DI Asia Summit

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Teaching Gifted or Advanced Students: What Works and What Doesn't?

For further conversation about any of these topics:

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Petals Around the Rose

The name of the game is, "Petals Around the Rose." The name is very important. For each roll of the game, there is one answer, and I will tell you that answer.

Petals Around the Rose

6

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10

Petals Around the Rose

Clues to give students if they struggle:

1. *All the math you need to slve this problem you learn in kindergarten or before.*

2. *The sequence of the dice patterns has no bearing on the answer.*

DIANE HEACOX, Ed.D. | RICHARD M. CASH, Ed.D.
Differentiation for Gifted Learners
Going Beyond the Basics

Susan Winebrenner's
TEACHING Gifted Kids IN Today's Classroom
Revised & Updated Third Edition
Strategies and Techniques Every Teacher Can Use
with contributing author Dina Brulles, Ph.D.

What tethers us to ineffectiveness and low morale? What is no longer supportable in modern education?

Assuming gifted students can teach themselves, 'no need to be explicit

Disprespectful Tasks: Asking advanced students to "spin their wheels" while classmates catch up

Assuming "cognitively/physically advanced" means, emotionally advanced as well.

Assuming that just because students are gifted that they know how to read

Prohibition on students students skipping grade levels

Forgetting that students can be twice exceptional

'Want a successful gifted ed program? Pay attention to…

The Intellectual Life of Teachers

In some schools, there is a pervading, anti-intellectual bias.

It is more effective to build teacher professionalism and intellect than it is to enslave teachers to thoughtless automations.

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If we find ways for educators to experience curiosity, awe, induction, deduction, analysis, synthesis, resilience, empathy, extrapolation, juxtaposition, and other mental dexterities in their own development, they are better thinkers with our children. They can solve their own problems, connect with students, innovate their way to meaningful lessons, and persevere in the midst of challenge.

- Rick Wormeli

Pictured: Professor and author, Tan Oon Seng, Dean of Singapore's National Institute of Education's Office of Teacher Education. This is a photo from the Februrary 2012 article, "Becoming a Thinking Teacher," found at http://singteach.nie.edu.sg/issue34-teachered/

**Build It, and They Will Think
– A Starter Kit for the Intellectual Life of Teachers:**

Start or participate in an Edcamp experience. It's the organic, unconference for those of us tired of unmeaningful in-service training where one listens passively to someone at the front of the room for hours. To find a dynamic Edcamp experience near you, visit http://edcamp.wikispaces.com/.

(http://www.youtube.com/watch?v=I7DwCI7j0Bg)

- Create an actual committee dedicated to the intellectual life of teachers in the school or district. Identify courses at local museums/universities, invite guest speakers on diverse, innovative topics, and provide programs to cultivate teachers' robust intellectual engagement as a companion to the many courses already offered in the district's staff development catalog. Encourage teachers to take courses unrelated to the subjects they taught and to try something with which they have no previous experience.

- Play Minecraft and other world-building, interactive, on-line or single-player games.

- Study video production (you can get editing suites fairly cheaply today, even for Smart phones), then write and produce short education videos you and others can use in the classroom. Invite former students join you. If ambitious, begin your own channel of instructional videos on Youtube.com or use the videos to provide some on-line tutorials and flipped classroom experiences.

Participate in the larger profession.

Professional inquiry via personal action research projects, Professional Learning Communities, subscriptions to professional journals, participation in on-line communities: listervs, Twitter, Blogosphere, Webinars, Nings, and Wiki's; professional conferences, instructional roundtables in the building

We get more ideas/tools, and creative people are inspired by people around them.

Regularly do automatic tasks and let the mind roam.

Walk, run, drive a long distance without listening to music, take an extended shower or bath, wash a lot of dishes, mow the lawn, weed the garden, paint a room, crochet, clean gutters, shovel snow, stare at the ocean, watch birds for 45 minutes, swim freestyle, water walk, or tread water for an extended time. All of these put us in a more associative state.

- Study motivation of today's students in greater depth. It takes intellectual heft to help students find meaning and motivation in assigned learning. Effective teachers don't yield to simplistic rewards/punishments or grading policies to motivate students' cognitive efforts. Specifically, seek information on self-efficacy, executive function, attribution theory, and self-determination theory.

- Require divergent thinking and inspired efforts in students' work. If we inspire students to challenge themselves and create products that are truly amazing for them, it inspires our own intellect.

- Reconsider unit sequences: A later one should be taught earlier, or perhaps instead of doing a bunch of disconnected units on different topics, we can move through all the topics historically: What did we know about cells, plants, animals, and the microscope in the 1920's, then in the 1940's, the 1960's, spirally through to the modern world?

- Mentor a new teacher as he or she prepares for their first or second year of teaching. It helps you reflect on your own practices.

- Unpack the standards you have to teach in terms of the evidence you'll accept for mastery of each one. This takes real intellectual fortitude and expertise. It often takes two to three years to do one year's worth of curriculum.

- Finally watch all those TED talks related to education you've been meaning to watch. There might be something you can use.

- Write for education publications. Analyzing what you do and explaining it and larger issues in a compelling way to others clarifies and transforms our thinking. If you're interested, I have a PowerPoint presentation with suggestions on how to write education articles/books that I can send you.

Apply for National Board Certification. It's one of the most transforming and professional experiences you'll ever have. Each of us who has gone through the process claims that we are dramatically better teachers for having gone through the experience, regardless of whether or not we are Nationally Board Certified in the first attempt. To get details, visit www.nbpts.org. Most districts have support classes for National Board Certification – Join them.

- Get exercise. Getting the heart rate up, endorphins pumping, muscles loose, and oxygen to the brain does wonders for the mind. Walk, hike, jog, kayak, climb, bike, blade, dance, swim, lift weights, jump rope, play basketball, do workout DVD's, or do yoga, but get moving for 45 minutes or more at least three times a week. It might be time to get a personal trainer, if you can.

- Hydrate. Seriously, water your brain and it will grow.

- Change your physical location. When we're in different countries or different regions of our own country or town, it stimulates the mind. On a smaller scale, rotate classrooms and meeting spaces for department/faculty meetings.

Try bike tourism. There are many agencies that facilitate bike tours, even for the occasional biker. Explore new geographic regions, cities, historical sites, and more.

- Change to a heart-healthy diet. It turns out what's good for the heart is often good for the mind.
- Learn to use at least five technologies new for you: Twitter, virtual tours, VideoScribe, QR codes, apps, on-line tutorials, Google Docs, MOOCS, crowd-sourcing, MIT Open Courseware, screencasts, Voicethread, Fivver, Moodle, Prezi, iMovie, Edmodo, Promethean/Smartboards. Take an on-line course.
- Learn to play a new musical instrument, incorporate a new art technique, or speak a foreign language.

Learn to play chess or Bridge. Contact the American Contract Bridge League for instructors in your area.

- Take behind-the-scenes tours of museums, factories, wineries, theaters, government bodies.
- Design and market a new game or app for a chosen technology or facilitate students creating them.
- Coach Odyssey of the Mind (www.odysseyofthemind.com) or debate teams (www.idebate.org, www.americanforensics.org/forensics) for competition.
- Learn to cook a specific cuisine or a variety of breads.
- Do logic puzzles (Start with www.logic-puzzles.org)
- Write your first short story or novel for publication.
- Journal or Blog on topics of interest twice a week.

- Get involved in a community theater production, summer youth sports programs, or play in a local musical performance.
- Turn off the t.v. Listen to audio books or radio theater productions. Cultivate the theater of the mind.

- Try your hand at stand-up comedy at a local club.
- Participate in a group ropes course with colleagues and friends.

Consider Using
Google's Policy

For every four hours
spent working on

…official company projects, we are required to work for one hour on something that really interests us.

Vulnerability is not weakness, and that myth is profoundly dangerous. Vulnerablity is the birthplace of innovation, creativity, and change.

- Brene Brown

- Reflect on how you're different than you were 10 years ago and where you'll be 10 years from now. Identify decisions you've made to get to who you are today and what you will need to make in order to achieve your personal goals.

- Join a church, synagogue, or mosque retreat.
- Start a book or philosophy discussion group.

'PREJUDICES
ARE WHAT
FOOLS USE
FOR REASON.'

FRANCOIS VOLTAIRE

If you choose
not to decide,
you still have
made a choice.

-    Rene
Descartes
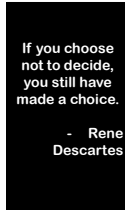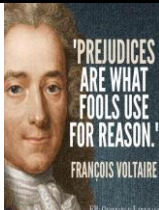
Without mental catalysts, creativity atrophies and teaching suffers. When we pay attention to our intellectual lives, we make connections, spark insights, and remain mindful of the student's journey and our role in it. We're excited to greet the day, and problems are solvable. Igniting teacher intellect is a prime energy source for the learning dynamo in every classroom. It's an overt act of school improvement.

Schools aren't meant to meet the needs of diverse students.

'Anyone out there know me?

It is counter-cultural, subversive, to differentiate instruction .

Identify how your lessons and interactions reflect expertise with the unique nature of the students you serve.

Remember, they're 12 years old first, gifted second.

Example:
The Unique Nature
of Young Adolescents

Physical activity
➢ **Creative expression**
➢**Positive social interactions**
➢ **Structure and clear limits**
➢**Achievement and competence**
➢ **Opportunities to define who they are**
➢ **Connection to adults and community**

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Principles for Teaching Advanced Students

- No matter what readiness level, we teach essential and enduring knowledge first or at least at the same time as advanced standards.
- The teacher doesn't have to know it all. He has to facilitate the learning.
- Advanced experiences illuminate more material during the course of the year, whether by moving more rapidly, by exploring concepts in greater depth, or by offering more breadth in the field of study.

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Advanced students encounter higher order thinking skills (analysis, synthesis, evaluation, application, deduction, induction, justification) as standard operating procedures, not something newly introduced.

- In advanced experiences, tangential thinking is invited.
- Subjects are integrated to a larger extent.
- Advanced students often think academic struggle is a weakness, something to avoid. We teach otherwise. Challenge and struggle are academically virtuous.
- Enrichment does not equal fluff. All activities are substantive.
- Advanced students usually have longer attention spans.

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- With advanced students, we affirm effort and perseverance, not how intelligent or capable they are. They can be impatient.
- Advanced students tend to appreciate the teacher's use of humor more than other students do.
- We don't require as much practice, moving students quickly into experimentation phase.
- We affirm and use shared leadership in the classroom.
- Textbooks and novels are resources, not the curriculum.
- Primary sources in research are more heavily valued.

In general, advanced students do not like whole novels to be read to them. Excerpts are fine.

-                      Advanced experiences expose students to a larger variety of language and literature.
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-                      Non-traditional grammar, sentence structures, vocabulary words and writer's voice are encouraged. Students have a large vocabulary and they use it.
- Assessment is more authentic and alternative assessment is are more likely to occur in advanced experiences.
- Advanced students respond well to increased autonomy.

- We intentionally provoke thinking and confront the status quo and invite students to do the same.
- There can often be a wider range of readiness levels in a classroom of advanced students than there is in a classroom of general education students.
- Advanced experiences will have some unique opportunities: Socratic Seminars, debates, working directly with experts in the field, integrating subjects.

Inquiry Method

1. Something <u>arouses students' curiosity</u>.

2. Students <u>identify questions</u> regarding topic. There is usually one main question with several sub-questions that help answer the main question. These questions are submitted to classmates for review.

3. Students <u>determine the process of investigation</u> into topic. Their proposal for how to conduct the investigation is submitted to classmates for review and revision as necessary.

4. Students <u>conduct the investigation</u>.

5. Students <u>share their findings</u>.

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Socratic Seminar

<u>Pre-Seminar</u>:
A.   Shared experiences, chosen for richness of ideas, issues, ambiguity, "discussability"
B.   Students reflect on material
    Group dynamics, ground rules, and courtesy are understood and accepted.

<u>Seminar</u>:
A. Teacher asks a provocative question. Opening, Core, and Closure Questions
B. Students respond to the provocative question and each other.
C. Teacher offers core questions that help students interpret and to re-direct, also evalutes and tries to keep mouth shut.
C. Closing – connect to the real world of the student

<u>Post-Seminar</u>
    Writings, Summations, Artwork, Reflection, Critique, Analysis

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Debate Format

1. Statement of the General Debate Topic and Why it's Important – 1 min.
2. Affirmative Position Opening Remarks – 3 min.
3. Negative Position Opening Remarks – 3 min.
4. Affirmative Position Arguments – 5 min.
5. Negative Position Arguments – 5 min.
6. Caucus – Students on both teams consider their arguments and rebuttals in light of what has been presented. – 3 min.
7. Affirmative Rebuttal and Questioning of the Negative's Case – 3 min.
8. Negative Rebuttal and Questioning of the Affirmative's Case – 3 min.
9. Closing Arguments Affirmative Position – 2 min.
10. Closing Arguments Negative Position – 2 min.

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Meeting of Minds
at Rachel Carson Middle School
Portrayals of Dr. Sally Ride, Albert Einstein, Josef Stalin, Bob Dylan, Boss Tweed, Dr. Robert Oppenheimer, Senator Joseph McCarthy, the Unsinkable Molly Brown, Rosa Parks. In the background: Advisors for each historical figure

- We still make the implicit, explicit and not assume anything.
- We compact the curriculum for advanced students as warranted.
- Advanced students often perceive subtlety and nuance. We notice it, too.
- Advanced students embrace complexity, often transcending simplistic or binary responses.
- Advanced students can often lose track of time, space, and people; they easily enter, "Flow."

Advanced students are often quite good at switch-tasking.

Independent studies (orbitals), adjusted prompts, and learning contracts work.

Advanced students appreciate patterns and connections and rarely leave content to its individual pieces.

Integration with fine and performing arts works well with advanced students, even with those not advanced in those arts.

Moving Content into Long-term Memory

Students have to do both,

Access ⟶ Sense-Making

Process ⟶ Meaning-Making

Universal Design for Learning

Principle I: Provide Multiple Means of Representation (the "what" of learning), multiple ways for students to perceive and comprehend information

Principle II: Provide Multiple Means of Action and Expression (the "how" of learning), multiple ways for students to interact and process content and skills, including how to express what they know

Principle III: Provide Multiple Means of Engagement (the "why" of learning), multiple ways to build and sustain motivation and perseverance

- www.udlcenter.org/aboutudl/whatisudl/3principles

The Value of Pre-Assessments for Gifted/Advanced Students

Teacher Focus

- To make informed decisions about the next steps in students' instruction

Student Focus

- To provide highly motivating Growth-Over-Time perspective

- To prime the brain, 'putting important content on student's "radar scope" for elevated attention during learning

Advanced Thinkers…

- Concede ignorance when they are ignorant.
- Find out what's going on.
- Respect intellectuals and don't deride them.
- Speak out *after doing their homework*.
- Examine superstitions.
- Play thinking games and amuse themselves by trying to answer puzzle questions.
- Become more informed about history than they are.

Advanced Thinkers…

- Aren't afraid to change their minds.
- Are aware that their opinions, assumptions, and beliefs are often affected by peer-group pressure.
- Are realistically skeptical – even of leaders.
- Recognize that they have personal prejudices.
- Do not to fall in love with their first answers.

[from Steve Allen's book, *Dumbth: The Lost Art of Thinking: with 101 Ways to Reason Better and Improve your Mind* (Prometheus Books)]

"Little Geniuses"
(Article by Thomas Armstrong about alternative giftedness).
http://www.thomasarmstrong.com/articles/geniuses.htm

- Acting Ability
- Adventuresomeness
- Aesthetic perceptiveness
- Artistic Talent
- Athletic prowess
- Common sense
- Compassion
- Courage
- Creativity
- Emotional maturity
- Excellent memory
- Imagination
- Inquiring mind
- Intuition
- Inventiveness
- Knowledge of a given subject
- Leadership abilities
- Literary aptitude
- Logical-reasoning ability
- Manual dexterity
- Mathematical ability
- Mechanical know-how
- Moral character
- Musicality
- Passionate interest in a specific topic
- Patience
- Persistence
- Physical coordination
- Political astuteness
- Problem-solving capacity
- Reflectiveness
- Resourcefulness
- Self-discipline
- Sense of humor
- Social savvy
- Spatial awareness
- Spiritual sensibility
- Strong will
- Verbal ability

Common characteristics that many gifted individuals share:

- Unusual alertness, even in infancy
- Rapid learner; puts thoughts together quickly
- Excellent memory
- Unusually large vocabulary and complex sentence structure for age
- Advanced comprehension of word nuances, metaphors and abstract ideas
- Enjoys solving problems, especially with numbers and puzzles
- Often self-taught reading and writing skills as preschooler
- Deep, intense feelings and reactions
- Highly sensitive
- Thinking is abstract, complex, logical, and insightful

Common characteristics that many gifted individuals share: (continued)

- Idealism and sense of justice at early age
- Concern with social and political issues and injustices
- Longer attention span and intense concentration
- Preoccupied with own thoughts—daydreamer
- Learn basic skills quickly and with little practice
- Asks probing questions
- Wide range of interests (or extreme focus in one area)
- Highly developed curiosity
- Interest in experimenting and doing things differently
- Puts idea or things together that are not typical
- Keen and/or unusual sense of humor
- Desire to organize people/things through games or complex schemas
- Vivid imaginations (and imaginary playmates when in preschool)

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2 1
1 2 1 1
1 1 1 2 2 1
3 1 2 2 1 1
1 3 1 1 2 2 2 1
1 1 1 3 2 1 3 2 1 1
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Discern the Pattern and Fill in the Last Row of Numbers

- From, *Creative Thinkering*, 2011, Michael Michalko, p. 44

**Advanced
Students
Benefit from
Re-Framing**

Engaged…   **Compliant…**

Our future depends on
this one here.

"We went to school. We were not taught how to think; we were taught to reproduce what past thinkers thought….Instead of being taught to look for possibilities, we were taught to exclude them. It's as if we entered school as a question mark and graduated as a period."

-- Michael Michalko,
Creative Thinkering,
2011, p. 3

F.A.I.L.

<u>F</u>irst <u>A</u>ttempt <u>i</u>n <u>L</u>earning

Fixed Intelligence Mindset
[Nov. 5, 2013 Webinar *Ed Week* with Dr. carol Dweck]

- Talent/intelligence set at birth
- 'Must look smart at all costs
- Showing effort/struggle is seen as a negative, something to be avoided
- When failing, these individuals blame circumstance or others. They feel helpless to change anything.
- Fixed mindset is much more harmful for students laboring under a negative stereotype
- When we praise talents, innate qualities, we create fixed mindsets in students. "I was never good at math, nor will I ever be good at math. Just give me the test and let me get my F."

Growth Intelligence Mindset
[Nov. 5, 2013 Webinar *Ed Week* with Dr. carol Dweck]

Check out Brainology.us!

- Talent/intelligence malleable, changeable
- 'Must learn at all costs.
- Effort/struggle seen as part of the process, normal, even virtuous
- 'When failing, these individuals analyze their own decisions and actions, then revise efforts
  and try again. 'Very resilient.
- Colleges are looking for growth mindset quality in freshman candidates
- Include, "yet" in any statement of content or skill not yet attained
- Praise process/decisions made when work done well:
    "Who had a terrific struggle today?"
    "Great persistence!"
    "You kept trying different things until it worked."
    "Nice strategies."
    "Who has an interesting mistake to share?"

DI AS / A

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The goal of any teacher is to put himself out of a job. – Oscar Wilde
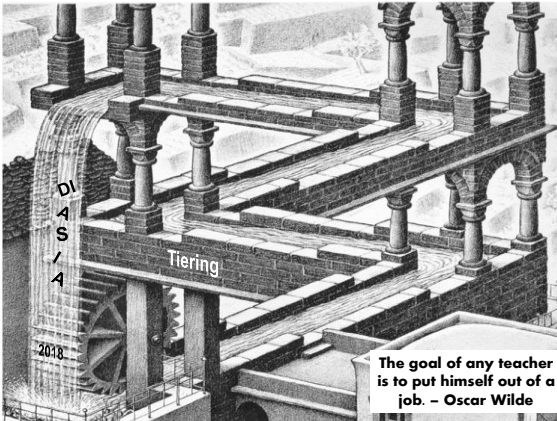
For Gifted/Advanced Students:

➤ **Use respectful tasks.**
➤ **Use tiered lessons**
➤ **Compact the curriculum.**
➤ **Plan accordingly: They get ideas and make connections quickly.**

Practice Complex-ifying.
'Really.
'A lot.

Practice turning regular education objectives and tasks into advanced objectives and tasks.

Ethos
credibility - trust

Logos
consistency - logic

Pathos
emotions - imagination
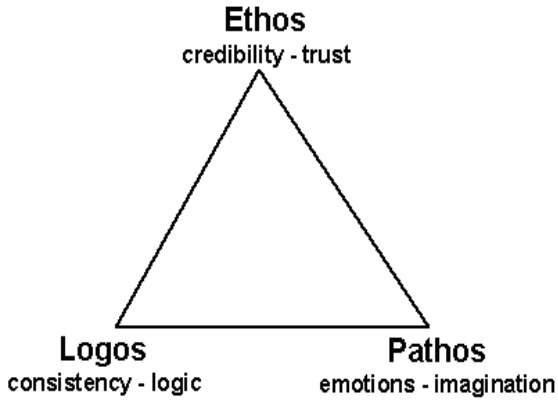
Ways for Students to Transcend Rubric Criteria:

- Demonstrate divergent thinking.
- Add your own voice: If we left your name off the project, would we know it was you that created it?
- Make meaningful connections that the rest of us did not consider.
- Extend your investigation beyond the parameters put forth in the descriptors

**Ways for Students to
Transcend Rubric Criteria:**

- Give the teacher alternative proposals for how to demonstrate evidence of your learning.
- Teach the teacher and your classmates something they did not know about the topic.
- Express content from a different perspective or through a different domain:
  - ❑'Norse mythology expressed through careful cultivation of Bonsai trees?
  - ❑ Debate as a form of dance?
  - ❑The human circulatory system could be used as a form of cryptography?
  - ❑Cultures, furniture, languages, and technology experience entropy?

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**Ways for Students to
Transcend Rubric Criteria:**

- Make the content your own, not something you borrow from the teacher and return passively at the end of the unit. Let the teacher see what YOU bring to learning's table. Don't subordinate who you are for the sake of what a previous generation thought was salient.

And best of all: There are no penalties for giving all of these a try, even when you fail in the first attempts.

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Transcend formulaic responses.

"Please paint the transit buses in an interesting way that breathes a little more life into our city."

- *How to Assess Higher-Order Thinking Skills in Your Classroom* by Susan M. Brookhart
- *From Standards to Rubrics in Six Steps: Tools for Assessing Student Learning* by Kathleen (Kay) B. Burke
- *Scoring Rubrics in the Classroom: Using Performance Criteria for Assessing and Improving Student Performance* by Judith A. Arter and Jay McTighe
- *Rubric Nation: Critical Inquiries on the Impact of Rubrics in Education* (2015) by Michelle Tenam-Zemach (Editor), Joseph E. Flynn Jr. (Editor)

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- *Essential Questions: Opening Doors to Student Understanding* by Jay McTighe and Grant Wiggins
- *Creating & Recognizing Quality Rubrics* by Judith A. Arter, Jan Chappuis
- *How to Create and Use Rubrics for Formative Assessment and Grading* by Susan M. Brookhart
- *Introduction to Rubrics: An Assessment Tool to Save Grading Time, Convey Effective Feedback, and Promote Student Learning* by Dannelle D. Stevens, Antonia J. Levi, Barbara E. Walvoord

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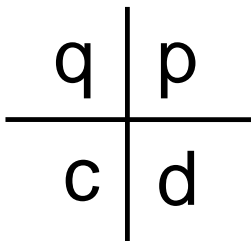
Which letter does not belong, and why?

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To Increase (or Decrease) a Task's Complexity,
Add (or Remove) these Attributes:

- **Manipulate information, not just echo it**
- **Extend the concept to other areas**
- **Integrate more than one subject or skill**
- **Increase the number of variables that must be considered; incorporate more facets**
- **Demonstrate higher level thinking, i.e. Bloom's Taxonomy, William's Taxonomy**
- **Use or apply content/skills in situations not yet experienced**
- **Make choices among several substantive ones**
- **Work with advanced resources**
- **Add an unexpected element to the process or product**
- **Work independently**
- **Reframe a topic under a new theme**
- **Share the backstory to a concept – how it was developed**
- **Identify misconceptions within something**

To Increase (or Decrease) a Task's Complexity,
Add (or Remove) these Attributes:

- **Identify the bias or prejudice in something**
- **Negotiate the evaluative criteria**
- **Deal with ambiguity and multiple meanings or steps**
- **Use more authentic applications to the real world**
- **Analyze the action or object**
- **Argue against something taken for granted or commonly accepted**
- **Synthesize (bring together) two or more unrelated concepts or objects to create something new**
- **Critique something against a set of standards**
- **Work with the ethical side of the subject**
- **Work in with more abstract concepts and models**
- **Respond to more open-ended situations**
- **Increase their automacity with the topic**
- **Identify big picture patterns or connections**
- **Defend their work**

- **Manipulate information, not just echo it:**
  - **"Once you've understood the motivations and viewpoints of the two historical figures, identify how each one would respond to the three ethical issues provided."**

- **Extend the concept to other areas:**
  - **"How does this idea apply to the expansion of the railroads in 1800's?" or, "How is this portrayed in the Kingdom Protista?"**

- **Work with advanced resources:**
  - **"Using the latest schematics of the Space Shuttle flight deck and real interviews with professionals at Jet Propulsion Laboratories in California, prepare a report that…"**

- **Add an unexpected element to the process or product:**
  - **"What could prevent meiosis from creating four haploid nuclei (gametes) from a single haploid cell?"**

- **Reframe a topic under a new theme:**
  - "Re-write the scene from the point of view of the antagonist," "Re-envision the country's involvement in war in terms of insect behavior," or, "Re-tell Goldilocks and the Three Bears so that it becomes a cautionary tale about McCarthyism."
- **Synthesize (bring together) two or more unrelated concepts or objects to create something new:**
  - "How are grammar conventions like music?"
- **Work with the ethical side of the subject:**
  - "At what point is the Federal government justified in subordinating an individual's rights in the pursuit of safe-guarding its citizens?"

The Equalizer

(Carol Ann Tomlinson)

Foundational ----------------- Transformational
Concrete ----------------------- Abstract
Simple -------------------------- Complex
Single Facet/fact -------------- Multi-Faceted/facts
Smaller Leap ------------------- Greater Leap
More Structured --------------- More Open
Clearly Defined ---------------- Fuzzy Problems
Less Independence -------- Greater Independence
Slower -------------------------- Quicker

Unit	Enrichment	Extension	Enhancement
Percentages	Describe how percentages, decimals, and fractions are used in sports	Describe how statisticians use percentages, decimals, and fractions	Which is more effective to use and when: percentages, decimals, fractions?
Gravity	Define the various forces of gravity	Show how enginereers use gravity to build brtidges.	Discuss how greavity is used to improve our daily lives.

-- Samples from, *Differentiation for Gifted Leaners: Going the Basics,* 2014, Richard Cash and Diane Heacox, P. 49 and 50

THE PARALLEL
CURRICULUM

• The Core Curriculum
• The Curriculum of
Connections
• The Curriculum of Practice
• The Curriculum of Identity

The **Parallel Curriculum**

A Design to Develop Learner Potential
and Challenge Advanced Learners

Carol Ann Tomlinson
Sandra N. Kaplan
Joseph S. Renzulli
Jeanne H. Purcell
Jann H. Leppien
Deborah E. Burns
Cindy A. Strickland
Marcia B. Imbeau

SECOND EDITION

A JOINT PUBLICATION

Gifted Children   CORWIN PRESS
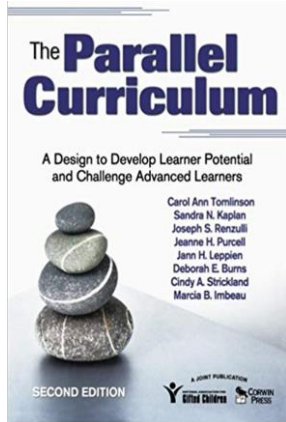
Sternberg's Intelligences

Analytical
Creative
Practical

ROBERT J. STERNBERG ∞ ELENA L. GRIGORENKO

Teaching for
SUCCESSFUL
INTELLIGENCE
— Second Edition —

*To Increase Student Learning
and Achievement*
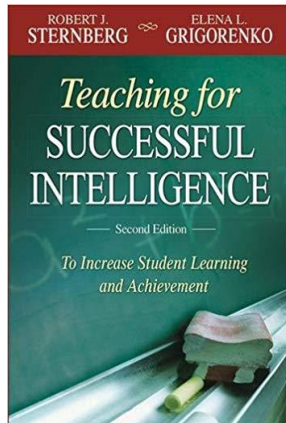
Webb's Depth of Knowledge Levels

Level 1: Recall and Reproduction

Just like it sounds, students recall facts and do simplistic
procedures. They don't do anything cognitively beyond that.
Examples include defining vocabulary words, matching
activities, and answering simple recall questions from the
text.

Level 2: Skills and Concepts

Students have to compare ideas and objects, organize,
summarize, predict, recognize patterns and anomalies, and
do multi-step procedures. Writings, classifications, logical
sequencing of events or items, written and oral summaries,
and annotating text are good examples of this level.

Webb's Depth of Knowledge Levels

Level 3: Strategic Thinking

Students justify claims with evidence, anticipate opposing arguments and counter them, deal with novelty, apply prior knowledge, infer author's meaning, adjust writer's voice or speaking tone according to audience and purpose, analyze ideas/objects and their categories, and explore the why of actions and policies. Examples include "curve balls" in math problems, isolating and analyzing critical attributes, accounting for experimental variables, and formal debate.

Webb's Depth of Knowledge Levels

Level 4: Extended Thinking

Students have to connect content in one domain as they interpret or interact with another domain (or several), and they usually do it over an extended time period in such a way that it changes conceptual thinking. They synthesize content from many sources, and they conduct inquiry labs and investigations in more than one subject that have no pre-determined question, methodology, or result, vetting their choices and interpretations with classmates as they determine each of these. In this level, they apply math and science models to solve complex, not easily answered, real-world problems, and they mine the intersection of several competing theories to create a new theory, such as applying elements of several different literary criticism models as they critique rising genres of popular literature. They explore the influences of ancient Greece and Rome in modern marketing campaigns, how historical accuracy is undermined by politics of the era, and the logical reasoning (inductive, deductive, analogical) and logical fallacies present in modern news-reporting and politics and their impact on society.

William's Taxonomy

Fluency
Flexibility
Originality
Elaboration
Risk Taking
Complexity
Curiosity
Imagination

Frank Williams' Taxonomy of Creative Thinking

Fluency – We generate as many ideas and responses as we can

Example Task: Choose one of the simple machines we've studied (wheel and axle, screw, wedge, lever, pulley, and inclined plane), and list everything in your home that uses it to operate, then list as many items in your home as you can that use more than one simple machine in order to operate.

Flexibility – We categorize ideas, objects, and learning by thinking divergently about them

Example Task: Design a classification system for the items on your list.

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Frank Williams' Taxonomy of Creative Thinking

Originality – We create clever and often unique responses to a prompt

Example Task: Define life and non-life.

Elaboration – We expand upon or stretch an idea or thing, building on previous thinking

Example: What inferences about future algae growth can you make, given the three graphs of data from our experiment?

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Frank Williams' Taxonomy of Creative Thinking

Risk Taking – We take chances in our thinking, attempting tasks for which the outcome is unknown

Example: Write a position statement on whether or not genetic engineering of humans should be funded by the United States government.

Complexity – We create order from chaos, we explore the logic of a situation, we integrate additional variables or aspects of a situation, contemplate connections

Example: Analyze how two different students changed their lab methodology to prevent data contamination.

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Frank Williams' Taxonomy of Creative Thinking

Curiosity – We pursue guesses, we wonder about varied elements, we question.

Example: What would you like to ask someone who has lived aboard the International Space Station for three months about living in zero-gravity?

Imagination – We visualize ideas and objects, we go beyond just what we have in front of us

Example: Imagine building an undersea colony for 500 citizens, most of whom are scientists, a kilometer below the ocean's surface. What factors would you have to consider when building and maintaining the colony and the happiness of its citizens?

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R.A.F.T.S.

R = Role, A = Audience, F = Form, T = Time or Topic, S = Strong adverb or adjective

Students take on a role, work for a specific audience, use a particular form to express the content, and do it within a time reference, such as pre-Civil War, 2025, or ancient Greece.

Sample assignment chosen by a student:

A candidate for the Green Party (role), trying to convince election board members (audience) to let him be in a national debate with Democrats and the Republicans. The student writes a speech (form) to give to the Board during the Presidential election in 2004 (time). Within this assignment, students use arguments and information from this past election with third party concerns, as well as their knowledge of the election and debate process. Another student could be given a RAFT assignment in the same manner, but this time the student is a member of the election board who has just listened to the first student's speech.

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R.A.F.T.S.

Raise the complexity: Choose items for each category that are farther away from a natural fit for the topic . Example: When writing about Civil War Reconstruction, choices include a rap artist, a scientist from the future, and Captain Nemo.

Lower the complexity: Choose items for each category that are closer to a natural fit for the topic. Example: When writing about Civil War Reconstruction, choices include a member of the Freedmen's Bureau, a southern colonel returning home to his burned plantation, and a northern business owner

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Tiering

Common Definition -- Adjusting the following to maximize learning:

- Readiness
- Interest
- Learning Profile

Tier in gradations

Rick's Preferred Definition:

-- Changing the level of complexity or required readiness of a task or unit of study in order to meet the developmental needs of the students involved (Similar to Tomlinson's "Ratcheting").
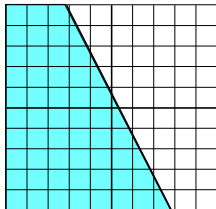
Tiering Assignments and Assessments

Example -- Graph the solution set of each of the following:

1. y > 2   2. 6x + 3y ≤ 2   3. −y < 3x − 7

2. 6x + 3y ≤ 2
3y ≤ -6x + 2
y ≤ -2x + 2/3

Given these two ordered pairs, students would then graph the line and shade above or below it, as warranted.

x	y
0	2/3
3	-5 1/3

Tiering Assignments and Assessments

For *early* readiness students:
- **Limit the number of variables for which student must account to one in all problems. (y > 2)**
- **Limit the inequality symbols to, "greater than" or, "less than," not, "greater then or equal to" or, "less than or equal to"**
- **Provide an already set-up 4-quadrant graph on which to graph the inequality**
- **Suggest some values for x such that when solving for y, its value is not a fraction.**

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Tiering Assignments and Assessments

For *advanced* readiness students:
- **Require students to generate the 4-quadrant graph themselves**
- **Increase the parameters for graphing with equations such as: --1 $\leq$ y $\leq$ 6**
- **Ask students what happens on the graph when a variable is given in absolute value, such as: /y/ > 1**
- **Ask students to graph two inequalities and shade or color only the solution set (where the shaded areas overlap)**

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Anchor activities refer to two types of learner management experiences:

- **"Sponge" activities that soak up down time, such as when students finish early, the class is waiting for the next activity, or the class is cleaning up or distributing papers/supplies**

- **A main activity everyone is doing from which the teacher pulls students for mini-lessons**

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Anchor Lesson Design

Activity/ Group:	**Activity/ Group:**

Anchor Activity

(10-45 min.)

Activity/ Group:

Activity/ Group:

Activity/ Group:
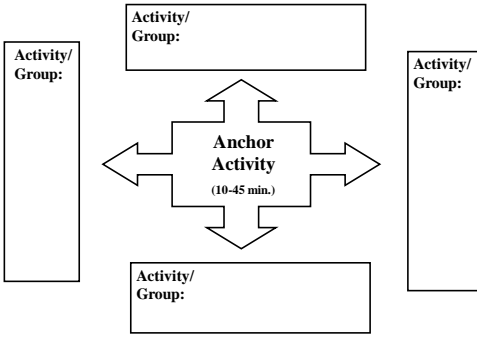
Anchor Activities Advice

- Use activities with multiple steps to engage students
- Require a product – 'increases urgency and accountability
- Train students what to do when the teacher is not available
- Start small: Half the class and half the class, work toward more groups, smaller in size
- Use a double t-chart to provide feedback
- Occasionally, videotape and provided feedback

Double-T Charts

[eye]	[ear]	[heart]
Char.'s of success we'd <u>see</u>	Char.'s of success we'd we'd <u>hear</u>	Char.'s of success we'd <u>feel</u>

What to Do
When the Teacher is Not Available

Suggestions include:

- Move on to the next portion; something may trigger an idea
- Draw a picture of what you think it says or asks
- Re-read the directions or previous sections
- Find a successful example and study how it was done
- Ask a classmate ("Ask Me," "Graduate Assistant," "Technoids")
- Define difficulty vocabulary
- Try to explain it to someone else

The Football Sequence

1. First teach a general lesson to the whole class for the first 10 to 15 minutes.
2. After the general lesson, divide the class into groups according to readiness, interest, or learning profile and allow them to process the learning at their own pace or in their own way. This lasts for 15 to 20 minutes. We circulate through the room, clarifying directions, providing feedback, assessing students, and answering questions. This section is very expandable to help meet the needs of students.
3. Bring the class back together as a whole group and process what they've learned. This can take the form of a summarization, a Question and Answer session, a quick assessment to see how students are doing, or some other specific task that gets students to debrief with each other about what they learned. This usually takes about 10 minutes.

The football metaphor comes from the way we think about the lesson's sequence: a narrow, whole class experience in the beginning, a wider expansion of the topic as multiple groups learn at the own pace or in their own ways, then narrowing it back as we re-gather to process what we've learned.

General lesson on the topic -- everyone does the same thing

Students practice, process, apply, and study the topic in small groups according to their needs, styles, intelligences, pacing, or whatever other factors that are warranted

Students come back together and summarize what they've learned
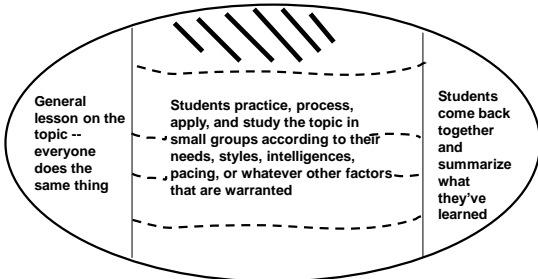
Additional Differentiated Instruction Strategies

- Use Anticipation Guides
- Create personal agendas for some students
- Use centers/learning stations
- Adjust journal prompts and level of questioning to meet challenge levels
- Incorporate satellite studies ("Orbitals")

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Rigor versus

Difficult
Difficult
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Does providing more support mean it's less rigorous?

On the contrary, providing support for complex, multi-faceted applications is MORE rigorous.

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Summarization Pyramid

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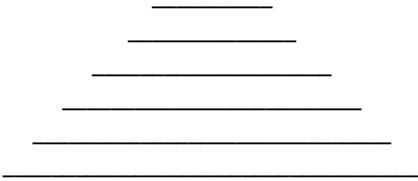
Great prompts for each line: *Synonym, analogy, question, three attributes, alternative title, causes, effects, reasons, arguments, ingredients, opinion, larger category, formula/sequence, insight, tools, misinterpretation, sample, people, future of the topic*

Analyze…	**Construct…**
Revise…	**Rank…**
Decide between…	**Argue against…**
Why did…	**Argue for…**
Defend…	**Contrast…**
Devise…	**Develop…**
Identify…	**Plan…**
Classify…	**Critique…**
Define…	**Rank…**
Compose…	**Organize…**
Interpret…	**Interview…**
Expand…	**Predict…**
Develop…	**Categorize…**
Suppose…	**Invent…**
Imagine…	**Recommend…**

One-Word Summaries

"The new government regulations for the meat-packing industry in the 1920's could be seen as an <u>opportunity</u>…,"

"Picasso's work is actually an <u>argument</u> for….,"

"NASA's battle with Rockwell industries over the warnings about frozen temperatures and the O-rings on the space shuttle were <u>trench warfare</u>…."

Basic Idea: Argue <u>for</u> or <u>against</u> the word as a good description for the topic.

3-2-1

3 – Identify three characteristics of Renaissance art that differed from art of the Middle Ages

2 – List two important scientific debates that occurred during the Renaissance

1 – Provide one good reason why "rebirth" is an appropriate term to describe the Renaissance

3 – List three applications for slope, y-intercept knowledge in the professional world

2 – Identify two skills students must have in order to determine slope and y-intercept from a set of points on a plane

1 – If (x1, y1) are the coordinates of a point W in a plane, and (x2, y2) are the coordinates of a different point Y, then the slope of line WY is what?

Unique Summarization Formats/Products

A soap opera about valence among chemical elements

A "Wanted: Dead or Alive" poster about Preposition Pete ("He was last seen in the OverHill'n'Dale Saloon, at the table, in the dark, under close scrutiny of other scalawags…")

Compose a ballad about the cautious Massasoit tribe coming to dinner with Governor Bradford and his colony in 1621.

Interpret the Internet for Amazonian inhabitants that have never lived with electricity, let alone a computer.

Argue for and against Democracy as a healthy way to build a country – Provide at least two arguments for each position.

Classify the Greek gods and goddesses according to three different criteria.

Predict the limiting factors for this habitat twenty-five years from now.

Retell a fairytale of your choosing with one of the following concepts as its central theme:

- "Courage is not the absence of fear, but the judgment that something else is more important than that fear." -- Ambrose Redmoon
- "A setback is preparation for a comeback."
- "The one who never makes mistakes takes his orders from one who does."

Unique Summarization Formats/Products

A comic strip about the mantissa (the decimal-fraction part of a logarithm)

A mysterious yet accurate archeological map concerning the quadratic formula

A field guide to the asymptotes of a hyperbola (the diagonals of the rectangle formed by the lines x= a, x= —a, y= b and y= -b in the hyperbola: x squared over a squared – y squared over b squared)

A coloring book about Amendments 1, 2, 3, 4, and 10 to the Constitution

A rap song that expresses the order of Presidential succession

A grocery list for Taiga biomes

A mural that accurately expresses the "checks and balances" nature of our Federal government's three branches: judicial, legislative, and executive

A sculpture or mobile that teaches observers about latitude and longitude

A pop-up book on liquid and dry measures

Consider:
Rhodes Scholarship
Candidate struggles

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"**Do they know**

how to ask good questions?"

– Tony Wagner, *The Global Achievement Gap*, 2008

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Our job is not to make up anybody's mind, but to open minds and to make the agony of decision-making so intense you can escape only by thinking." - *Fred Friendly, broadcaster*

"All thinking begins with wonder."
-- Socrates

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Create a sense of wonder!

- Verbs
- Pronouns
- Newton's
  Laws
- Put on Scuba
  Gear and climb out
  of an eyeball
- Velcro props
- Compare
  Not-so-
  Pretend
  Constitutions

What does this depict?

owher

Do we have the creativity to solve our own problems?

- My whole lesson today is based on accessing those three Websites, but the school's Internet is down, so what can we do instead?
- Small groups are not working in my class, yet I know they're important for many students' learning. How do I get these students to stay focused on their group tasks?
- I've backed myself into a corner explaining an advanced science concept, and it's not making sense to me, let alone to my students. What should I do?
- Angelica doesn't understand the concept after my explanation, but I don't know any other way to teach it. What will I do?

- I'm supposed to differentiate for some of my students, but I don't see any time to do it.
- My school's current electronic gradebook system doesn't allow me to post anything but norm-referenced scores, and I want to be more criterion-referenced in my grades. What can I do?
- Because I'm a veteran teacher, I've been asked to be the rotating teacher using a cart and moving from classroom to classroom each period so the new teacher can have his own room and not have so much to deal with his first year. How will I handle this?

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Important:

In order for us to try a new idea or advice from a friend, teacher, or parent, we have to first admit that what we are doing isn't working. This can be scary – It might make us look foolish, but it's one of the smartest things we do.

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"The fellow who never makes a mistake takes his orders from one who does."
-- Herbert Prochnow

"I have learned throughout my life as a composer chiefly through my mistakes and pursuits of false assumptions, not my exposure to founts of wisdom and knowledge."   -- Igor Stravinsky

"There are two mistakes one can make along the road to truth -- not going all the way, and not starting."   -- Buddha

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"An expert is a person who has made all the mistakes that can be made in a very narrow field."
– Niels Bohr
winner of the Nobel Prize in Physics
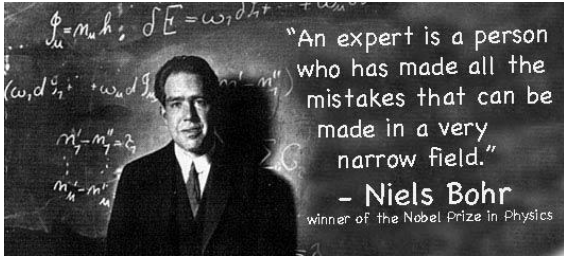
Ropes Course Games
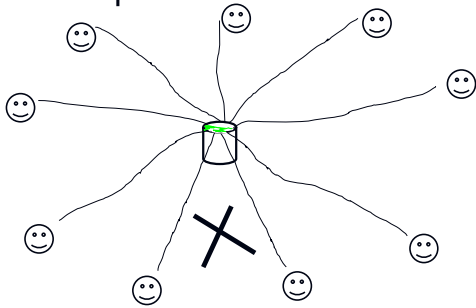
Line-up

- **Groups of students line up according to criteria. Each student holds an index card identifying what he or she is portraying.**
- **Students discuss everyone's position with one another -- posing questions, disagreeing, and explaining rationales.**

Line-up

Students can line-up according to:

chronology, sequences in math problems, components of an essay, equations, sentences, verb tense, scientific process/cycle, patterns: alternating, category/example, increasing/decreasing degree, chromatic scale, sequence of events, cause/effect, components of a larger topic, opposites, synonyms

Human Continuum
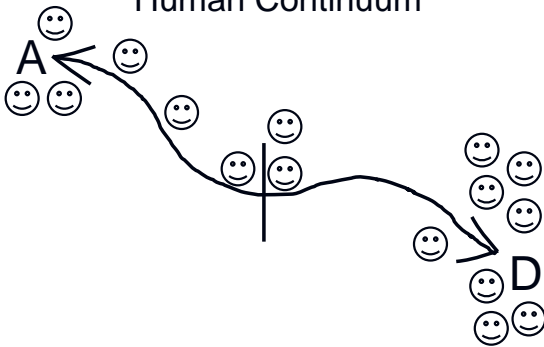
Human Continuum

Use a human continuum. Place a long strip of masking tape across the middle of the floor, with an "Agree" or "Yes" taped at one end, and "Disagree" or "No" at the other end.   Put a notch in the middle for those unwilling to commit to either side.   Read statements about the day's concepts aloud while students literally stand where they believe along the continuum. Be pushy – ask students to defend their positions.

When there is a correct answer

Exercise in creative thinking

Elad Segev PhD
Odelia Kohn-Oppenheim

Rama school
for gifted and talented children
Ramat-Hasharon, Israel
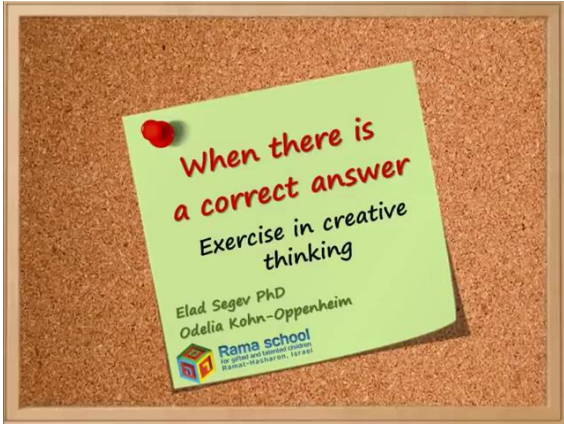
Embrace the fact that, "[l]earning is fundamentally an *act of creation*, not *consumption of information*."

-- Sharon L. Bowman, Professional Trainer

Active Creators, NOT Passive Consumers!

The Inner Net"

By David Bowden

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Taking Positive Risks

**"The fellow who never makes a mistake
takes his orders from one who does."**
-- Herbert Prochnow

**"If I had been a kid in my class today,
would I want to come back tomorrow?"**
-- Elsbeth Murphy

"Nothing ventured, something lost."
-- Roland Barth

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**Negating Students' Incorrect Responses
While Keeping Them in the Conversation**

Act interested, "Tell me more about that…"
**Empathy and Sympathy: "I used to think that,
too," or "I understand how you could conclude
that…"**
Alter the reality:
**-- Change the question so that the answer is
correct**
**-- That's the answer for the question I'm about to
ask**
**-- When student claims he doesn't know, ask, "If
you DID know, what would you say?"**

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Negating Students' Incorrect Responses and While Them in the Conversation

Affirm risk-taking
Allow the student more time or to ask for assistance
Focus on the portions that are correct

Remember: Whoever is responding to students is processing the information and learning. Who, then, should be responding to students in the classroom? **Students.**

The amount of risk someone takes in the work place is directly proportional to his sense of strong relationship with the person in charge.

Re-Do's & Re-Takes with students and their teachers: Are They Okay?

More than "okay!" After 10,000 tries, here's a working light bulb. 'Any questions?

Thomas Edison

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Recovering in full from a failure teaches more than being labeled for failure ever could teach.

It's a false assumption that giving a student an "F" or wagging an admonishing finger from afar builds moral fiber, self-discipline, competence, and integrity.

Students should be allowed to re-do assessments until they achieve acceptable mastery, and they should be given full credit for having achieved such.

"…John Hattie (2012) whose synthesis of 800 meta-studies showed that student self-assessment/self-grading topped the list of educational interventions with the highest effect size. By teaching students how to accurately self-assess based on clear criteria, teachers empower them to become "self-regulated learners" able to monitor, regulate, and guide their own learning. The reason students never develop these traits is that our monopoly on assessment, feedback, and grading has trained students to adopt an attitude of total passivity in the learning process."

-- Arthur Chiaravalli (@hhschiaravalli) "Teachers Going Gradeless: Toward a Future of Growth Not Grades"

We can learn without grades,
we can't learn without
descriptive feedback.

What are you supposed to be learning,

...and where are you in relation to that goal?

Dr. Dylan Wiliam
Video on Feedback

When providing descriptive feedback that builds perseverance and helps those who struggle with EF,

…comment on decisions made and their impact, NOT quality of work.

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Two Ways to Begin Using Descriptive Feedback:

❑ **"Point and Describe"**
(from *Teaching with Love & Logic*, Jim Fay, David Funk)

❑ **"Goal, Status, and Plan for the Goal"**

1. **Identify the objective/goal/standard/outcome**
2. **Identify where the student is in relation to the goal (Status)**
3. **Identify what needs to happen in order to close the gap**

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Effective Protocol for Data Analysis and Descriptive Feeddback found in many Schools:
Here's What, So What, Now What

1. Here's What: *(data, factual statements, no commentary)*

2. So What: *(Interpretation of data, what patterns/insights do we perceive, what does the data say to us?)*

3. Now What: *(Plan of action, including new questions, next steps)*

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Item	Topic or Proficiency	Right	Wrong	Simple Mistake?	Really Don't Understand
1	**Dividing fractions**		✓		✓
2	**Dividing Fractions**		✓		✓
3	**Multiplying Fractions**		✓	✓	
4	**Multiplying fractions**	✓			
5	**Reducing to Smplst trms**	✓			
6	**Reducing to Smplst trms**	✓			
7	**Reciprocals**	✓			
8	**Reciprocals**		✓	✓	
9	**Reciprocals**		✓	✓	

Date

Mr./Mrs./Miss _____,

I understand….

I need assistance in….

I suggestion the following four steps for me to take in order to learn these content and skills:

Sincerely,

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Cognitive Coaching | **One of the greater gifts we provide gifted/advanced students**

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Cognitive Coaching:
Helpful resources

- *Educational Coaching: A Partnership for Problem Solving* by Cathy A. Toll
- *Embarrassment – And the Emotional Underlife of Learning* by Thomas Newkirk
- *Onward: Cultivating Emotional Resilience in Educators* by Elena Aguilar
- *The Art of Coaching: Effective Strategies for School Transformation* by Elena Aguilar
- *The Human Side of School Change: Reform, Resistance, and the Real-Life Problems of Innovation* by Robert Evans
- *Instructional Coaching: A Partnership Approach to Improving Instruction* by Jim Knight

Helpful resources

- *Better Conversations: Coaching Ourselves and Each Other to Be More Credible, Caring, and Connected* by Jim Knight
- *Coaching Conversations: Transforming Your School One Conversation at a Time* by Linda M. Gross Cheliotes, Marceta F. Reilly
- *Unstuck: How Curiosity, Peer Coaching, and Teaming Can Change Your School* by Bryan Goodwin, Tonia Gibson, Dale Lewis, and Kris Rouleau
- "The Grief of Accepting New Ideas," "Cultivating the Intellectual Life of Teachers," and, "Cognitive Coaching: Training for All Teachers" by Rick Wormeli (Article available at www.rickwormeli.com)

To Build Trust and Relationships between Coach and teacher or Student

- Honor the person and what they bring to the conversation.
- Be present and attentive *(From Toll, "Now" Post-it note).*
- Listen without judgment and regulate your internal editor – Don't give in to intellectual biases; empathize with first-time eyes.
- Channel Stephen Covey: Seek to understand, *then* to be understood.

To Build Trust and Relationships between Coach and teacher or Student

- Remain open, and give every body indicator that you really are open and willing to be a fellow learner. Use the inclusive, first person plural rather than first or second person singular, i.e. Use *we*, not *I* or *you* as you can.
- If it's stated in the coaching conversation, it stays there, even positive and complimentary things. If even compliments come back to the teacher or student through an outside party, trust is broken.
- Respect the teacher or student: Ask permission.

Respecting the Teacher or Student:
Asking Permission

- "Would you mind if I shared an idea that comes to mind?
- "May I ask a question that may seem off topic but that may be helpful?
- "Is it okay if I bring some resources to the next meeting?
- "Would you care to partner to solve that problem?
- "I'd like to ask a colleague about her approach. Would that be okay with you?"

– Toll, p. 75

Coaching Actions
During the conversation

- Teacher or Student does most of the talking – *Seriously, record a session and note the time you talk versus the time the teacher talks. Shoot for 90% teacher, 10% coach.*
- Avoid simplistic platitudes and education politicizing.
- "And this." -- From Toll, p. 11: 'Said privately as we listen to teachers, which is short for, "and this is part of the conversation that I accept as well."

Coaching Actions
During the conversation

- Ask questions without a specific answer in mind. We unconsciously telegraph that there is one, correct answer when we are seeking a particular response, and it doesn't come across as genuine and exploring.
- Use tentative language (*seems, might*) and open-ended questions that come across as a mutual explorer expressing curiosity.
- Speak in such a way as to continue thoughtful dialog, not prove that you are right or the problem is solved. It's not about you providing the solution, it's about the teacher arriving there.

Coaching Actions
During the conversation

- Practice silence.
- Assume at any given moment in the conversation, the teacher or student is doing the best he/she can.
- Work toward long term insights and gains, not just short-term fixes, though that can be done as needed.
- Focus on developing the intellect, not evaluation or judgment; seek phrasing and conversations that do not invoke the ego.
- The goal is teaching excellence and independence, which might be achieved in our partner by using methods *other than those* that worked for us.

Coaching Actions
During the conversation

- Coaching is not telling, nor is teaching. Don't provide the solution(s). *"Never think for teachers what they can think for themselves."* (Toll, p. 74)
- Surprisingly, professional development focused on what teachers do is among the *least effective* approaches. (Toll, p. 18)
- Use metaphors/analogies to help the teacher see things through a different lens. (Toll, p. 46-47) [Potential Resource: *Metaphors and Analogies: Power Tools for Teaching any Subject* by Wormeli]
- When brainstorming with a teacher or student, don't provide dozens of ideas, it's overwhelming, can create resentment or dependence.
- If the teacher or student says something we know will not work, we don't nix it. We ask for more information and walk them through it.

Paraphrasing

- I hear you saying…
- What I hearing you saying is…
- Let me make sure I have this correct…
- In sum, then, you are worried that…
- Do I have that right?
- Did I hear that correctly?
- It sounds like you're saying that…

Coaching/Mentoring Questions

[Based on the work of Costa, Garmston, Toll, Aguilar, Knight, and Wormeli]

Questions to Help Teachers (and students) Reflect

- How do you feel it went?
- If you were teaching the way you wanted to teach, what would students see, hear, and feel?
- "When you think about the learning you want your students to do and the teaching you want to do, what gets in the way?" (Toll, p. 27)
- "When you think about bringing [Standard] to life in your classroom, what might get in the way?" ["Coach: I'm making a note of that. What else gets in the way?" Then as things are mentioned, keep recording the notes, and re-mentioning them in the list – "In addition to X getting in the way, you also think Y and Z are adding to the challenge…" – Based on idea by Toll, p. 28]

Questions to Help Teachers (and students) Reflect

- How's [X] going? You were concerned/happy with it last time.
- What was your goal there?
- What do you mean by….?
- Tell me more about…
- How will students be different as a result?
- What would a respected colleague do this situation?
- What have you done in the past, and what was the result?
- Why did you choose….?
- Is this increasing or decreasing students' self-efficacy?
- How does this move students from dependence on the teacher to independence from the teacher?

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Questions to Help Teachers (and students) Reflect

- Is their another way to teach/assess students identified with that challenge?
- I noticed you…., and as a result, students….. Was that your goal?
- How does that further their goal?
- How does that further your goal?
- Describe a time when this was successful for you.
- Tell me what excites you about this unit.
- Tell me what excites you about your teaching these past few weeks.
- Let's consider the situation from his/her point of view….
- What are your objectives, and how are they a part of a larger set of goals?

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Questions to Help Teachers (and students) Reflect

- When you do this again next year, what will you change?
- What does that tell you?
- Is there anything to that?
- Who is your intended audience for that statement and will it be clearly understood by them?
- If time wasn't an issue, how would you teach this differently?
- How are students progressing towards the goal?
- Is that congruent with your teaching philosophy/beliefs?

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Questions that help
teachers (and students) get to specifics

- How will you begin?
- What will you need for that?
- Can you give an example of….?
- Imagine yourself at that point in the lesson (or grading those projects) – What will be going through your mind?
- Can you describe that further?
- Let's rehearse that moment in the lesson/assessment together.
- At this point in the lesson, were you making students more reliant or less reliant upon you for their learning?
- Let's watch another teacher teach/assess a similar lesson via this video clip – What do you notice?

Questions that help
teachers (and students) get to specifics

- Let's consider the situation from his/her point of view….
- How will you know your lesson/assessment was successful?
- What would you like me to look for as I watch the lesson/assessment happening?
- What did you see students doing (or hear them saying) that made you feel that way?
- What do you recall about your own behavior during the lesson?
- How did what you planned compare with what you did?
- Are the students engaged or just on task, and how do you know?

Questions that help
teachers (and students) get to specifics

- What are the goals for student learning stated in student-friendly language?
- What are some anticipated misconceptions? How will they be addressed?
- How will we make student learning visible?
- How will we record what we notice about student learning; during the lesson and after?
- Is there any part of this lesson you can turn over to students?
- At this point in the lesson, are students *accessing* content or *processing* content? Let's look at evidence of each.
- Does this make it passive or active for students?
- How could we streamline this process so you have more time to…?

Questions to Help solve problems

- Could you tell me how you…?
- And what else?
- And what was your response?
- How could you have re-phrased the question/statement so there was a different outcome?
- How could we re-phrase that to better communicate your intent?
- What did you do/decide that added to -- or resolved -- the issue?
- How will students be different as a result?
- What have you tried so far?
- Was this effective – How do you know?
- Did this increase the difficulty of the challenge or the complexity?

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Questions to Help solve problems

 If this problem were solved what would it look like?" (Toll, p. 32), or alternatively, "What would I notice is different if I visited the classroom or chatted with you about your students' learning?" (Toll, p. 33)

- What would a respected colleague do in this situation?
- Let's brainstorm some possibilities together.
- What have you tried?
- How would you like this to be different?
- Would it be okay if we "partnered on this" (Toll) and did some individual information gathering and share back with other next week?

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Questions to Help solve problems

- Have you talked to….? They may have some advice on this.
- Where did the learning break down?
- Is there a metaphor or analogy we could create or help students create that would help them understand this more clearly?
- I hear you saying….. Is that what you intended to say?
- What else are you considering?
- Why did you not choose to….?
- Why did you choose to….?
- Of the three concerns/challenges listed, on which one would you like to focus first?

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Questions Focused on assessment and Grading

- How will the students self-assess/self-monitor?
- How does that demonstrate ethical assessment/grading principles?
- Is that a report of compliance or competence?
- What does the grade/symbol/percent mean?
- What instruction/assessment principle is at work here?
- How did you express your assessment philosophy here?
- Will students and their parents get a clear picture of the student's progress?
- What are you trying to assess?
- What evaluative criteria are you using?
- Did students create the criteria by which they will be judged or did you?
- How does that help students understand what is expected of them?

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Questions Focused on assessment and Grading

- Are you reporting what students did or what they learned?
- Is consistency teacher to teacher valuable?
- As a result of this analysis of evidence, where are the students' strengths and needs?
- How will feedback be provided to students?
- Will that get you the accurate data you need? Why or why not?
- How does that practice make an assessment/grade more accurate?
- Is there any other way students could express the evidence you're seeking?
- Is the assessment format getting in the way of an accurate report?

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"I used to think…, but now I think…"

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Great Web Resources in Critical Thinking

www.criticalthinking.org
(Richard Paul, Linda Elder)
Anything written by David Perkins and Shari
Tishman at Harvard
http://faculty.ed.uiuc.edu/rhennis/tewctet/Ennis
-Weir_Merged.pdf
   (The Ennis-Weir is a test of critical thinking
   ability and takes the form of a letter to the
   editor of a fictional newspaper.)
http://fnopress.com/pedagogy/modules/g
qp.html
www.middleweb.com

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Great Resources!

- www.nagc.org– National Association for Gifted
  Children
- www.cec.sped.org – Council for Exceptional
  Children
- Cash, Richard. *Advancing Differentiation: Thinking
  and Learning in the 21st Century,* Free Spirit
  Publishing, 2011
- Heacox, Diane. *Making Differentiation a Habit, Free
  Spirit Publishing*, 2010
- Tomlinson, Carol Ann, Doubet, Kristina. (2006) *Smart
  in the Middle Grades: Classrooms that Work for
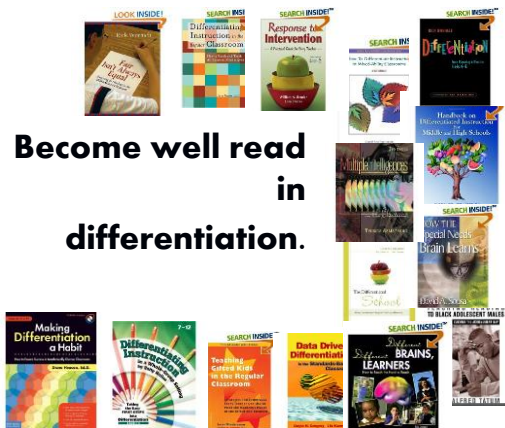 Bright Middle Schoolers.* Westerville, OH: NMSA

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**Become well read
in
differentiation.**

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Resources…

Mindware: (1-800-999-0398)
Fluegelman, Andrew, Editor. *The New Games Book*, Headlands
Press Book, Doubeday and Company, New York, 1976
Henton, Mary (1996) *Adventure in the Classroom.* Dubuque,
Iowa: Kendall Hunt
Lundberg, Elaine M.; Thurston, Cheryl Miller. (1997) *If They're
Laughing…* Fort Collins, Colorado: Cottonwood Press, Inc.
Rohnke, K. (1984). *Silver Bullets.* Dubuque, Iowa: Kendall Hunt.
Rohnke, K. & Butler, S. (1995). *QuickSilver.* Dubuque, Iowa:
Kendall Hunt
Rohnke, K. (1991). *The Bottomless Bag Again.* Dubuque, Iowa:
Kendall Hunt
Rohnke, K. (1991). *Bottomless Baggie.* Dubuque, Iowa: Kendall
Hunt
Rohnke, K. (1989). *Cowstail and Cobras II.* Dubuque, Iowa:
Kendall Hunt

Need Ideas for Integrating Movement into Curriculum? Try these:

- www.WellnessCKE.net
- www.jamschoolprogram.com
- school.fueluptoplay60.com
- Carol Glynn, "Carol Out of the Box" videos, www.youtube.com/watch?v=ALgY0BywKy0, plus *Learning on their Feet*, www.Discover-writing.com
- www.braingym.com

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- Henton, Mary (1996) *Adventure in the Classroom*. Dubuque, Iowa: Kendall Hunt
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- Rohnke, K. (1989). *Cowstail and Cobras II*. Dubuque, Iowa: Kendall Hunt

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