can describe the relationship between thermal energy and particle motion, kinetic energy, temperature, and thermal expansion and contraction.

### 1.1 Particles in Matter CFA#1

This is to be completed independently to the best of your ability.

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The average kinetic energy of the particles in a substance is greater if the substance is cold than if the substance is warm. \*

True  
 False

A substance with a definite volume but no definite shape is a liquid. \*

True  
 False

The space between the particles will \_\_\_\_\_ when thermal energy is removed from the material. \*

increase  
 decrease  
 stay the same

# Seventh Grade Science

Which container has solid particles in it? \*

Container A      Container B      Container C

The temperature of the material will \_\_\_\_\_ when thermal energy is added to it. \*

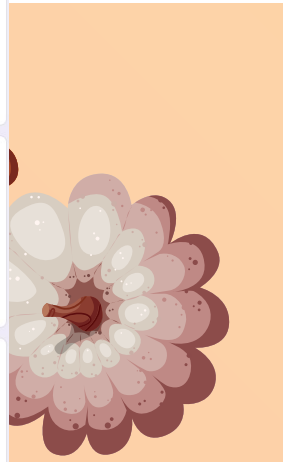
rise  
 fall  
 stay the same

The material will \_\_\_\_\_ when thermal energy is added to it. \*

expand  
 contract  
 stay the same

The space between the particles will \_\_\_\_\_ when thermal energy is removed from the material. \*

increase  
 decrease  
 stay the same





### Standard

**RH.7.4:** Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

### Learning Target

I am learning to determine the meaning of words and phrases as they are used in a text including vocabulary related to history

### Success Criteria

I will be able to determine:

- specific words or phrases in a history/social studies text (e.g., dynasty, preamble, imperialism).
- the meaning of words and phrases using context clues

I can use various strategies (e.g. context clues, root words, affixes) to determine the meaning of key terms, and domain-specific words and phrases.

Questions Responses 386 Settings Total points: 5

**JULIUS CEASER PASSAGE**

Read the following passage about Caesar Augustus and answer the questions based on context clues in the passage.

Caesar Augustus was one of ancient Rome’s most successful leaders who led the transformation of Rome from a republic to an empire. During his reign, Augustus restored peace and prosperity to the Roman state and changed nearly every aspect of Roman life. Caesar Augustus was born Gaius Octavius in 63 B.C.E. His great-uncle was Julius Caesar, who he fought beside in 47 B.C.E. Augustus impressed his great uncle so much during battle that when Julius Caesar was assassinated in 43 B.C.E., he had appointed Augustus as heir to his political and personal fortune in his will. Augustus, at the age of 19, accepted the inheritance from Caesar’s will and was quickly plunged into the complicated world of Roman politics. He quickly formed strategic alliances, defeated his political rivals, and won a bitterly fought civil war. In 31 B.C.E. at the Battle of Actium, Augustus won a decisive victory over his rival Mark Antony and his Egyptian fleet. Returning to Rome, Augustus was acclaimed a hero. With skill, efficiency, and cleverness, he secured his position as the first Emperor of Rome. Augustus claimed he acted for the glory of the Roman Republic, not for personal power. He appealed to Roman citizens by claiming that he led a frugal and modest life. Augustus reorganized Roman life throughout the empire. He passed laws to encourage marital stability and renew religious practices. He instituted a system of taxation and a census while also expanding the network of Roman roads. He founded a postal service and established a regular police force and fire brigade in Rome. Augustus expanded the empire, annexing Egypt, part of Spain, areas of central Europe, and even lands in the Middle East, such as Judea in C.E. 6. These additions, along with the end of civil wars, fostered the growth of an enormous trading network. Augustus died outside of Naples, Italy, in C.E. 14. His body was returned to the capital. Businesses closed the day of his funeral out of deep respect for the emperor. He was a ruler of ability and vision, and at his death, Augustus was proclaimed by the Senate to be a Roman god.

1. What does the word "acclaimed" mean in the passage? \*

A) Criticized harshly

B) Praised enthusiastically

C) Ignored completely

D) Mocked sarcastically

# Seventh Grade Soc. St.



# Eighth Grade ELA

**(RI 8.1) Learning Target:** Students will determine which piece(s) of textual evidence will support their analysis.

- **I Can** identify which sentences or phrases most strongly support my interpretation of the text.

CFA #1a (RI 8.1) Analysis

Teacher	Question #1		Question #2	
Wise - period 1 (G/H)	96.9%	31/32	15.6%	5/32
Wise - period 4 (Collab)	72.4%	21/29	34.5%	10/29
Wise - period 5 (G/H/ELA 8)	91.2%	31/34	14.7%	5/34
Too - Period 1	76.9%	20/26	19.2%	5/26
Too - Period 4	81.3%	26/32	9.4%	3/32
Too - Period 6	72.4%	21/29	31%	9/29
<b>Combined</b>	<b>81.85%</b>	<b>150/182 82.4%</b>	<b>20.73%</b>	<b>37/182 20.3%</b>

CFA #1b (RI 8.1) Analysis

## RI 8.1 CFA 1A

(RI 8.1) I can determine which piece(s) of textual evidence will MOST STRONGLY support my analysis. The quiz will be open for 15 MINUTES.



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Claim: A policy that bans cell phones from school grounds will cause more problems than it will solve. Reason: Such a policy would upset parents who depend on cell phones to stay in touch with their children.

Description (optional)

...

Which evidence below BEST supports this claim and reason? \*

- When Wheeler High School imposed a cell phone ban, many students still brought their phones to school.
- "Cell phones tend to distract students during class," Mr. Yates said.
- Sixty percent of parents surveyed said that they would be upset if their kids could not carry cell phones.

Claim: Athletes should not be treated as heroes. Reason: They do not deserve the position and most do not want the job.

Description (optional)

...

Which evidence below BEST supports this claim and reason? \*

- It is true that athletes make great sacrifices. They practice hard and often play in pain.
- Athletes make these sacrifices for personal glory, money, and the love of the game.
- The real heroes in your life are the people who guide and protect you everyday - parents, teachers, firefigh...





**Standard: MS-LS4-1** Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on earth under the assumption that natural laws operate today as in the past.

Success Criteria:

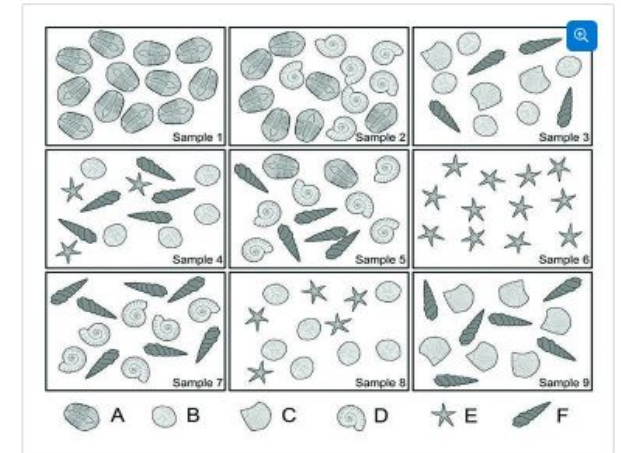
1a. I can organize the given data using tables, graphs, charts, and/or images.

1b. I can organize the given data using in a way that allows for the identification, analysis, and interpretation of similarities and differences in the data.

2a. I can analyze and interpret evidence from rock strata and in fossils for the existence, diversity, extinction, and change in life forms throughout the history of Earth.

3a. I can use similarities and differences in the observed patterns to provide evidence.

Review the nine fossil sample cards with your group. Each sample was collected from a different rock layer in a geologic column. Sample 1 came from the lowest layer in the column, but the other samples have become mixed up and are out of order. Work with your team to arrange the samples from oldest to youngest.



# Eighth Grade Science





### Standard

**RH.8.4:** Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

### Learning Target

I am learning to determine the meaning of words and phrases as they are used in a text including vocabulary related to history

### Success Criteria

I will be able to determine:

- specific words or phrases in a history/social studies text (e.g., dynasty, preamble, imperialism).
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- B) Praised enthusiastically
- C) Ignored completely
- D) Mocked sarcastically

# Eighth Grade Soc. St.



# Physical Education



## Standard:

3.1-7th Grade: Assess one's own muscle strength, muscle endurance, aerobic capacity, flexibility, and body composition by using a scientifically based health-related fitness assessment.

## Learning Target:

I am learning to assess my muscular endurance and aerobic capacity through the mile run by using scientifically based health-related fitness assessments.

**Assessment:** Mile Run

## Success Criteria:

**Mastery**= under 10 minutes

**Near mastery**= 11-12 minutes

**Basic**= 12-13 minutes

**Far below basic**= 14 or more minutes

**Average Run Time:** 11:10



# Lesson Components Include

Essential Standard

Learning Target

Success Criteria

% Mastery

