5th grade
DOK questioning strategies lessons

From the cluster teacher training:
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Social studies

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Earth Science
Math lessons

Fractions - numerator

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Decimals

Add/Sub. Fractions with like/unlike denom.

Illustrate the add/sub fraction

Represent/read/write decimals
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Fractions
Reading lessons

Problem/Solution
Fact/Opinion
Fact/Opinion
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Fact/Opinion
Problem/Solution-”Wonder”
Fact/Opinion
Cause/Effect-”Blood on the River”

Author’s Purpose
Protagonist/Antagonist
Reading/Skill: Problem and Solution

DOK 1: Identify the problem and solution from the text.
DOK 2: Construct graphic organizer to identify problem and solution in sequential order.
(Example: thinking map)
DOK 3: Investigate the problems that occurred (Jamestown) and research solutions they could have used in one problem they are most interested in.
DOK 4: Critique the professions of Jamestown colonists and analyze why that helped to create problems that existed.
Reading/Skill:  Fact and Opinion

DOK 1:  Define what is fact and opinion.

DOK 2:  Categorize task cards into fact and opinion. Compare elements/keywords that make it fact and opinion.

DOK 3:  Construct your own fact and opinion on the current classroom novel using keywords as evidence.

DOK 4:  Design a commercial using fact and opinion to persuade the audience to buy your product.
**Reading/Skill: Author’s Purpose**

Objective: The students will be able to identify the difference between informing, entertaining and persuading various texts.

DOK 1: The students will illustrate an advertisement using one form of Author’s Purpose and present to class by choice.

DOK 2: Based on classmates presentations students will classify the advertisement into proper category of Author’s Purpose.

DOK 3: Student will use appropriate “voice” to identify the purpose to the audience (act out).

DOK 4: Create and design a commercial and/or poster to connect with all three forms of Author’s Purpose while the audience critiques their work and determines the Author’s Purpose and giving supporting evidence.
Social Studies/Skill: Regions

Objective: Students will study major aspects of each region.

DOK 1: Students will label and identify states, capitals and landforms.

DOK 2: Summarize the major historical events of the region.

DOK 3: Create a post-test using ten questions related to the content. Make sure to use a variety of questions.

DOK 4: Create an advertising poster or brochure that promotes tourism. Include natural resources, tourism, industries, landmarks/landforms, etc... (identify environmental issues and how you could solve it/tourism)
Social Studies/Skill: Explorers

**Objective:** Students will identify explorers.

**DOK 1:** Identify specific explorers routes, and country represented.

**DOK 2:** Construct maps of explorers' travel routes.

**DOK 3:** Develop a logical argument for how Native Americans were affected negatively or positively.

**DOK 4:** Create a living museum (diorama) which depicts the route the explorers traveled, along with landforms and native establishments. Describe in written form what your living museum display depicts, naming the difficulties explorers faced and native's faced to include terrain, weather and any other conditions inhibiting their travels and explorations.
Math Skill: Fractions

Level 1: Which of the following is the numerator?

Level 2: Show the value of the numerator using a fraction strip.

Level 3: Explain why a fraction has to have equal parts to show accuracy. Relate this to a candy bar.
Math Skill: Fractions

Level 1: Add a pair of fraction with like denominators

Level 2: Show a visual representation of an equation that adds fractions with like denominators

Level 3: Develop a logical argument that proves why adding your denominators together makes no sense.
Math Skill: Decimals

Level 1: Write the decimals in word form. What is the word form of 1.281?

Level 2: Where might you find decimals in the real world and how are they useful?

Level 3: Explain why you can take the zero from the end of a decimal without changing the value of the number.
Math Skill: 5.N.3 Add and Subtract Fractions with like and unlike denominators

Entry Level: Roll fraction dice in pairs, then add them together. Repeat for subtraction.

Advanced: Construct your own word problems use addition and/or subtraction of fractions and solve.

Most Challenging: Write an informative paragraph about why it is possible to add with like denominators, but impossible to add with unlike denominators.
Math Skill: 5.N.2.1-Illustrate the addition and subtraction of fractions

Entry Level: Complete any activity that utilizes a picture model of fractions, showing the shaded pieces as the numerators, and the total pieces as the denominator.

Advanced: Write a story about a person that went to a store and had to combine pictures of fractions correctly.

Most Challenging: Identify places in our world where you might see a type of picture model of a fraction. Find images of these online and explain how they are useful.
Math Skill: Represent, read, and write decimals in all forms-5.N.2.2

Entry Level: Using a number on the board, write the decimal in word form.

Advanced: Collect examples of decimals in word form from the Internet. Put them in categories of tenths, hundredths, and thousandths.

Most Challenging: Explain why money involves tenths and hundredths. Why does money not have thousandths?
Math Skill: Fractions and Decimals

DOK 1: Conduct basic fraction and decimal equivalents of benchmarking fractions

DOK 2: Organize, represent and interpret data using fractions and decimals. Students can use picture models/charts.

DOK 3: Construct a concept regarding fractions and decimals that involves using a number line that will contain benchmarking and non-benchmarking fractions and decimals

DOK 4: Apply a mathematical model to illuminate a problem with fractions and decimals in the real world.
Unit: What’s in a Story?
Standard: Protagonist vs. Antagonist

Entry level activity: Teacher reads *The Three Little Pigs* by James Marshall and guides class in creating an anchor chart.

Advanced activity: Students compare the original *Three Little Pigs* to the *True Story of the Three Little Pigs* by Scieszka. They develop a logical argument to determine the true antagonist.

Most challenging activity: Students choose a character from their own books and create a poster justifying whether a character is a protagonist or antagonist.
Math Skill: Decimals

DOK 1: Represent decimals to the thousandths by conducting basic calculations.

DOK 2: Show that you can organize, represent, and interpret the decimals of a number you are working with or given.

DOK 3: Differentiate the value of decimals through the thousandths place. Make a new decimal that is of greater value and a new decimal with lesser value. Explain which is greater and which is less and why.

DOK 4: Complete a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results and solutions. The students must use numbers with decimals in this project.
Unit: What’s in a Story?  
Standard: Fact and Opinion

**Entry level activity:** Students define fact and opinion. Teacher leads discussion and class finds examples.

**Advanced activity:** Students are assigned a passage about Boston Massacre. Then, locate three facts and use text evidence to write two opinions about the event.

**Most challenging activity:** Students examine a diagram by Paul Revere and a painting by a British artist depicting the Boston Massacre and compare them to eyewitness accounts in an attempt to determine fact and opinion in this historical event. Analyze events leading up to the American Revolution and how they caused and eventual war.
Fact and Opinion: Students will distinguish fact from opinion in nonfiction text and investigate facts for accuracy.

Entry Level: Give students cards to separate fact and opinion.

Advanced Level: Reading text and listing facts and opinions by showing proof by citing evidentiary language to support fact and opinion

Challenging Level: Create an advertisement for a specific product that includes both facts and opinions. Present your ad to the class explaining which elements are factual and which are opinions
Fact and Opinion: Students will distinguish fact from opinion in nonfiction text and investigate facts for accuracy.

DOK 1: Define what is fact and opinion

DOK 2: Categorize task cards into fact and opinion. Compare elements/keywords that make it fact and opinion

DOK 3: Construct your own fact and opinion on an nonfiction text using keywords and investigate facts for accuracy

DOK 4: Design a commercial using fact and opinion to persuade the audience to buy your products
Entry Level: Explain what the problem/solution is of the story “The Three Little Pigs.”

Advanced: Illustrate the problem/solution in the story “The Three Little Pigs.”

Challenging: Predict another solution to the problem in “The Three Little Pigs.”
Reading: Problem/Solution

Entry Level: Identify what the problem and solution in the current novel you are reading

Advanced: Compare the problem/solution in a previous novel you have read (text to text)

Challenging: Construct a new solution to the problem in the current novel you are reading
Reading: Problem/Solution

Entry Level: Identify the character’s problem in the book “Wonder”

Advanced: How can you relate to the character’s problem in the book “Wonder”? (text to self)

Challenging: Create a dramatization of the theme based on the problem/solution of the book “Wonder”
Cause and Effect: Blood on the River

DOK 1: Define what cause and effect means

DOK 2: Analyze and demonstrate examples of cause and effect in the novel Blood on the River.

DOK 3: Evaluate the effects and explain possible causes and support by citing the evidence from the text.
Social Studies: 13 Colonies

DOK 1: Identify and label the states in each region.

DOK 2: Distinguish and summarize daily life in the colonies as experienced by social classes.

DOK 3: Investigate and develop a logical argument as to why the regions were divided.

DOK 4: Analyze and create a presentation comparing and contrasting daily life in the colonies to life today.
Social Studies: New England, Middle and Southern Colonies

Objective: Analyze the similarities and difference of self-government

DOK 1: Describe the types of government in the colonies using graphs, words or illustrations (Burgesses, town hall, religious influence)

DOK 2: Describe the cause and effect of each regions form of government and how it impacted colonial life and development

DOK 3: Construct an argument to support a form of government in a specified region with proof and valid reasoning; prepare a debate to convince peers why your form of government is the best

DOK 4: Analyze, through research, colonial forms of government and compare and contrast them to current world governments. Create a product to present findings (or display) to peers
Social Studies: New England, Middle and Southern Colonies

Level 1: 1) Who was forced to migrate in the Middle Passage? 2) Where were Africans forced to migrate too? 3) What countries were involved in the triangular trade route? 4) What was the forced migration of Africans called?

Level 2: 1) Dramatize the Middle Passage showing who was impacted and how 2) Pretend you are an African and write a letter home describing your foods and countries seen 3) Illustrate and label the map for countries and route of the triangular trade 4) creat a new name for the migration and justify your reasoning

Level 3: 1) Create a new story that highlights this situation. Choose a stance on it and persuade your viewers why it is important 2) Create a model demonstrating the triangular trade route detailing countries and sea paths 3) Justify why Africans were used in the trade routes in regard to the countries involved 4) Based on your new name create propaganda to encourage willing traders.
Social Studies: New England, Middle and Southern Colonies

Objective: The student will compare and contrast the development of New England, Middle and Southern Colonies.

Entry Level: Compare and contrast the three colonial regions (resources, agriculture, exports, economic, labor system); create a chart showing each area to the others (discussion)

Advanced: Create 3 brochures highlighting the different regions and resources. Choose one region to persuade other to join your colony in that region.

Challenging: Create a 4th region (Florida). How would you colonize? What assets do you now have that are similar or different from other regions?
Math: Measurement (used in Unit 3 of OER’s)

Level 1: Label an inch to sixteenths

Level 2: Demonstrate using a ruler, the measurement (length) of 5 different classroom items

Level 3: Estimate then justify the width of a door
Math: Measurement (used in Unit 3 of OER’s)

Level 1: Memorize prefixes and base units of metric system

Level 2: Can you convert the metric length of everyday objects?

Level 3: Choose a metric scale and apply it to various situations
Math: Measurement (used in Unit 3 of OER’s)

Objective: Measure to the nearest 1/16th of an inch

Entry Level: Represent and label the measurements of an inch in fractions (through 16ths)

Advanced: Measure the length of 5 different classroom items of your choice to the 1/16th of an inch

Challenging: Estimate the width of a door. Justify your estimate by writing a short paragraph explaining your thinking.
Math: Measurement (used in Unit 3 of OER’s)

Objective: Convert within the metric system

Entry Level: Recall multiplying and dividing by powers of 10. Use KHDBdcm chart to model this.

Advanced: Choose 5 classroom items to find metric length in cm. Then convert those lengths to meters and millimeters.

Challenging: Develop a metric scale, design a floor plan, and then evaluate the area and perimeter of your design.
Objective: Understanding benchmark fractions

Entry Level: Create a fraction strip and label benchmark fractions

Advanced: Find 4 ways to categorize the classroom composition using benchmark fractions

Challenging: Predict and create a system for establishing fractions beyond 1/4ths and 1/25ths
5th Grade Social Studies: Colonization

Objective: Students will examine Jamestown and Plymouth Plantation as the foundations of American culture and society.

DOK 1: Who was involved in founding and establishing Jamestown and Plymouth Plantation?
DOK 2: Describe how the geography affected each of the colony's development.
DOK 3: Construct a model of each colony demonstrating its development based on its location.
DOK 4: Apply your knowledge of the settlements of these colonies to creating a new colony and analyze how modern technology may have impacted that and how you would be better prepared.
5th Grade Social Studies

Objective: Students will compare and contrast the developments of the New England, Southern, and Middle Colonies.

L1: Identify and label the states in each region
L2: Distinguish and summarize daily life in the colonies as experienced by social classes.
L3: Investigate and develop a logical argument as to why the regions were divided.
L4: Analyze and create a presentation comparing and contrasting daily life in the colonies and analyze how modern technology may have impacted that.
5th Grade Social Studies: Causes of the American Revolution

**L1:** List the primary causes of the American Revolution.

**L2:** Identify and summarize the primary causes of the American Revolution.

**L3:** Develop an argument for or against American Independence.

**L4:** Analyze primary and secondary sources to create a multimedia poster that connects the causes of the American Revolution to our modern government.
5th Grade Science: Matter

Objective: Students will understand physical and chemical properties of matter.

DOK 1: Identify the physical and chemical properties of matter.
DOK 2: Predict the outcome in regards to physical and chemical changes to the following items when left outside for a period of time: penny, tree, wagon, nail, water.
DOK 3: Develop a scientific investigation to test hardness and magnetism of given items.
DOK 4: Design and analyze the process of rusting and describe how this process can affect different materials.
5th Grade Science: Kinetic vs. Potential Energy

**Objective:** Students will compare and contrast kinetic and potential energy.

**L1:** Define kinetic and potential energy and list 3-5 everyday objects that illustrate each form of energy.

**L2:** Construct a model that demonstrates the changes from potential to kinetic energy.

**L3:** Research the fastest US roller coasters and draw conclusions about their speed vs levels of incline.

**L4:** Analyze and synthesize information from multiple sources to create a new rollercoaster for a theme park opening in your area. Prove that your rollercoaster is both safe and fast.
5th Grade: Jamestown

DOK 1--Student will take on the role of an English settler and write a journal entry of the experience from the settlers point of view.

DOK 2--Construct a map of John Smith’s journey to the New World.

DOK 3--Formulate a strategy that could have help the first attempt to the New World to make it more of a success.

DOK 4--Connect religious and political views from the Colonial Times to views of today. Writing with facts to prove and link your connections.
5th Grade: Jamestown

Area of Complexity: Concrete to More Abstract
1. Students will make their own rope with a partner, following a lesson on Jamestown, and learn background knowledge behind making it.
2. Compare/Contrast the life of the Powhatan Indians and English Settlers, in the time of establishing the New World.
3. Develop conflict/cooperation scenarios between the English Settlers and Native Americans.
4. Give reasons with support as to why a relationship between the settlers and natives would be important or would not be important for the survival of the New World.
5. Demonstrate understanding of the lifestyles of the English Settlers and Native Americans and the importance both had on the New World.
JAMESTOWN: Higher Level Thinking Questions--
Level 1/Level 2/Level 3
1. When did the first settlers come to the New World?
2. Use cause/effect for reasons why the first attempt to the New World failed?
3. Construct a model of the Constant Ship. Label the parts and explain why each was important to their journey.
1. Who were the Powhatan Indians?
2. Compare their way of living with that of the
3. Construct a model of a Yahakan on paper. Describe the different things they used to make them and where they were found. Why was this used in the tribe?
5th Grade: Jamestown

1. Who was John Smith?
2. Write several journal entries as John Smith. What items and events were most important to him?
3. Construct a plan if you would have been in John Smith’s shoes. What would you have done the same? Different? What would you have packed that could have impacted the journey?
1. Why did the English come to the New World?
2. Compare and Contrast the life an English Settler had in England, with the life they had in the New World.
3. Analyze how life was different. Why were things easier or harder? What would life be like today for a person from England if they relocated to the US?
1. What conflict did the English have with the Native Americans?
2. What connections do the conflicts of Jamestown have with our nation today?
3. What resolutions could have been tried to prevent the conflicts in Jamestown? How could citizens of today use these resolutions to help solve their own problems?
5th Grade: Jamestown

1. What role did religion play in the English coming to the New World?
2. Predict what will happen between the Indians and the Settlers involving religion.
3. Develop an argument from the perspective of an English Settler. From the perspective of a Native American. Have a Debate.
5th Grade Solar System

5ESS-1
5ESS-2
5PS 2-1

**DOK 1:** List the planets in order by distance from the sun. Define and identify the planets as either inner or outer.

**DOK 2:** Chart the lunar phases to reveal that the changing phases of the moon occur in a monthly cyclical pattern.

**DOK 2:** Describe the life cycle of a star.

**DOK 3:** Compare data from observations to reveal patterns in shadows. Draw conclusions about why the sun appears larger and brighter than other stars because it’s the closest star to Earth.

**DOK 4:** Design a model of the Solar System and explain that the monthly cyclical phases of the moon are due to orbit of the moon around the earth.
Topic: Earth’s major systems

Objective: Earth’s major systems are the geosphere, hydrosphere, atmosphere, and biosphere. The ocean supports a variety of ecosystems and organisms, shapes, landforms, and influences climate.

DOK 1: List Earth’s major systems and their components
DOK 1: Draw and describe an ecosystem in the ocean
DOK 2: Explain how the systems interact in multiple ways to affect earth’s surface, materials, and processes.
DOK 2: Identify the different landforms, determine what influences the shape, and summarize how it happens
DOK 3: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere and atmosphere interact.
DOK 3: Explain how specific ecosystems are affected by human activity. Access how this activity could ultimately impact the human race.
DOK 4: Research the major systems of another planet. Compare and analyze the differences between Earth and another planet. Describe what would be needed to exist on another planet using the differences in these two systems.
Topic: Earth science

Entry level activity: Make a foldable about the spheres

Advanced activity: Chart the water cycle and compile data

Most challenging activity: Create an ecosystem involving all 4 of the earth’s systems and measure the growth of the plans in the system.
Topic: Earth Science

Level 1: what are the four parts of the eco-system
Level 2: How do the geosphere and hydrosphere interact with each other. Model as an example.
Level 3: Explain what would happen if one of the spheres disappeared?
Topic: early explorers

Entry level question: Who were the early explorers
Level 2: compare and contrast the early explorers
Level 3: List early explorers and countries they are from and purpose of their exploration.
Topic: New England/middle/southern colonies

**DOK 1:** Describe the types of government in the colonies using graphs, words, or illustrations including the House of Burgess and New England Town Hall meetings

**DOK 2:** Describe the cause/effect of the types of government in each of the three regions and how it impacted colonial life and development

**DOK 3:** Construct an argument to support their assigned region of government using evidence to support the development of the region

**DOK 4:** Analyze through research the 3 regions of government and compare/contrast to our own government of the world today. Create a product to display or present to their peers.
**Topic: New England/middle/southern colonies**

**Required standard:** Student will compare and contrast the development of the New England/mid/southern colonies

**Entry level activities:** Compare and contrast the 3 regions (Natural resources, settlement patterns, agriculture, experts, and economic growth) using a Venn diagram and a word bank.

**Advanced activities:** Create a brochure to persuade people to move to your assigned colony and explain why it is better than other colonies.

**Most challenging activities:** Take over the Spanish region to create a 4th region. Explain how you would organize the government and compare it with the government of the other three colonies.
Topic: Triangular trade route

Level 1 questions:
- Who was forced to migrate to the middle passage?
- Where were Africans forced to migrate?
- What countries were part of the triangular trade?
- What was the name of the event that included the forced migration of Africans?

Level 2 questions:
- Create a drama to show who was forced to migrate.
- Pretend you were an African forced to migrate and write a letter to a friend explaining your experience.
- Illustrate the Triangular Trade route (including labels for the countries)
- Create a different name for forced migration and justify that name.

Level 3 questions:
- Create a news story as if in the media over who was forced to migrate.
- Create a model illustrating the migration during the triangular trade
- Justify why Africans were used during the triangular trade and not people from other places.
- Based on a new name for the migration, create propaganda to persuade people to willingly go.
Jamestown

Level 1: List the names of the men who came to Jamestown in 1604.

Level 2: Compare & contrast the life in Jamestown before and after John Smith became the leader.

Level 3: Evaluate John Smith’s leadership skills and give reasons for your answer. What qualities does he share with current leaders.