preassessment and grouping: laying the groundwork for effective differentiation

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how is this an analogy for teaching?
grouping
NOT tracking!
cooperative learning

jigsaw

flexible grouping

mixed ability

+.79 which equates to one and 4/5 years of learning in a year’s time (when grouped by readiness or ability)

educator decision...
flexible grouping for instructional purposes

- learning profile or learning modality
- multiple intelligences
- ability, readiness, or level of achievement
- interests
students have different assignments based on their group
flexible grouping for noninstructional purposes

self-selection

random

gender
students have the same assignments regardless of their group
always have a strong reason for grouping students!
remember...

a child cannot learn what she already knows
intent is everything
preassessment
intentional planning → intentional preassessment → intentional differentiation
questions leading to appropriate differentiation

Planning
- What do I want students to know, understand, or to be able to do?

Preassessment
- Who already knows and understands the information and/or can do it? Who needs additional support in order to know, understand, and/or demonstrate the skills?

Differentiation
- What can I do for him, her, or them so they can make continuous progress and extend their learning?
Planning

- What do I want students to know, understand, or to be able to do?

Preassessment

- Who already knows and understands the information and/or can do it? Who needs additional support in order to know, understand, and/or demonstrate the skills?

Differentiation

- What can I do for him, her, or them so they can make continuous progress and extend their learning?
why preassess?

continuous progress

defensible
time-saver
differentiation
preassessment

- readiness
  - skills
  - concepts
  - content knowledge

- learning profile
  - learning style
  - multiple intelligence
  - work preference
  - product preference

- interests
  - previous experiences
  - levels of interest
Record keeping is important!

To be defensible, preassessments should be individual and written.

If oral or group preassessments must be used, be sure to keep anecdotal records.
use existing data

(Diane Heacox)
# Data for 4th Grade Class

<table>
<thead>
<tr>
<th>Name</th>
<th>STAR Reading</th>
<th>ELA Exit Slip</th>
<th>Lexile</th>
<th>TN3: InView/CSI</th>
<th>TN3: Reading Comp</th>
<th>TN3: Lang Comp</th>
<th>Current Interest</th>
<th>Choice</th>
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<tr>
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</table>

M=meets goal, N=not yet, A=approaching; TN3 is Terra Nova 3rd Edition; TN3 InView tops at 141 (127 considered gifted)
<table>
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<tr>
<th>Grade</th>
<th>Lexile</th>
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<th>STAR Group</th>
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</table>
what are grouping options?
end-of-the-previous-unit assessment
what are grouping options?
end-of-the-unit assessment
80%
rule of thumb
what are grouping options?
k-w-l and
t-w-h
Original K-W-L

what do you know about...?  
what do you want to know about...?  
what did learn about....?  

Revised K-W-L

what do you know about...?  
what do you want to know about...?  
how do you want to learn about....?  

T-W-H

what do you think about...?  
what do you want to know about...?  
how do you want to learn about....?
<table>
<thead>
<tr>
<th><strong>K - W - L CHART</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic/Unit</strong></td>
</tr>
</tbody>
</table>

### What do you **K**now about this topic?
- North and south sides
- Main Generals: Robert E. Lee, Ulysses S. Grant
- North had factories, some machinery.
- South had plantations, good food
- **Clothing**: kerls, overcoats, coats, pants, wool socks, boots
- Weapons: swords, revolvers, cannons, muskets.

### What do you **W**ant to learn about this topic?
- Learn about weaponry
- Learn about different soldiers
- Learn about Generals lives
- What did they eat?
- Where did they sleep?
- How many men per company?

### How do you want to **L**earn about this topic?
- Group Reenactments
- Projects
- Field trips
- Going to battlefields
- Read books about the civil war
<table>
<thead>
<tr>
<th>Topic/Unit</th>
<th>Electricity</th>
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</table>

<table>
<thead>
<tr>
<th>What do you <strong>Know</strong> about this topic?</th>
<th>What do you <strong>Want</strong> to learn about this topic?</th>
<th>How do you want to <strong>Learn</strong> about this topic?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The circuit</td>
<td>How it works</td>
<td>by doing experiments</td>
</tr>
<tr>
<td>Batteries</td>
<td>Why wire is made of copper</td>
<td>with wire and a battery</td>
</tr>
</tbody>
</table>

*Include a circle with the statement: what's inside a battery.*
<table>
<thead>
<tr>
<th>What do you <strong>Know</strong> about this topic?</th>
<th>What do you <strong>Want</strong> to learn about this topic?</th>
<th>How do you want to <strong>Learn</strong> about this topic?</th>
</tr>
</thead>
</table>
| * Earthquakes  
  - Recent in California & Japan  
  - Seismographs  
  - aftershocks last so it will last  
  - special building buildings  
  - plates shift, causing land to shake  
  * Hurricanes  
  - regular in southeastern U.S.  
  - causes flooding  
  - 5 categories are named  
  * Tornadoes  
  - regular in Kansas, Flat areas  
  * Tornado  
  - very tall, water carrying onto land  
  - happens in southeastern U.S.  
  * Drought  
  - water is limited  
  - happens in southwestern U.S.  
  - blizzards  
  - snow storm  
  - snow blocks people from being hungry  
  - snow eastern U.S.  | * How natural disasters progress  
  * How long they usually last  
  * How fatal they are  
  * How much money each costs after it takes place  
  * How fatal they are/how they effect everyone  
  * Places disasters are most common in/least common in  
  * How powerful they can be  
  * The strongest natural disaster  
  * Most expensive natural disaster  
  * How it feels to be in a very dangerous feeling as if you're going to die/natural disaster  | * fire grains  
  * videos  
  * charts  
  * notes  |
<table>
<thead>
<tr>
<th>Know about this topic</th>
<th>Want to learn about this topic</th>
<th>How do you want to learn about this topic?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hurricanes &amp; tornadoes are kind of similar. Hot cold air mix from different directions. South North. Current (El Nino) and cold water from the Arctic mix. Earthquakes happen. There is motion in the tectonic plates. A disturbance in fault line. Tsunamis are similar except it happens when the disturbance is on a fault line in the ocean.</td>
<td>More detail about volcances &amp; blizzards &amp; droughts. I know about them but want to know more in depth.</td>
<td>3D models that we can make ourselves.</td>
</tr>
<tr>
<td>What do you <strong>K</strong>now about this topic?</td>
<td>What do you <strong>W</strong>ant to learn about this topic?</td>
<td>How do you want to <strong>L</strong>earn about this topic?</td>
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<tr>
<td>I know that an earthquake involves the atomic plates shifting. That's all.</td>
<td>I want to know how hurricanes happen and tornadoes.</td>
<td>I want to learn by watching videos and maybe doing an experiment.</td>
</tr>
<tr>
<td>Topic/Unit</td>
<td>What do you <strong>Think</strong> about this topic?</td>
<td>What do you <strong>Want</strong> to learn about this topic?</td>
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<td>------------</td>
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</tr>
</tbody>
</table>
What do you Think about this topic?

I think acting is very fun. I also think that acting can be stressful for some people.

What do you Want to learn about this topic?

0 I would like to learn if acting can be used all the time.
@ I would like to know if it's good to overreact.
0 I would like to know if acting can be used in everyday life.

How do you want to learn about this topic?

I want to learn about acting by doing fun acting games. I want to learn about acting by learning what actors/actresses do. I also want to learn about acting by going on a field trip to a studio.
<table>
<thead>
<tr>
<th>Topic/Unit</th>
<th>T-W-H Chart</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you <strong>Think</strong> about this topic?</td>
<td>It's really fun.</td>
<td>C.</td>
</tr>
<tr>
<td><strong>What do you Want</strong> to learn about this topic?</td>
<td><strong>Who</strong> came up with acting? Usually how many people work backstage. How do you make props? Usually, how many people are in a play.</td>
<td></td>
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<tr>
<td>How do you want to learn about this topic?</td>
<td>Pay attention to what my acting teacher says. Always be early to supervised. Always pertinent.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Think you know? What do you think about this topic?</th>
<th>What do you want to learn about this topic?</th>
<th>How do you want to learn about this topic?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I know that George Washington was the general of the military of this time.</td>
<td>I want to know how people such as Alexander Hamilton benefited and played such a big part in this. Also, how Alexander and Aaron Burr's conflict ended up bettering our country. How the constitution comes into play.</td>
<td>I learn best by watching videos and visually being able to see it in front of me.</td>
</tr>
<tr>
<td>What do you Think about this topic?</td>
<td>What do you Want to learn about this topic?</td>
<td>How do you want to learn about this topic?</td>
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</tr>
<tr>
<td>I think a primary source is where something starts.</td>
<td>How do I use this in my reading?</td>
<td>By reading books that require this.</td>
</tr>
<tr>
<td>I think a secondary source is when something ends.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
what are grouping options?
your turn...
Venn diagram
Hurricanes:
- A sea-level storm
- Causes major waves
- Spins a wide area of storms
- Hurricanes are named in order, generally
- Winds can reach over 200 mph
- Less suction than tornadoes or hurricanes
- Hard to track on doppler radars because all they are is water

Tornadoes:
- Destroy homes, etc., and blow things away
- Creates when warm air and cold air mix
- Turtles are used to get in deep in the ground
- Destroy things
- All destroy extremely high winds
- Can cause millions of dollars in damage
- Temperatures are above 32° degrees to happen
- More than one can happen at a time

Waterspouts:
- Rated on F-scale
- Causes high winds
- To T0's, and doppler radars can be used to track tornadoes & other hurricanes
- Both take the same shape, stick things up the main area
1. **Tax Tip:** $y = x + 0.06x$

   In Kentucky, the tax is 6\%. That means that 6\% of the original price is added on to the original price of the product. Tax will vary in different states.

2. **Discounts:** A price that is less from the original.

   **Example:** Shirt = $50.00
   **Shirt with 25\% discount:** $37.50

   \[ y = x - d \times x \]

   \[ d = \text{the discount} \]
   \[ y = \text{the price of product with discount} \]
   \[ x = \text{original price} \]

3. **Interest:** In your bank account, when you have money in it for a period of time, it can get interest.

   **Example:** $200 is in your bank account.
   You have 1\% interest, 2 dollars are added into your account.

   Simple Interest:

   \[ y = \frac{x \times d}{100} \]

   \[ x = \text{principal} \]
   \[ d = \text{interest rate (as a decimal)} \]
   \[ y = \text{interest earned} \]
3 Circle Venn Diagram

Date: 10-28-19  Subject: Math

Tax: Tip: Tip - amount of money you give someone to add on to order

Discounts - percent that you get a coupon usually to decrease the price

All related to money that is used as a percent

- the percent something changes in order for you to keep or someone pays you. Ex: 25% interest plus the amount of money in the loan - $500 x .25 = 7 + 500 = total payment

Simple Interest
3 Circle Venn Diagram

Date: 10-28-19
Subject: Math

- Add
- All Percents
- Take Away
- Discounts
- Simple Interest
- Tax/Tip

- Add
Venn Diagram: Three Ovals

- Poseidon
  - Symbols: Trident
  - God of the sea
  - Parents: Cronus and Rhia

- Artemis
  - Symbols: Hunting dog
  - Goddess of hunting
  - Parents: Zeus and Leto

- Hermes
  - Symbols: Caduceus
  - God of Travel
  - Parents: Zeus and Maia
Athena
- goddess of wisdom
- her symbol is the olive tree
- was born through Apollo's head
- they all lived on Mount Olympus
- they are immortal
- they all had powers

Nike
- goddess of victory

Pan
- god of nature
Venn Diagram: Three Ovals

Hecate

Powerful, strong

Mysterious, understanding

Immortal, aggressive, vengeful, power-worshipped

Self-centered, greedy, vindictive

Lazy, pathetic, quite weak, rude

strong, sea, god,
bad temper, ambitious,
not incredibly full of wisdom
but not stupid

not as well known

"party starter"

Dr. Julia Roberts and Dr. Tracy Inman
The Center for Gifted Studies
Western Kentucky University
gifted@wku.edu
On your sheet of paper, draw a three circle Venn diagram as pictured below.

Prompting questions for those having trouble getting started:

- What are the general characteristics of the genres?
- What are structural elements of the genres? *Remember these are literary structures not informational text structures.
- What are literary elements found in the genres?
- What are literary devices or types of figurative language found in the genres?
After completing the pre-assessment individually, the teacher then turned the Venn Diagram into a collaborative learning experience for those that needed the instruction.
what are grouping options?
your turn...
graphic organizer
Spider Map

Write main ideas on the slanted lines that connect to the circle. Write details on the branching lines.
Think punctuation, purpose, and examples.
MIND MAP

- Buzan
- Tony
- Origin
- Britain
- Brain research
- Advantages
- Visual
- Organic
- Quick
- Memorable
- Novel
- Review
- Preassessment
- Uses
- Assessment
- Organizing
- Prewriting
- Note taking

- Creativity
- Techniques
- Title connectedness
- Color capitals
- Concepts
- Meanings
- Importance
- Shapes
- Drawing
STAGES OF CHILD DEVELOPMENT
Directions: Using the style of the example below, complete this mind map showing everything you know about the Revolutionary War. Each section/line should be written in a different color.
Directions: Using the style of the example below, complete this mind map showing everything you know about the Revolutionary War. Each section/line should be written in a different color.

MIND MAP

REVOLUTIONARY WAR

Battles
- Battle of Lexington
- Battle of Bunker Hill
- Battle of Saratoga
- Battle of Long Island
- Battle of Monmouth

Places
- Boston
- Philadelphia
- Charleston
- Yorktown

Acts
- Stamp Act
- Prohibitory Act
- Quartering Act
- Tea Act

People
- George Washington
- Thomas Jefferson
- Benjamin Franklin
- Paul Revere

Events
- Boston Massacre
- Lexington-Concord
- Signing of Treaty of Paris

War Strategies
- Continental Army
- British Army

Treaties
- Treaty of Paris

Movements
- March to Valley Forge
- Retreat from Saratoga

Monuments
- Liberty Bell
- Bunker Hill Monument
I’ve mapped out the concepts I’ve already grasped to save you time.
what are grouping options?
your turn...
Frayer model/
Punnet square
<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>Nonexample</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What does a conjunction do?</th>
<th>What is a complex sentence?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Post Assessment</strong>&lt;br&gt;Conjunctions/Complex Sentences</td>
<td>Write a complex sentence using a conjunction.</td>
</tr>
</tbody>
</table>

List the conjunctions that begin with the following letters:
A<br>W<br>I<br>B<br>U<br>S
Write the past tense of the following verbs.

Name:
What is an irregular verb?

Write a sentence using an irregular verb.

Present

Past

hear

sing

come

leave

fell

jumped

Irregular Verbs

What is the difference between the two verbs below?

Pre-Assessment
Name: What is an irregular verb?

Write a sentence using an irregular verb.

Write the past tense of the following verbs.

Past  Present

leave  fell
come  jumped
sing
hear

What is the difference between the two verbs below?
What does an apostrophe look like?

Why do you use them?

To show that
You own it.

Use an apostrophe correctly in a sentence.

Cung's tooth has been pulled out.

Use an apostrophe incorrectly in a sentence.

Cung has not been toothed.

Toothed has not been pulled out.
What does an apostrophe look like?

Why do you use them?
To show that you own it.

Use an apostrophe correctly in a sentence.
That's me the cat.

Use an apostrophe incorrectly in a sentence.
That's mine.
<table>
<thead>
<tr>
<th>Equation</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 + 12</td>
<td>10 + 10 = 20</td>
</tr>
<tr>
<td>6 + 2 = 8</td>
<td>2 + 9</td>
</tr>
</tbody>
</table>

**Answer:** 28

**Explanation:** I added 10s then ones.
6 + 12

28

I used a number line. I start with 16 then jump up 12.
What is a reasonable domain for \( h(t) = -2t^2 + 12t + 28 \), if \( h \) is the height of a ball above the ground after \( t \) seconds? **Hint:** Use the graphing calculator to help you make a sketch of the situation.

Identify all of the intervals for which the function is increasing.

---

Given \( f(x) = \sqrt{x} \) and \( g(x) = \sqrt{x} - 5 \). Which of the following statements are true?

1. \( f \) and \( g \) have the same domain
2. \( f \) and \( g \) have the same range
3. \( g(x) = f(x - 5) \)
4. \( g(x) = f(x) - 5 \)

---

Let \( f(x) = \sqrt{x} \) and \( g(x) = -\sqrt{x+2} - 3 \). Describe \( g(x) \) in terms of the parent function, \( f(x) \). \( g(x) \) is \( f(x) \): 

---

A certain law of motion is given by the equation \( S = \frac{1}{2}t^3 \) where \( S \) is in feet and \( t \) is in seconds. Find in feet per second the average velocity over the time interval \( t = 2 \) to \( t = 4 \).

\[
\frac{1}{2} \cdot 2^3 \quad \frac{1}{2} \cdot 3^3 \quad \frac{1}{2} \cdot 4^3 \\
4 \quad 13.5 \quad 32
\]

\[16.5\]
What is a reasonable domain for \( h(t) = -2t^2 + 12t + 28 \), if \( h \) is the height of a ball above the ground after \( t \) seconds? Hint: Use the graphing calculator to help you make a sketch of the situation.

Identify all of the intervals for which the function is increasing.

\[ \begin{align*} &Z + 1 + 1 + Z \end{align*} \]

Given \( f(x) = \sqrt[3]{x} \) and \( g(x) = \sqrt[3]{x} - 5 \). Which of the following statements are true?

I. \( f \) and \( g \) have the same domain
II. \( f \) and \( g \) have the same range
III. \( g(x) = f(x - 5) \)
IV. \( g(x) = f(x) - 5 \)

III and IV

Let \( f(x) = \sqrt{x} \) and \( g(x) = -\sqrt{x} + 2 - 3 \). Describe \( g(x) \) in terms of the parent function, \( f(x) \). \( g(x) \) is \( f(x) \):

\[ \begin{align*} &? \end{align*} \]

A certain law of motion is given by the equation \( S = \frac{1}{2} t^3 \) where \( S \) is in feet and \( t \) is in seconds. Find in feet per second the average velocity over the time interval \( t = 2 \) to \( t = 4 \).

\[ \begin{align*} S &= \frac{1}{2} t^2 \\ S &= \frac{1}{2} \cdot 2^2 \\ S &= 2 \text{ ft./sec.} \\ S &= \frac{1}{2} \cdot 4^2 \\ S &= 8 \text{ ft./sec.} \\ S &= 32 \text{ ft./sec.} \]
what are grouping options?
your turn...
interest
inventory
Preassessments can be written for a specific project or a longer-term assignment.
Stand Up, Speak Out: A Freedom of Speech Unit

Interest Inventory

The Great American Document
Please check one:
- I have studied the United States Constitution thoroughly.
- I have studied the Constitution and would like to study it again.
- I have never studied the Constitution but would like to.
- I have never studied the Constitution and am really not that interested in it.

Great Speakers
Circle the speaker that you would most like to investigate during this unit of study. These multimedia explorations will include nonfiction books, articles, video clips, and other various print & nonprint sources. Your exploration will be shared with the rest of the class in a presentation.

<table>
<thead>
<tr>
<th>Speakers</th>
<th>1961 Inaugural Address</th>
<th>1963 &quot;I Have a Dream&quot;</th>
</tr>
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<tr>
<td>Famous Line</td>
<td>&quot;And so, my fellow Americans: ask not what your country can do for you -- ask what you can do for your country.&quot;</td>
<td>&quot;I have a dream that my four children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character.&quot;</td>
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1st Amendment Issues
Study the pamphlets given to you today. Which topic would you most be interested in studying for this unit? Number 1 through 4 below. If you have had any personal experiences with a 1st Amendment right that you'd be willing to share, please place a star beside it.

- Freedom of Speech
- Freedom of Religion
- Freedom of Press
- Freedom of Assembly

Student Speeches
Please check all that apply:
- I have researched 1st Amendment issues.
- I have studied how to write a speech.
- I have written a speech.
- I have presented a speech in front of my classmates before.
- I have presented a speech for a competition before.
BEYOND GHOSTS AND GOBLINS: AN EXPLORATION OF FEAR

An Interest Survey

THE CONCEPT OF "FEAR"

Please check the statement that best applies to you:

☐ I can define the word "fear" in more than one way, providing accurate examples for each definition.
☐ I can attempt to define the word "fear" in more than one way, and I may struggle to provide accurate examples.
☐ I have never studied "fear," but I am interested in learning about this topic.
☐ I have never studied "fear," and I am not interested in studying this topic.

"FEARFUL" WORKS

Circle the synopsis that most piques your interest. Keep in mind that the study of your selected piece will include various forms of media, allowing your interpretation/analysis of the piece to be fully immersive.

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<th>An unnamed narrator insists on his sanity after murdering an old man with a &quot;vulture&quot; eye. The murder is carefully calculated, and the murderer hides the body by cutting it into pieces and hiding it under the floorboards.</th>
<th>A guest arrives on a dark and rainy night. The guest has recently returned from colonial India and has in his possession a monkey's paw which is said to be able to grant three wishes to its owner.</th>
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<td>An unnamed narrator decides to read &quot;forgotten lore&quot; by a dying fire as a way to forget the death of his beloved Lenore. A &quot;tapping at [his] chamber door&quot; initially reveals nothing. However, an unexpected visitor traces the narrator's fall into madness.</td>
<td>A creepy, abandoned house overlooks a town. Though residents attempt to ignore the house, strange happenings continue to draw visitors to its door, leading to further discoveries and unpredictable events.</td>
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“FEARFUL” POETRY PRESENTATIONS
If you were asked to present a complete poem, check the method through which you would most like to present:

- In-person read aloud
- Pre-recorded video/audio presentation
- Animated lyric video
- Poster/bulletin board creation
- Dramatic interpretation (staging)

ASPECTS OF “FEAR”
Circle the aspect of “fear” that most interests you:

- How someone reacts (both mentally and physically) when faced with a “fearful” experience.
- How beliefs about death influence overarching “fears” in life.
- How “fears” can influence and/or affect those around us.
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An Interest Survey

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what are grouping options?
your turn...
open-ended questions
what do you know about differentiation?
what are grouping options?
your turn...
five hardest questions (Winebrener)
How do I determine who is learning what content on what level and in what manner?

How do I grade differentiated work?

How can I manage multiple groups in my classroom?

List examples of differentiation strategies that address readiness.

Is it fair to differentiate assessment?
1. $8574 + 3 = 8577$

2. $546 + 9 = 555$

3. $92 \times 58 = 5336$

4. Kate baked 84 muffins. If each muffin tray held 9 muffins, how many trays did Kate use?
   
   $9 / 84 = 9.3$
   
   9 trays

5. 62 fourth grade students are going on a field trip to the museum and will travel by car. If each car holds 4 students, how many cars will be needed?
   
   $15.5 \times \frac{1}{2} = 7.75$
   
   8 cars
what are grouping options?
your turn...
established data

five hardest questions

k-w-l and t-w-h

end-of-unit exam

data

eend-of-previous-unit exam

open-ended question

graphic organizer

Venn diagram

Frayer model/Punnett

interest inventories
not a grade
not supposed to know
opportunity for input
preteach ideas
“Summer’s over kids!
Now, all you round pegs get back into your square holes!”
to differentiate or not to differentiate?
lack of training both in learning strategies and classroom management

why not?

lack of time

management issues

emphasis on content mastery for state assessments

no role modeling

limited resources
Why do children differ appropriately challenging material encourages development of life skills (e.g., organizational skills, time-management, risk-taking, sense of responsibility, work ethic, etc.)

Continuous progress motivates and develops metacognition and autonomous learning

Why do?
note the focus behind the reasons....

• reasons teachers differentiate are student-based.

• reasons teachers do not differentiate are teacher-based.
thank you
tracy.inman@wku.edu