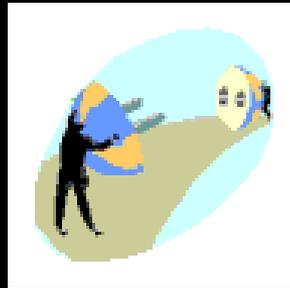# Differentiation Strategies for High-End Learners: A Response to Instruction

KEEPIN' IT REAL

REAL WORLD CONNECTIONS & COMPETITIONS

Real World Connections: Pre-assessment

1. Which of the following are examples of real-world connections?

      A. Reading the text and answering the chapter questions.
      B. Incorporating a current event into a unit of study.
      C. Involving the class in a Service Learning project.
      D. Kids identify a need in the school or community and follow up with some sort of action.
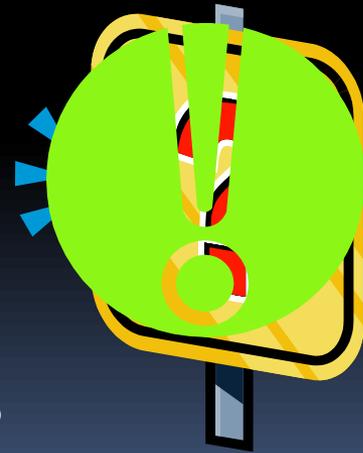   E. All of the above.

Real World Connections: Pre-assessment

2. Which students benefit from authentic assignments with real-world connections?

A. All

B. None

C. Only gifted students

Real World Connections: Pre-assessment

3. The level of retention of information is highest when students

A.   Read about it.
B.   Hear it in a lecture.
C.   See it.
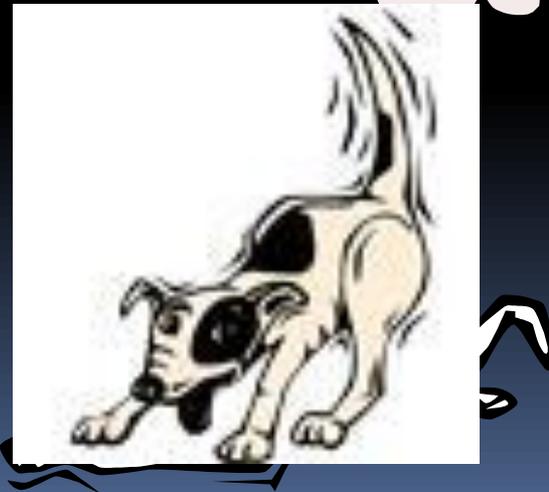D.   Act on it.
E.   Act on it and then
     discuss it.

Real World Connections: Pre-assessment

4.   Real world connections can make student discussions too disruptive and cause loss of valuable classroom time.

A. *True*

B. *False*

C. *Don't Know*

Real World Connections: Pre-assessment

6. Report card grades or numerical scores are the only effective methods for evaluating authentic student products.

      A. True
      B. False
      C. Don't Know

Real World Connections: Pre-assessment

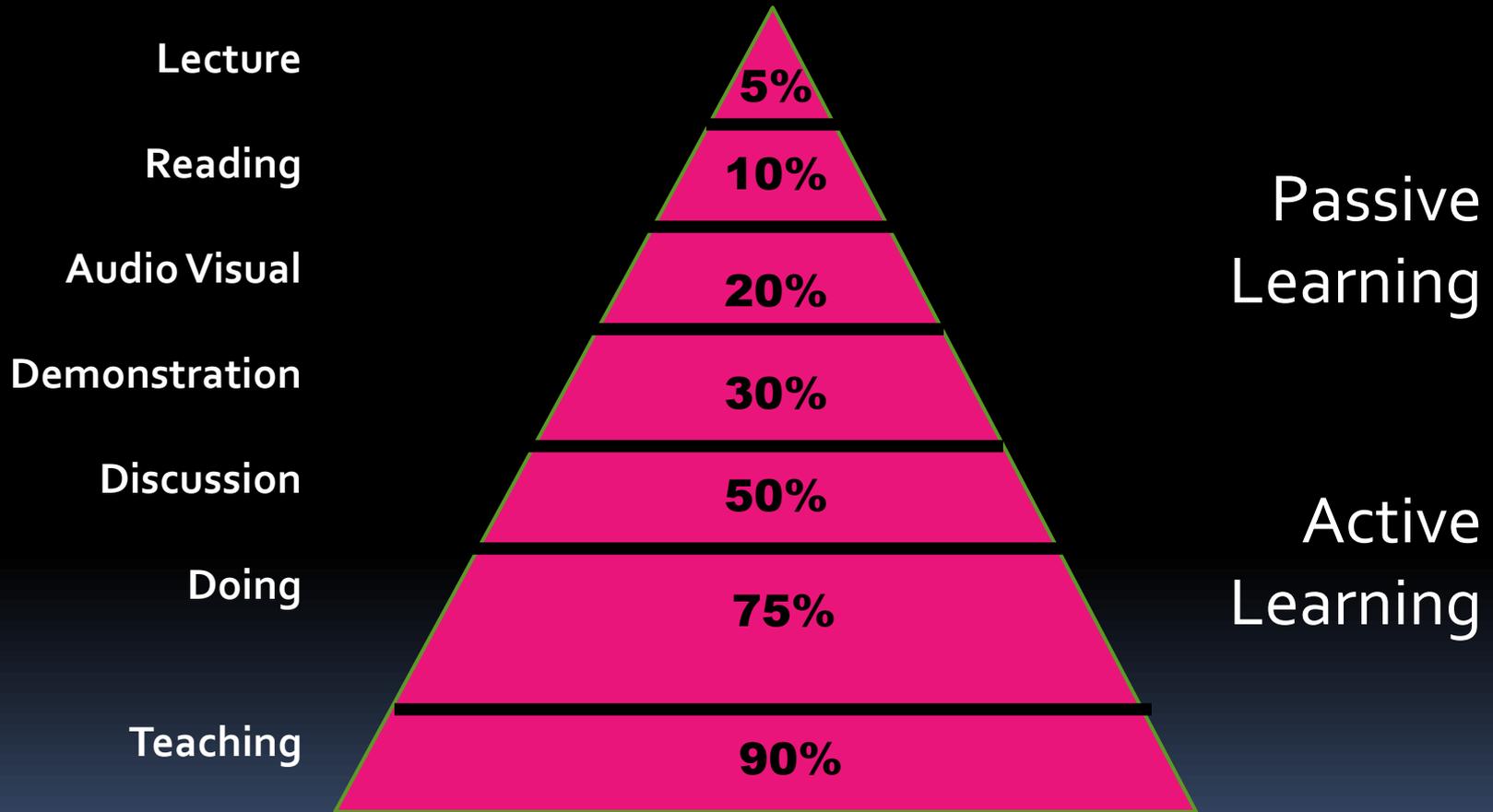**6. What grade level and subject do you teach?**

Real World Connections

- Why are real world connections important?
  - Make school and learning relevant now- not just in the future
  - Help students understand why they need to know
  - Facilitate student engagement
  - Lend urgent purpose to reading, writing, and research
  - Students learn that some questions can have more than one correct answer or, in some instances, no known answer
  - Increases creativity and problem solving ability

Retention Levels

Lecture — 5%

Reading — 10%

Audio Visual — 20%

Demonstration — 30%

Discussion — 50%

Doing — 75%

Teaching — 90%

Passive Learning

Active Learning

"I hear and I forget. I see and I remember. *I do and I understand.* "

-Confucius

Real World Connections

- Types
  - *Service Learning*
  - *Problem-based Learning*
  - Creative Problem Solving
  - Teachable moments
  - What? So What? Now What?
  - *Simulations*
  - Using Primary Documents
  - *Real world competitions*

  *Require students to use the language of the discipline and may produce authentic products

What is Service Learning?

Students learn through performing a service to solve, or work toward a solution to a real-world problem.

Students learn the necessary skills to solve the problem as they work through the problem on a "need to know" basis or as "on the job" training, also applying skills already learned.

- What are some necessary skills in order to solve the following problem?

  - School lunches are unpopular with students who are wasting huge quantities of food by throwing it away. They decide to do something about it.

What is Problem-based Learning?

Students solve a simulated problem posed by a teacher, Web Quest, or other source. The problem is based on a scenario that may be based on past, current, or future reality.

Simulations are open-ended and require students to think and act as disciplinarians in one or a variety of professions.

- Example

In the year 2020, an alien vehicle has crash landed on earth. The inhabitants are found unconscious, but alive. No common language exists for communication with them. Earthlings wish to learn more about them, but they are afraid that the unintended visitors may bring them harm.

What should be done? What professionals would be needed to assist in solving the problem?

What is Creative Problem Solving?

Creative Problem Solving is a model for solving open-ended problems or achieving a goal through a series of steps consisting of data collection followed by questions that alternate between diverse and converse thinking until a solution is found.

There are no single, correct answers, and no wrong answers if the solution is backed by logical thinking.

- Step 1- Mess Finding
  - Formulate or record the problem or "messy situation" in as much detail as possible.

- Step 2- Fact Finding
  - Analyze the situation by recording facts or collecting data.

- Step 3- Problem Finding
  - Think of many, different possible factors contributing to the main problem.

  - Decide logically what is the most important factor which, if solved, would alleviate the major part of the problem.

Creative Problem Solving Continued

Creative Problem solving was adopted by NASA and various other businesses and organizations as a model for solving complex problems in the work environment.

Ask your gifted specialist to assist if you decide to implement this real-world problem solving strategy.

- Step 4- Idea Finding
  - Think of many, different possible ideas for solutions to the major part of the problem.

- Step 5- Solution Finding
  - Decide logically on one solution.

- Step 6- Acceptance Finding
  - Make a plan for implementing the chosen solution.
  - Implement the chosen solution

Teachable Moments

Students or teacher note something happening in the real world- at school, in the community, or globally.

Students and teacher explore or research together to find out more about the situation, incident, etc. sometimes tying it to a larger theme or concept that has been or will be taught.

- Example
  - During a PTA celebration and culmination of a fund drive, the top-selling student was allowed time inside a "money" machine. While an electric fan blew dollar bills around inside a transparent tent, the participant scrambled to grab as many as possible in a given amount of time. The excited audience lost control and a riot broke out as some rushed to seize the money from the recipient as he exited the machine.

What? So what? Now what?

These 3 questions can turn an ordinary , fact-filled report, at Bloom's levels of *knowledge* and *comprehension* into into a real-world project involving *application*, *analysis*, *evaluation*, and *synthesis.*

- Example: A report on the Stock Market Crash of 1929
  - *What?*
    - *What* happened?
    - *Why* did it happen?
  - So what?
    - *Why* is it important to know?
    - *How* did it change the lives of those involved, the community, the world?
    - *What* are patterns, trends or themes?
  - Now what?
    - Now that I know, what can I or someone else do about it?

Simulations

Participating in the role of a professional or a variety of professionals, students study and use the skills and the language of appropriate disciplines in order to experience a life-like situation.

OR

They may experience historical situations in a life-like way in order to see different perspectives.

- Example
  - Students in a 7th-8th grade history class attended class in a simulated World War I bunker. They read, researched, wrote, participated in drills and other assignments in the bunker as the sound of "shells" whistled through the air, artillery blasted, and water from "drenching rains" dripped on their heads.

Primary Documents

Primary documents can consist of original letters, diaries, or accounts from a person who witnessed or experienced a historical event.

OR

They may be an actual painting, song, manuscript, notes, photographs, or other examples of original works.

- Students watch actual television advertisements collected from the 1950's depicting products of interest to women.

- What can they surmise about the social position of women in America at that time?

Schoolhouse learning or keepin' it real?

❑ Students in a physical science class prepare science experiments for the displays in a local hands-on children's science museum.

Service Learning

❑ Students in a middle school general math class build a playhouse for Kindergartners to use on the school playground.

Service Learning

❑ Students notice an inordinate amount of bullying by students in the school. They undertake a project to find out why and to solve the problem.

Creative Problem Solving

Schoolhouse learning or keepin' it real?

❑ Students are given a pop quiz on current events.

<p style="text-align:center; color:magenta;">Schoolhouse learning</p>

❑ A student shares a newspaper article on the revolutions in the Middle East. The class is studying different types of government in civics class. They compare the different types of governments in these countries to a democracy and decide to do various projects to show how these revolutions are similar to and different from the American Revolution. They compare how their lives might be different if they lived in one of the Middle Eastern countries.

<p style="text-align:center; color:magenta;">What? So what? Now what?</p>

Schoolhouse learning or keepin' it real?

❑ Students enter class grumbling and arguing about "unfair" treatment as the school has just adopted a policy requiring students to wear school uniforms. The teacher organizes a discussion on free expression and students prepare a petition to present to the principal, based on Constitutional rights.

Teachable moment

❑ While cleaning out the attic, a students comes across letters exchanged between her great grandmother and a soldier in World War II.

Primary Documents

Schoolhouse learning or keepin' it real?

Students learn the format for writing friendly and business letters by following the text directions.

Schoolhouse learning

Students write and mail letters to the City Council about the need for more funding for the local animal shelter. In addition, some students decide to plan a rally and a fund raiser to raise money for the shelter.

Service Learning

Students work through the problems on measurement in the text book.

Schoolhouse learning

How can you keep it real?

- You teach a geometry class. You have been studying about triangles.

- Your History class will be studying a unit on conflict.

- Your Language Arts class has just completed a study of a number of books by Eric Carle.

How can you keep it real?

- In PE class, you have noticed that one child is always the last to be chosen to be on a team. His/her body language suggests depression.

- Your Social Studies class is studying about the Civil Rights Movement.

- In Science class, you are studying outer space and space travel.

Real World Connections

- Web quests

  - Visit the website at (www.webquest.org and choose one.

    OR

  - Create one of your own. Example:
    - Create a web quest about a given country or society.)
    - Take your classmates on a virtual tour of an ancient civilization. You decide the highlights of the trip based on the big ideas, themes, and lessons to be learned from the civilization.

Real World Competitions- Another way to keep it real

Stock Market Game (3-12)

Science Olympiad (K-12)

Envirobowl (7-12)

Robotics (5-12)

Odyssey of the Mind (4-12)

Future Problem Solving (4-12)
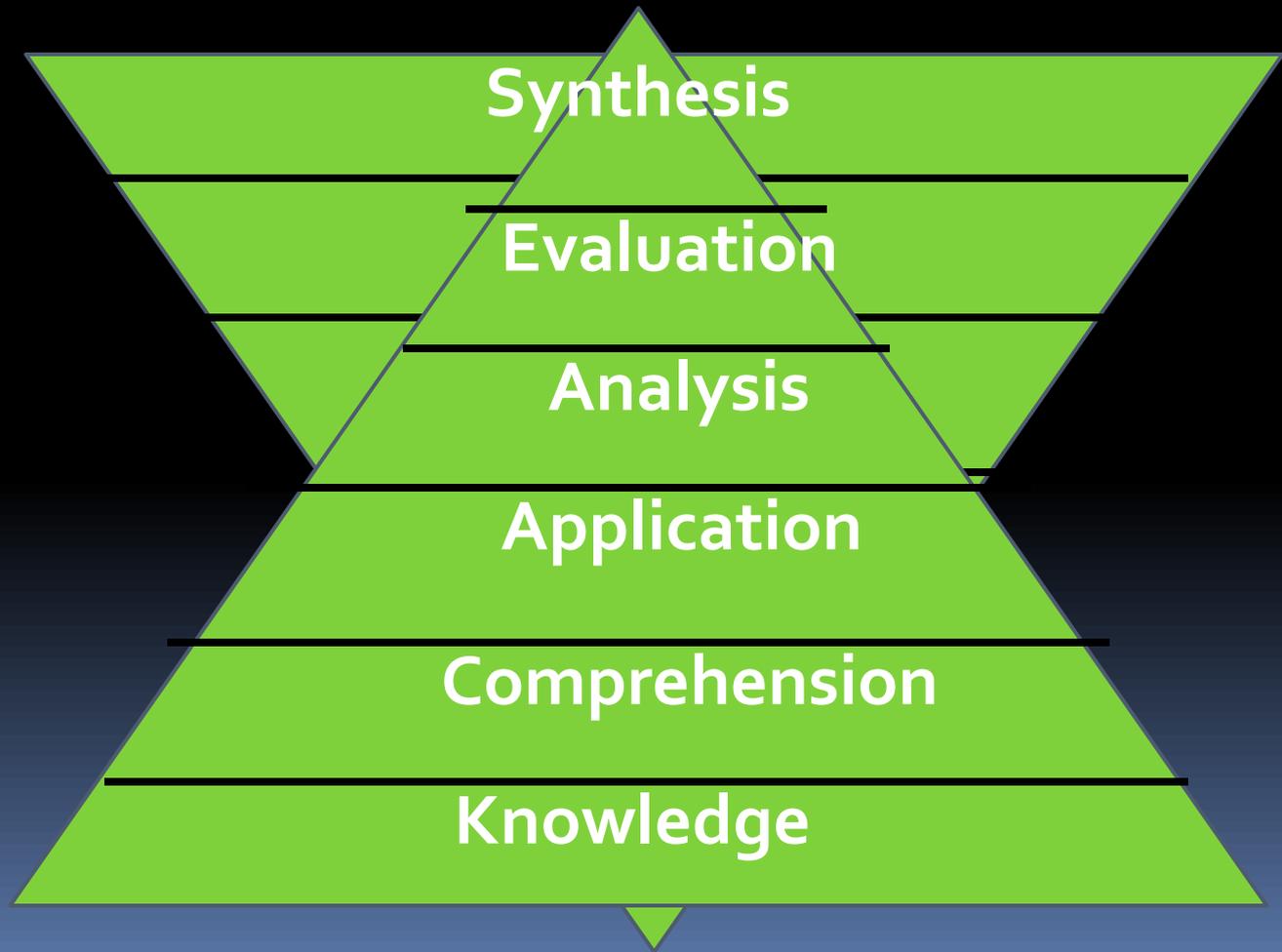
Think Quest

ACTE Technology Fair

Real World Connections

- How do I Evaluate Student Performance besides using traditional grades?
    - Authentic Products
    - Rubrics
    - Reflection Journals
    - Teacher Observation
    - Teacher Conference with Student

Real World Connections

Special Needs of Gifted Students

- Real world assignments and competitions appeal to the special needs of gifted students.
- Depth
- Complexity
- Opportunities to express creativity
  In their areas of giftedness

Why should we teach using real world connections?

"We are attempting to educate students today so that they will be ready to solve future problems that have not yet been identified using technologies not yet invented based on scientific knowledge not yet discovered."

J.J. Lagowski

What are YOUR ideas for how to include real-world connections in your classroom or school?

Real World Connections

- Upload your lesson plan to the Moodle Class website.
- Elementary : **http://atim.cc/course/view.php?id=377**
- Teach the lesson
- Follow-Up:
  - Webinar to discuss the effectiveness of the lesson and how to continue improvement   **Date: 3/29**
  - WIKI to write a minimum of four paragraphs reflecting on the effectiveness of the lesson and how to continue improvement. In addition, post feedback to two other teacher postings.

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