**PRACTICAL DIFFERENTIATION: DOK/HOTS**

**GAGC 2016 HANDOUT**

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**MYTHS OF GIFTED…….**

The Gifted are...

* more prone to emotional disturbance
* have everything going their way
* can succeed without help
* should be valued mostly for their brain power
* are more stable and mature
* should assume responsibility for others
* enjoy being examples to/for other children
* have abilities that are always valued by their families
* excel or exceed the norms in all areas of development
* will always reveal their giftedness
* are high achievers with high motivation to excel in school

**CHARACTERISTICS OF GIFTED…... Remember there is a SHADOW SIDE**

* Conceptual
* Creative
* Critical
* Focused
* Inquisitive
* Verbal
* Versatile
* Well informed
* Humorous
* Idealistic
* Independent
* Sensitive

**THE FIVE C’s OF SUCCESS…… (**Jim Delisle)

* **CONTROL** over at least some aspects of the learning process.
* **CHOICE** in the selection of learning methods, materials and content.
* The **CHALLENGE** to be invited to explore interesting topics in depth.
* **COMPLEXITY** in sharing emerging knowledge in meaningful ways.
* **CARING TEACHERS** who encourage and understand a student’s drive to learn.

**MEMORY PATHWAYS……..**

* **Semantic Memory**- the weakest and most difficult to use; the pathway educators use the most
* **Episodic Memory**- Location driven; enhanced with bulletin boards, costumes, props, etc.
* **Procedural Memory**- found in cerebellum; enhanced by movement; strong
* **Automatic Memory**- also found in cerebellum; enhanced with flashcards, mnemonic devices, repetition, etc.
* ***Emotional Memory****- controlled by amygdala; most powerful*

**DIFFERENTIATION (MATCHING)**

At its most basic level, **differentiating instruction** means “shaking up” what goes on in the classroom so that students have multiple options for taking in information, making sense of ideas, and expressing what they learn.

-Carol Ann Tomlinson

Who benefits from a differentiated curriculum?
How is it beneficial?

* ALL STUDENTS BENEFIT from appropriately challenging learning experiences.
* Teachers benefit because they can target essential skills that all students must have in order to meet school and state accountability requirements.

75-90% of the material assigned to a given grade level is redundant learning for advanced kids. Therefore, much of their class time is spent on tasks that are quite meaningless and frustrating.

**Differentiation can include complex strategies, like writing tiered lesson plans, or it can take a more simplistic form, such as using reading buddies or think-pair-share strategies. Here is a condensed list of the continuum of differentiated strategies.**

**Remember that differentiation always teaches UP; never down.**

**HIGHER PREP STRATEGIES**

* Tiered Lessons (activities and products)
* Tiered centers
* Choice Boards
* Multiple Texts
* Course Compacting
* Flexible Grouping
* Think-Tac-Toe
* Students Assessed in Multiple Ways
* Interest Centers
* Graphic Organizers Response/Exit Cards Multiple Texts

**LOWER PREP STRATEGIES**

* Reading & Study Buddies Anchor Activities Think-Pair-Share Choices of books
* Interest Surveys
* Multiple Levels of Questioning
* Homework Options
* Options for Competition
* Explorations by Interest
* Various Journal Prompts

**DOK- 4 LEVELS OF THINKING**

**Level 1**—Recall level of facts, information, or procedures

**Level 2**—Skill or Concept level where students classify, organize, estimate, collect, display, observe, & compare data.

**Level 3**—Strategic thinking where students reason, plan, make conjectures, and support it with evidence.

**Level 4**—Extended thinking and is characterized by complex reasoning and interdisciplinary connections (Levels 3 and 4 are where we should focus a high percentage of instruction)

**It is not necessarily about the VERBS as in Blooms!**

* 1. **Level 1**—Explain John Brown’s antislavery views.
	2. **Level 2**—Explain how John Brown’s actions are perceived by people today.
	3. **Level 3**—Explain how John Brown can be viewed as both a revolutionary and an insurgent.
	4. **Level 4**—In an original way, explain the possible thought processes that led to John Brown’s actions.

**Level 3 (Strategic Thinking)**

* Revise
* Develop a logical argument
* Draw conclusions
* Assess
* Investigate
* Cite evidence
* Hypothesize
* Critique

Level 3 Activities

* Supports ideas with details and examples
* Use voice appropriate to the purpose and audience
* Identify research questions and design investigations
* Develop a scientific model for a complex situation
* Determine author’s purpose and describe how it affects the interpretation of a reading selection
* Apply a concept in other contexts

Level 3 Examples

* Create an open sort and define the rule and explain.
* Using a graph, predict how many teeth would be lost by all the 2nd grade classes in the school and justify your answer.
* Investigate how many people are coming to dinner and formulate the appropriate amounts of ingredients for 8 people.

**Level 4 (Extended Thinking)**

* Design
* Connect
* Synthesize
* Critique
* Analyze
* Create
* Prove
* Apply concepts

Level 4 Activities

* Conduct a project that requires specifying a problem, designing & conducting an experiment, analyzing its data, & reporting results/solutions.
* Apply mathematical model to illuminate a problem or situation
* Analyze and synthesize information from multiple sources
* Describe & illustrate how common themes are found across texts from different cultures

Level 4 Examples

A. At the end of the insect unit—

You are an insect!

* Create a journal entry in which you survive a 24 hour period in our classroom.
* Create a second journal entry in which you survive a 24 hour period on our playground.
* In a third journal entry, prove which habitat is best suited for your survival.

B. Come up with a model to estimate how many teeth are lost by 2nd grade students in the U.S. in one year. Include the type of data you would need to collect and explain how your model works.

C. Design a plan to feed the entire class using the following information: 1 jar of peanut butter makes 10 sandwiches, one jar of jelly serves 8, and one load of bread contains 18 slices.

**HOTS (Higher Order Thinking Skills)**

* Higher order thinking is not dosed in isolation but administered regularly.
* Higher order thinking is not a separate activity that students complete after their regular class work is done. If it is done within the regular lessons, then everyone gets the benefit of developing their higher order thinking skills.

**Bloom’s Taxonomy**

**What Questions Should We Ask?**

* ***Analysis/Analyzing*** –
Identify in-depth relationships; understand how parts relate to the whole; note fallacies.
* ***Evaluation/Evaluating –***
Make judgments based on evidence; determine and consider the value of something.
* ***Synthesis/Creating –***
Create new ideas by pulling parts of information together; reform individual parts to make a new whole

**Analyzing Sentence Stems…**

* What message is implied by …?
* Where else have you seen the same theme or message?
* How does … compare to …?
* What motive is there…?
* Make a distinction between …
* How would you classify …?
* What conclusions can you draw…?

**Evaluating Sentence Stems…**

* Did … make the right decision?
* Could this really happen?
* Would it be better if …?
* How would you prove or disprove …?
* What data could be used to conclude …?
* How would you prioritize …?
* How would you rate …?

**Creating Sentence Stems…**

* What if …?
* What changes would you make to … to make it better?
* What would be a good sequel to this book (problem)?
* How could you create a new …?
* How could you design ….?
* What kind of game could teach …?

**TAKE AWAYS:**

* **BAG IT**- Each student or group is given a bag and assigned a concept or topic studied. The students should write information about that concept or topic on small scraps of paper and put them in the bag. They may also decorate the outside of the bag relating to the concept. Pass the bags around for review. (Use colored strips for specific groups- that is how the teacher can go back and see if the groups “have it” or not.)
* **CHALK TALK-** The teacher places large sheets of poster paper around the room with statements, questions, or comments from current unit of study. The students travel around the room in small groups writing responses to the teachers’ statements as well as other students’ statements. Each response station is timed. Students are allowed to rotate back through to read all the responses or the teacher shares with the whole class.
* **THINK-INK-PAIR-SHARE**- In pairs, students are given a vocabulary word or concept. Each pair is given 1 minute to think about that word, 1 minute to write all they can about it, 2 minutes to share it with a partner, then 1 minute per partner pair to share with the class. (Should take approximately 16 minutes with a class of 24, reviewing 12 words or concepts.)
* **SENTENCE EXPANSION-** Expand this sentence to at least 15 (or whatever amount you choose) words using the information that you gained from the text.

 **Example**: **Sediment accumulates.**

Over time sediment accumulates in lakes, oceans, and land areas and eventually builds up layers that weigh down the materials trapped underneath. (22 words)

* **WOULD YOU RATHER BE. . . . ?** Great for solidification of the understanding of concepts or vocabulary, this technique is a forced choice activity asking students to choose by standing on one side of the room or another if they would rather be \_\_\_ or \_\_\_. For Example . . .

Would you rather be a right angle or an acute angle?

Would you rather be a period or a comma?

Would you rather be a verb or a noun?

Would you rather be a democracy or a dictatorship?

Would you rather be cumulous or nimbus?

* **SCAMPER**SCAMPER is an acronym for useful list of words that can be applied as stimuli to make you think differently about the problem area.

 **S**ubstitute

 **C**ombine

 **A**dapt

 **M**inimize, Magnify, Modify

 **P**ut to other uses

 **E**liminate

 **R**earrange, Reverse

Sample SCAMPER Activity

Using SCAMPER create a natural disaster hat. You may choose hurricane, earthquake, tornado, or volcano. The hat should be easy to store and readily available to anyone who finds themselves a victim of a natural disaster. Give your hat a name and plan a commercial to sell your hat.

* **PICTURE THIS…**

Provide multiple pictures available from magazines, personal photos, thought- provoking images, etc. and allow the student to free write or choose a general written prompt or two (providing choice) that can be used while looking at the picture.

 An example of this type of question could be to write about what you think occurred right before and/or after this photo was snapped.

For example if 5th graders are learning about the Revolutionary War, provide examples of multiple images of the RW to use for their writing inspiration and choice board activities.

* **PHOTO PEAK…**

Show only a portion of the photo at a time (can be quadrants of photo or just selected areas), eliciting a response either verbal or written before finally revealing the entire photo.

* **WRITING ROULETTE**

For 2 minutes: Write everything you can think about the word below.

 **ASTRONOMY**

For 1 minute: Trade papers and read your partners paper.

For 2 minutes: Write anything you thought of after you read what your partner wrote

For 2 minutes: Get your paper back and read, then discuss what you and your partner wrote.

**TECHNOLOGY TOOLS**

* <http://www.byrdseed.com/> (Site with lessons/activities and all things concerning gifted children)
* [http://ncaig.ncdpi.wikispaces.net/AIG~IRP+DRAFT+Resources](http://ncaig.ncdpi.wikispaces.net/AIG~IRP%2BDRAFT%2BResources) (NCDPI Resources that are posted for review. These lessons are not “print ready” but do provide a starting point.)
* <http://www.landmark-project.com/classweb/tools/rubric_builder.php3> (Rubric builder)
* <http://www.rtsd.org/cms/lib/PA01000218/Centricity/Domain/815/Differentiating_Math_for_Gifted.pdf> (Differentiating Math for the Elementary Child, full article)
* <http://prezi.com/index/3/> (Power Point alternative that makes engaging presentations.)
* <http://www.learnnc.org/lp/pages/6672> (LEARN NC)
* <http://rarehistoricalphotos.com/category/usa/>

 **REVISED BLOOM’s and WEBB’S DOK WHEEL COMBINED MATRIX**

