



ADVANCED ACADEMICS

# NEWSLETTER

## CCT STRATEGY HIGHLIGHT

**FFOE**

The Critical and Creative Thinking (CCT) Strategy highlight for this volume is FFOE.

FFOE stands for Fluency, Flexibility, Originality, and Elaboration.

Purpose: to promote divergent thinking and advanced problem-solving skills

How to Use:

- Can be used across subject areas
- For review after a unit/lesson or to introduce a new concept

## WHAT ARE THE PARTS OF FFOE?

Thinking Strategy	Definition	Example
<b>Fluency</b>	The ability to generate many ideas.	<b>List/Brainstorm</b> List all the words you know that start with the "ch" sound
<b>Flexibility</b>	A thinking skill that allows the learner to adapt ideas. This requires generating a wide range of ideas.	<b>How many different ways...</b> How many different ways can you measure the surface area of your table?
<b>Originality</b>	Refers to unique, unusual responses.	<b>What is the most unusual way/What if/Think of a Unique Way</b> What if we no longer could use gasoline to fuel our cars?
<b>Elaboration</b>	Requires: adding ideas, providing details, and extending thinking.	<b>What else do you need/Tell me more/Explain</b> What else do you need to build a solar-powered car?

# FFOE CONTINUED

## WHAT CAN FFOE LOOK LIKE IN THE CLASSROOM?

**FLUENCY**

### FFOE: Fluency, Flexibility, Originality, Elaboration

**Fluency:** Closely observe the page of images and list what you see (characteristics and parts). List them below.

- |                   |                                 |
|-------------------|---------------------------------|
| • underwater      | • about 15 jellyfish tentacles  |
| • coral           | • a stingray maybe              |
| • dolphins        | • a bunch of fins               |
| • black tip shark | • I think its sunrise or sunset |
| • turtle          | • trees and plants              |
| • a piece of land | • water                         |
| • clown fish      | • eyes                          |
| • jelly fish      | • mouths                        |

**Flexibility:** What was the author's purpose for including this page in the reader? How do the images on this page help you understand information you read?

I think the author included this page because then you would see what it looks like there. Also to show you the different animals and there characteristics of those animals.

**ORIGINALITY**

**Originality:** Imagine you were selected as a member of the publishing committee for the next edition of this CKLA reader. What other image would you include on this page to help students better understand information from the reader? Sketch your idea below.



**Elaboration:** Explain in words why you would include your picture in the next edition reader. How would your picture help students better understand the information?

I would include this picture in the next reader because it shows the animals that live on land and water in Australia. Also you can see the different habitats of Australia. That is why I think my picture should be in the next reader.

**FLEXIBILITY**

**ELABORATION**

In 3rd grade, students had the opportunity to engage in an FFOE thinking routine during their CKLA animal adaptations unit.

### FFOE

#### 1.2b Sound

##### Fluency

How many examples of sound can you list?


##### Flexibility

Pick a sound from your list. What would happen to the sound if it was under water? Draw or write.

##### Originality

Design a new instrument that can make sound. Draw it!

##### Elaboration

Explain: how can people hear your instrument?

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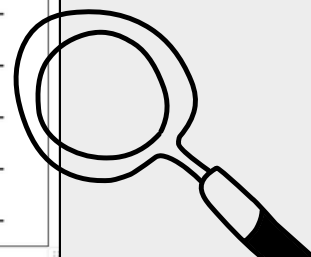
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Here's a 1st grade example of FFOE using a science standard.





# MATH RESOURCES

## NIMBLE WITH NUMBERS



This curricular resource provides meaningful practice of high-priority skills through games, computational mini-assessments, and independent activities to maximize number and operations learning.

### Place Value Paths

**Topic:** Number Sense

**Object:** Record numbers in an ascending sequence.

**Groups:** Whole class or small group

**Materials**

- 2 sets of Digit Cards, p. 148
- Place Value Paths recording sheet for each child, p. 78
- 100 Chart, p. 146 (optional)

**Directions**

1. The leader mixes the two sets of Digit Cards together and stacks them facedown. The leader then draws two cards and announces the digits to the class and asks, "What numbers can be formed using these digits?"

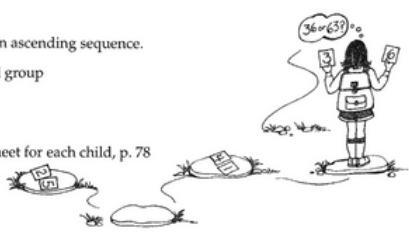
*Example:* If 8 and 3 are drawn, the number choices are 38 or 83.

2. Each child selects one of the choices. The leader reminds children that ultimately their paths must contain six two-digit numbers that are in order from smallest to largest. Initially, the leader helps children consider an area where their numbers fit appropriately between 10 and 100.
3. Each child independently records his or her number choice in one of the cells along the place value path. (Drawn cards are set aside.)
4. If a child cannot place either of the possible numbers in any of his or her remaining cells, nothing is recorded.
5. After six draws, the leader asks if anyone has completed an entire place value path. Draws continue until the majority of children have completed paths. Children compare their final results.

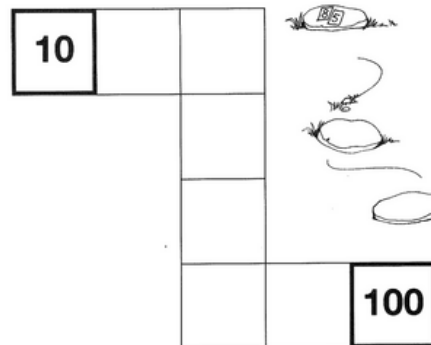
**Making Connections**

Promote reflection and make mathematical connections by asking:

- How did your path differ from others?
- How did you decide where to place your numbers?



### Place Value Paths



*Tip* Some children appreciate the use of a 100 chart to help determine placement of numbers.

GRADE  
2 AND 3  
EXAMPLE

In this sample Nimble with Numbers game, students can play as a whole class or small group. The goal is to record numbers in ascending order using digit cards. Students draw two digit cards to create a number to place on the path. For example, if they draw a 2 and a 9, they can place either 29 OR 92 on the path.

As students start to place the numbers on the path from 10 to 100, they have to make decisions using their knowledge of place value. Will they place is closer to 10, or closer to 100? Why?

As spaces start to fill up, they may find they aren't able to record a number based on previously placed numbers. Players draw cards until most have completed a path from 10 to 100.

# NIMBLE WITH NUMBERS

CONTINUED

## Decimal Trails I

Find a trail that produces correct answers and alternates the operations of addition and subtraction. Every cell should be included and used only once.

Example:

12.8		
5.9	9.7	
18.7	22.5	

$18.7 - 5.9 = 12.8$   
 $12.8 + 9.7 = 22.5$

1.

324.7	
8.11	313.31
332.81	19.5

2.

39.9	
29.2	69.1
20.5	48.6

3.

30.2	
32.2	62.4
26.9	59.1

4.

75.47	60.53	31.83
28.15	14.94	35.88
47.32	52.77	67.71

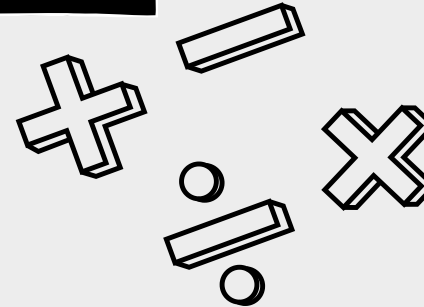
5.

24.8	71.1	21.9
46.3	85.7	63.8
49.9	96.2	32.4

6.

35.67	57.48	93.15
43.56	27.88	65.27

GRADE  
5  
EXAMPLE



## Decimal Trails II

Find a trail that produces correct answers and alternates the operations of multiplication and division. Every cell should be included and used only once.

Example:

3		
9.3	3.1	
8	24.8	

$9.3 \div 3 = 3.1$   
 $3.1 \times 8 = 24.8$

1.

5	
33	6.6
4.4	7.5

2.

2.5	
13.16	32.9
7	4.7

3.

15.2	
4	3.8
24.7	6.5

4.

2.4	3	7.2
1.5	1.8	4
2.7	3	.9

5.

56.78	3.4	16.7
17	8.35	3.4
3.34	8.5	28.39

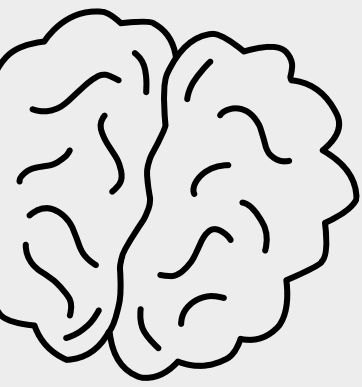
6.

5	3.6	3.2
2.7	18	5.625
5	13.5	2.4

In these 5th grade Nimble with Numbers examples, students search for a trail through the decimal numbers using either addition and subtraction, or multiplication and division. Students should find paths that use each cell only one time. Their trails should produce correct answers.

## HOME CONNECTION

(Gr. 3-5) Try out a related math game at home that supports this work. [Prime Climb](#) is a game that can be a fun way to solidify their understanding of prime numbers under 100.



# ELA RESOURCES

## DBQ PROJECT

**Document-Based Questions (DBQ)** - Each unit is inquiry-based and requires students to analyze a series of historical documents in order to answer a particular question (i.e. Was Hammurabi's Code just?). Students must analyze primary and secondary source documents in order to form and justify an opinion. These documents can be historical paintings, letters, sculptures, charts, graphs, maps, poems, etc. The process provides opportunities for investigation, debate, and written responses. DBQs often allow for a cross-curricular learning opportunity with social studies content.

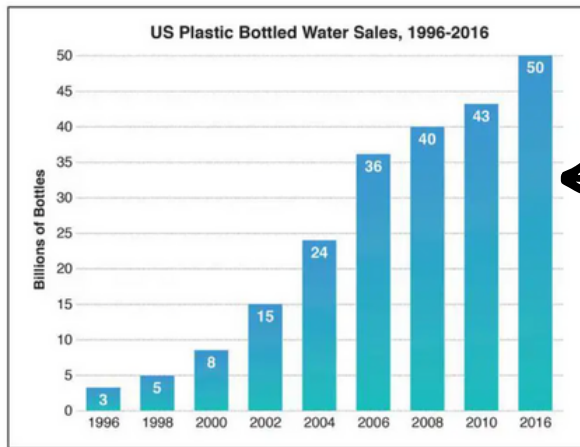
### Should Your Town Ban the Sale of Plastic Water Bottles?



**Overview:** Bottled water is everywhere. Easy to buy and easy to carry, it seems to be a convenient choice for many people. In some places, bottled water is safer than tap water. In other places, bottled water is definitely healthier than soda. No wonder it is so popular. However, there are some concerns about bottled water. In this Mini-Q, you will decide if plastic water bottles should be banned in your town.

Document B: Plastic Bottled Water Sales in the US

Source: Adapted from data from the Container Recycling Institute.



### PLASTIC WATER BOTTLE DBQ

Students are given charts, graphs, and an excerpt from an interview which detail plastic water bottle usage and its impact. Then, they develop an essay arguing their opinion.

### How Did the Nile Shape Ancient Egypt?



A wall painting from the tomb of Sennefer, mayor of Thebes and overseer of the Royal Gardens during the reign of Amenhotep II, 1426-1400 BCE.

Document D  
 Source: Painting from the tomb of a tradesman named Sennedjem, who lived sometime between 1307 and 1196 BCE.  
 Note: The afterlife in Ancient Egypt was a paradise called the Field of Reeds, shown in this tomb painting. Those whose heart had the correct weight at death could, after a long journey, live in the Field of Reeds forever. The Field of Reeds was believed to be somewhere in the east, near the rising sun.



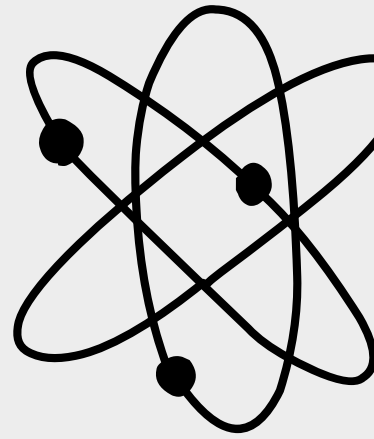
Top: The sun god, Ra, traveling across the sky in his boat. Baboons are shown worshipping him.  
 Bottom panels: Date palms and other crops.  
 Border and Middle panels: Various scenes of life and agriculture.

### NILE RIVER DBQ

Students analyze a map, tomb painting, a Nile River flood chart, and poem in this DBQ. Then, they create an essay explaining the impact of the Nile River on Egypt.

# PROJECT ZERO

## HIGHLIGHT



### Color, Symbol, Image (CSI)

**Purpose:** Students identify and narrow down essential ideas from reading, watching, or listening.

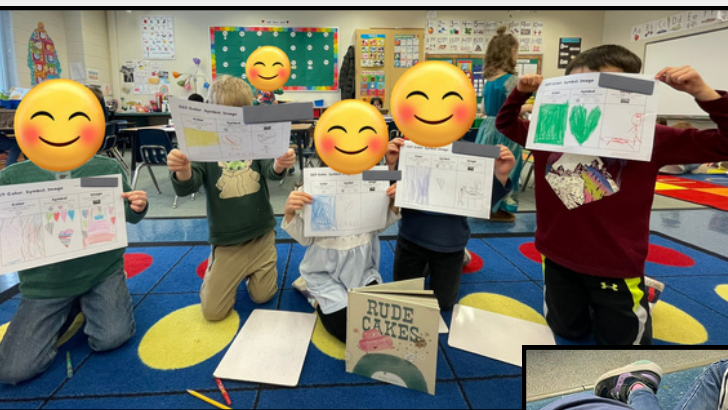
**How?** Students choose a color to represent their learning, then a symbol, and finally an image.

**Example:**

2nd graders read a chapter in a novel and then chose a color that they felt represented the chapter. Then they picked a symbol that represented the big idea in the chapter. Finally, they drew an image that shows the essential idea of the chapter. Students then explained why they made those choices in their CSI.

## WHY IS CSI EFFECTIVE?

- Enhances comprehension of reading, watching, or listening.
- Asks students to synthesize learning





## KINDERGARTEN

CSI after reading a book



## 2ND GRADE

CSI for a book club chapter

Chapter 12		
Project Zero: Color, Symbol, Image		
Color	Symbol	Image
Choose a <i>color</i> that you feel best represents this chapter. 	Choose a <i>symbol</i> that you feel best represents this chapter. 	Draw an <i>image</i> that you feel best represents this chapter. 