Integrating Depth and Complexity in Math within the Elementary Classroom

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MATH

The only place where people buy 64 watermelons and no one wonders why...
Implementing in Math

Not going to use it all of the time or everyday and that is OK

Will work better with certain TEKS/concepts than others

Won't change what you teach
Most Math-y
4 Ways to Integrate
# Choice Boards

<table>
<thead>
<tr>
<th>Choice Board</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Write your spelling words three times each in cursive.</strong></td>
</tr>
<tr>
<td>Make a code for each letter in the alphabet. Spell your words using your code.</td>
</tr>
<tr>
<td><strong>Free Choice! You decide how to practice your words.</strong></td>
</tr>
<tr>
<td>Write all your words in <em>ABC Order</em> in cursive.</td>
</tr>
<tr>
<td><strong>Write 12 sentences. Each sentence must be at least 12 words long. No sentence may begin with “I.”</strong></td>
</tr>
<tr>
<td>Make an unsccramble worksheet of all of your words. Give to someone to unsccramble before turning in to the tray.</td>
</tr>
<tr>
<td><strong>Choose 10 words and draw a picture to represent the word.</strong></td>
</tr>
<tr>
<td>Make a fill-in-the-blank worksheet using 10 of your words. Be sure to include an answer key.</td>
</tr>
<tr>
<td><strong>Write the definition for 12 words (not enrichment words)</strong></td>
</tr>
<tr>
<td>Write 12 words (not enrichment words)</td>
</tr>
</tbody>
</table>
Choice Boards

Many uses...

Homework

Project

Assessment
Choice Boards

Can easily manipulate to suit your needs

Determine number of choices

Tier icons in rows
Activity #1

- Choose a concept you teach
- Create a choice board you can use in your classroom
Interactive Notebooks

Use Depth and Complexity Icons to enhance
Interactive Notebooks
Interactive Notebooks
Interactive Notebooks

The denominator is the bottom number on a fraction. The numerator is the top number on a fraction.

A mixed number is a whole number and a fraction.

An improper fraction is when the numerator is bigger than the denominator.

You must first find the closest common denominator.
Interactive Notebooks

Adding Fractions

Details

Big Idea

Fractions

Details

Big Idea

First, you list the multiples of the denominator and then you find the LCM.
Second, you make equivalent fractions with the LCM as the denominator. Third, you add and simplify if possible.
Activity # 2

Choose a concept you teach

Create an interactive notebook entry you can use in your classroom
Group Work

Rules: Coordinate Grids

- You always have to start at the origin.
- The origin always has to be zero.
- You always have to go to the left then up.
- The Y-Axis is always vertical.
- The X-Axis is always horizontal.
Group Work

AREA

By: Madison & Danielle

Multiple perspectives

Language & the discipline
**Group Work**

Multiple Perspectives

- Construction workers use area to find the space inside of a home.
- You use area when you move into a new house to pick your room, you find out how much space it has.
- Teachers use it for setting up classrooms.

Language of the Discipline

- Length
- Width
- Area
- Formula
- Multiply
- Product

Area is the space in an object.
Activity # 3

With the people at your table, choose a familiar math concept

Together, create a "student product"
Exit Slips

Choose an icon or icons

Great way to see where your students are going into the next day of instruction
Exit Slips

- N/D
- \( \frac{2}{3} = \frac{1}{1} \)
- Fractions
- Denominator = whole
- Numerator = parts whole
- Smaller = smaller
Exit Slips

Who would use fractions every day besides bakers and butchers?
Exit Slips

Does Ms. Songdal Cook Brownies?
1. 
2. x
3. 
4. Check
5. Bring Down
Think of a concept you teach
On a notecard, create an exit slip
Depth and Complexity Framework

Icons are the most widely used component

Framework also includes:

- Content Imperatives
- Disciplinarian Thinking
- Universal Concepts and Generalizations

Some educators include Scholarly Behaviors
Remember that awesome worksheet we did?

Said no kid, ever.
Thank You!