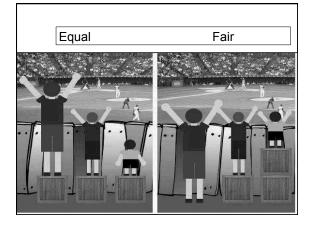


Think Pair Share

Step 1: Jot down your current best definition of differentiation. This is private think time.

Step 2: Find at least one other person you don't know, then share your definitions. Look for similarities and differences in them.

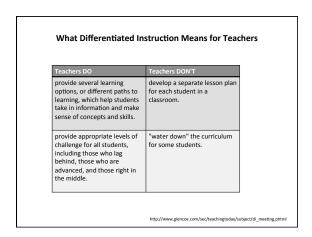


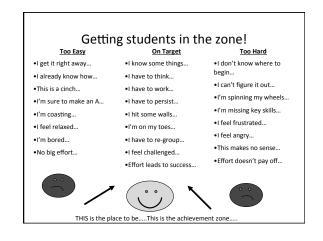
Differentiated Instruction

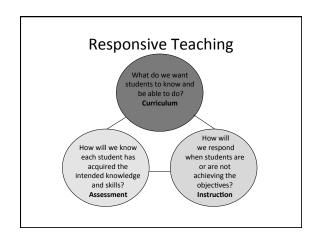
 "It means teachers proactively plan varied approaches to what students need to learn, how they will learn it, and/or how they will show what they have learned in order to increase the likelihood that each student will learn as much as he or she can, as efficiently as possible."

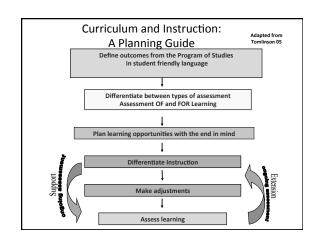
Tomlinson, 2013

 Tomlinson: "If I laid out on my kitchen counter raw hamburger meat still in its Styrofoam container, cans of tomatoes and beans, jars of spices, an onion, and a bulb of garlic [and told guests to eat heartily]....My error would be that I confused ingredients for dinner with dinner itself." Tomlinson: "One can make many different dishes with the same ingredients, by changing proportions, adding new ingredients, using the same ingredients in different ways, and so on."









Quick Reference: Differentiated Lesson Planning Sequence

- A. Steps to take before designing the learning experiences:
- Identify your essential understandings, questions, benchmarks, objectives, skills, standards, and/or learner outcomes
- 2. Identify your students with unique needs, and get an early look at what they will need in order to learn and achieve.
- 3. Design your formative and summative assessments.
- 4. Design and deliver your pre-assessments based on the summative assessments and identified objectives.
- 5. Adjust assessments or objectives based on your further thinking discovered while designing the assessments.

Learner Profile: Any Factor that might Influence Learning Transiency rate Family dynamics (if influential) SES IEP ELL 504 Gifted/Advanced Emotional health Physical health Speech and Language Issues Behavior/Discipline concerns Nationality (if influential) Diet (if influential) Religious affiliation (if influential) Technology access/comfort Arts – comfort/profiency Multiple Intelligences Personal background/experiences Leadership qualities Ethics Collaboration
Personal interests: sports, music, Weekly schedule television, movies, books, Politics (if influential) hobbies, other Anthony Gregorc Scale
Myers-Briggs Personality Inventory Home responsibilities Bernice McCarthy's 4MAT ADHD Asperger's Syndrome Hearing Impaired Tourette's Syndrome Down's Syndrome Visually Impaired Auditory Processing issues

Quick Reference: Differentiated Lesson Planning Sequence

- B. Steps to take while designing the learning experiences:
- Design the learning experiences for students based on preassessments, your knowledge of your students, and your expertise with the curriculum, cognitive theory, and students at this stage of human development.
- Run a mental tape of each step in the lesson sequence to make sure things make sense for your diverse group of students and that the lesson will run smoothly.
- 3. Review your plans with a colleague.
- 4. Obtain/Create materials needed for the lesson.
- 5. Conduct the lesson.
- Adjust formative and summative assessments and objectives as necessary based on observations and data collected while teaching.

When Designing your Actual Lessons....

- 1. Brainstorm multiple strategies
- 2. Cluster into introductory, advanced, and strategies that fit between these two
- 3. Sequence activities in plan book
- 4. Correlate Class Profile descriptors, expertise in students at this age, Differentiation Strategies, and Cognitive Science Principles to lessons What do you need to change in order to maximize instruction for all students?

Moving Content into Long-term Memory

Students have to do both,

Access Sense-Making

Process Meaning-Making

Teachers can differentiate:

-- Tomlinson, Eidson,

Content

Process

Product

. . .

Affect

Learning Environment



According to:
Readiness
Interest

Learning Profile

Flexible Grouping: Questions to Consider

- Is this the only way to organize students for learning?
- Where in the lesson could I create opportunities for students to work in small groups?
- Would this part of the lesson be more effective as an independent activity?
- Why do I have the whole class involved in the same activity at this point in the lesson?
- Will I be able to meet the needs of all students with this grouping?
- I've been using a lot of [insert type of grouping here whole class, small group, or independent work] lately. Which type of grouping should I add to the mix?

There's a range of flexible groupings:

- Whole class or half class
- Teams
- · Small groups led by students
- · Partners and triads
- Individual study
- One-on-one mentoring with an adult
- · On-line communities
- Temporary pull-out groups to teach specific mini-lessons
- Anchor activities to which students return after working in small groups
- Learning centers or learning stations through which students rotate in small groups or individually.

Flexible Grouping

Homogenous/Ability

- -Clusters students of similar abilities, level, learning style, or interest.
- -Usually based on some type of pre-assessment

Heterogeneous Groups

- -Different abilities, levels or interest
- Good for promoting creative thinking.

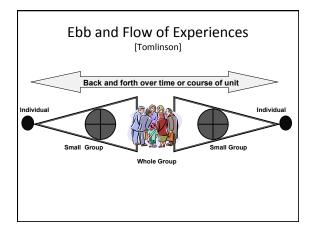
Individualized or Independent Study

- -Self paced learning
- -Teaches time management and responsibility
- -Good for remediation or extensions

Whole Class

- -Efficient way to present new content
- -Use for initial instruction

Adapted From Carol Tomlinson 2013



A moment of consideration

GRADES...

Adapted From Carol Tomlinson 2013

This quarter, you've taught:

- · 4-quadrant graphing
- · Slope and Y-intercept
- Multiplying binomials
- Ratios/Proportions
- 3-dimensional solids
- · Area and Circumference of a circle.

The student's grade: B

What does this mark tell us about the student's proficiency with each of the topics you've taught?

Unidimensionality – A single score on a test represents a single dimension or trait that has been assessed

Student	Dimension A	Dimension B	Total Score
1	2	10	12
2	10	2	12
3	6	6	12

Problem: Most tests use a single score to assess multiple dimensions and traits. The resulting score is often invalid and useless. -- Marzano, CAGTW, page 13

What is the Role of Each One?

- Formative Assessment
- Summative Judgment

A child is attempting to ride a bicycle, and the bike falls over. Another child, learning to walk, loses her balance and lands on her bottom. A baby's green peas slide off his spoon as he moves it toward his mouth. How do their parents respond? Good parents don't say, "You fail, you're not able to meet bicycling standards," "I'll develop a rubric for walking without falling," or, "We need a Common Core curriculum to help you keep your food in your spoon."[They] simply say, "Try again."

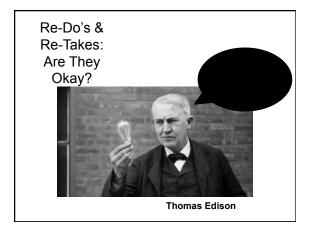
-Richard L. Curwin, *Education Leadership*, ASCD, September 2014, p.38

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.

 $\underline{https://youtu.be/h-QF9Q4gxVM?list=PLzFz35PAA7-cxi75IW6y4UGeN0oCtn3Y8}$



F.A.I.L.

First Attempt in Learning

Cultivate Teacher Creativity.

Seriously, it's just as vital as content expertise, professional behavior, and maintaining proper records.

Writer and educator, Margaret Wheatley, is correct:

"We can't be creative unless we're willing to be confused."

Do teachers have the creativity to solve their 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 is far beyond where I'm comfortable teaching, but we have two more weeks in this unit for the rest of the class. What will I do with her that honors her readiness level?
- 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 normreferenced scores, and I want to be more criterionreferenced in my grades. What can I do?

A science and math teacher, Mr. Blackstone, teaches a large concept (Inertia) to the whole class. Based on "exit cards" in which students summarize what they learned after the whole class instruction, and observation of students over time, he assigns students to one of two labs: one more open-ended and one more structured. Those that demonstrate mastery of content in a post-lab assessment, move to an independent project (rocketry), while those that do not demonstrate mastery, move to an alternative rocketry project, guided by the teacher, that re-visits the important content. (Tomlinson, p. 24)



As highly accomplished professional educators at advanced levels of responsive teaching, we see responsive teaching as a mindset, not a list of recipes.

What does it mean to do advanced responsive teaching?

It means we become mini-experts in increasingly diverse student populations

Learning disabilities Artistic

504 and OHI Hearing challenges Speech and Language issues Abused

Visual challenges Athletic/unathletic Extrovert/Introvert Autistic Gifted/advanced

Emotionally challenged Military Gang-affiliated Under resourced

English Language Learners ADHD Transient

Tech-savvy/tech-illerate Poor readers Single parent homes

Impoverished students

Lesbian-Gay-Bisexual-Transgender (LGBT)
Depression/Suicidal

Gamers Working full time or part time Pregnant Religious affiliation

What does it mean to do advanced responsive teaching?

It means we become mini-experts in cognitive science principles specifically for the students we teach

- •The mind craves structures, relationships, connections.
- •Emphasize sense-making, meaning-making, and the growth mindset.
- Prime the brain.
- Create prior knowledge where there was none.
- The brain is a survival organ.
- •Getting enough sleep is critical, not optional.
- *Build in more movement and shifting from one activity to another.
 *The mind retains information/skills through reiteration, recursive experiences.
- •The brain needs a lot more water and protein than we think.
- Stress limits cognition.
- •When assimilating too much, a child's default response is anger, frustration.
- •There is no such thing as laziness.
 •While there may be varied experiences and frames of reference as well as learning preferences depending on the situation or topic, most of the time students can learn most content in more than one way – we don't pigeon-hole
- ·Motivation, resilience, "stick-to-it-ness" are specific fields of expertise.

What does it mean to do advanced responsive teaching?

It means we become mini-experts in assessment and grading practices that support responsive teaching principles:

- ·Evidenced-based assessment
- •Formative feedback, including getting training on descriptive feedback •Gradebooks cumulative for the year
- ·Subject-like teachers collaborate on evidence descriptors
- ·Allow/Require re-do's for full credit
- Time becomes a variable
- Revising instruction based on assessment
 Distinguish between formative and summative

- •Increase the role of pre-assessment in our lesson design
 •Develop a constructive response to late work
 •Report work habits, efforts, character elements separately from academic
- progress and performance
 •Welcome alternative assessments (This is different than most interpretations of "Credit Recovery")
- Disaggregate scores/topic evaluations to see strong and weak areas
- ·Accept grades as what students know and can do at the end of learning, not during the learning.

What does it mean to do advanced responsive teaching?

It means we become mini-experts in building a personal repertoire of differentiated responses, cultivating pedagogical dexterity:

- •Read professionally. Subscribe to at least one professional journal.
- Think reflectively.
- •Keep up to date in our expertise regarding the disciplines we teach. Attend at least one national or regional conference/seminar each year.
- •Exchange lesson plans for collegial review.
- •Participate in PLC's, Teacher Action Research, Critical Friends Networks, or as a Lab School for a local university
- •Actively pursue new ways to do differentiation elements like flexible grouping, scaffolding, tiering, adjusting instruction to readiness levels,
- •Participate in the national and local conversations of our discipline.
- •Participate in a professional on-line community and/or course.

What does it mean to do advanced responsive teaching?

It means we become mini-experts in building a personal repertoire of differentiated responses, cultivating pedagogical dexterity: (part 2)

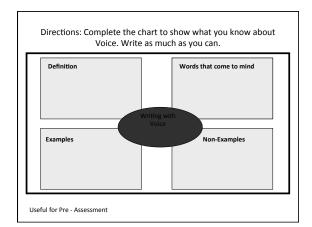
- Analyze practices/decisions regularly, and revise/change/ drop those that aren't working.
- •Invite professional critique from colleagues, students, parents.
- Coach others.
- •Participate/Conduct discussions of hypotheticals/scenarios.
- Cultivate personal creativity and innovation.
- •Ask students for how to teach something best.
- Co-teach.
- •Blog or write for publication.

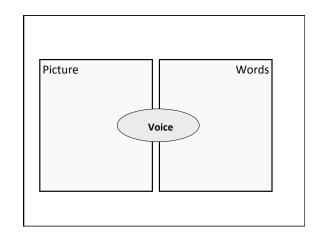
SOME TANGIBLE EXAMPLES





- Clear "I get it!"
- Bugs "I get it for the most part, but I still have a few questions."
- Mud-"I still don't get it."







Leveled Writing Prompts

- Our school is considering having longer class periods.
 Do you believe this is a good idea? Why or why not?
- As Americans, we enjoy many freedoms. Which freedom do you believe is the most important? Why?
- People have many choices of what to do during free time. What is your favorite thing to do during free time, and why is the best choice?

Leveled Questions with Reading



- What were your feelings after reading the opening chapter(s) of this book?
- Return to a place in the story that you loved, hated, or questioned. How did this event change the way you looked at the story?
- What was the author trying to say about life and living through this novel?

Adapted From Carol Tomlinson 2013

Exit Cards: Decimals and Fractions

Name:_____

- How is a decimal like a fraction?
- How are they different?
- What's a light bulb moment for you as you've thought about fractions and decimals?

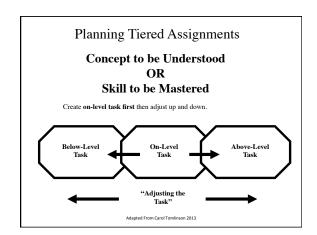
Adapted From Carol Tomlinson 2013

Other LO-PREP Tools

- Flexible groups
- Varied materials
- · Open-ended activities
- Jigsaw



Poetry Contract | Create A Rhyming Wheel | Use Your Rhyming Wheel | Use your spelling lists as a w ay to get started | Write a poem that sounds like Shel | Silvertalein might have written | Be sure it includes alliferation | Silvertalein might have written | Write | Computer Art | Write about you | Use good descriptive words in a precipitor, or analogy on your class | Isl. or ones you create. | Use good descriptive words in a precipitor | Use good descriptive words



Writing Bingo
to use your writing goals and our class rubric to guide your work Thank- you Note Directions to one Rules for a Letter to the editor place to another Email request for Information Letter to a pen Skit or scene Interview Invitation pal, friend or relative FREE Newspaper Short Story Grocery or shopping list Article YOUR Choice Advertisement Cartoon Strip Instructions Greeting Card Poem Proposal to Letter to Journal for a Design a Improve Week web page Aloud Something Teache Adapted From Carol Tomlinson 2013

Strategies to Make Differentiation Work

Tiered Instruction

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.

Adapted From Carol Tomlinson 2013

What Can Be Tiered?

- Processes, content and products
- Assessments
- Writing prompts
- Assignments
- Anchor activities
- Homework
- Materials
- Learning stations

Adapted From Carol Tomlinson 2013

What Can We Adjust?

- · Level of complexity
- Amount of structure
- Pacing
- Materials
- Concrete to abstract
- Options based on student interests
- · Options based on learning styles

Tiering Instruction

- Identify the standards, concepts, or generalizations you want the students to learn.
- 2. Decide if students have the background necessary to be successful with the lesson.
- 3. Assess the students' readiness, interests, and learning profiles.

Adapted From Carol Tomlinson 2013

Tiering Instructions

- Create an activity or project that is clearly focused on the standard, concept or generalization of the lesson.
- Adjust the activity to provide different levels or tiers of difficulty that will lead all students to an understanding.
- 6. Develop an assessment component for the lesson. Remember, it is on-going!

Adapted From Carol Tomlinson 2013

Strategies to Make Differentiation Work

2. Anchoring Activities

These are activities that a student may do at any time when they have completed their present assignment or when the teacher is busy with other students. They may relate to specific needs or enrichment opportunities, including problems to solve or journals to write. They could also be part of a long term project.



Strategies to Make Differentiation Work

3. Flexible Grouping

This allows students to be appropriately challenged and avoids labeling a student's readiness as a static state. It is important to permit movement between groups because interest changes as we move from one subject to another

Adapted From Carol Tomlinson 2013

CHOICE BOARDS

- · Students choose from a menu of options.
- Tasks vary by process and interest.
- Some anchor activities can be required of all students.
- Homework, projects, and assessment can be used as additional options.

Adapted From Carol Tomlinson 2013

<u>Diner Menu – Photosynthesis</u>

Appetizer (Everyone Shares)

Write the chemical equation for photosynthesis.



Entrée (Select One)

- Draw a picture that shows what happens during photosynthesis.
- Write two paragraphs about what happens during photosynthesis.
- Create a rap that explains what happens during photosynthesis.



Diner Menu - Photosynthesis

- Side Dishes (Select at Least Two)

 - Define respiration, in writing.

 Compare photosynthesis to respiration using a Venn Diagram

 - Write a journal entry from the point of view of a green plant.
 With a partner, create and perform a skit that shows the differences between photosynthesis and respiration.
- Dessert (Optional)
 - Create a test to assess the student's knowledge of photosynthesis.



Adapted From Carol Tomlinson 2013

<i>THINK-TAC-TOE</i> Book Report				
Draw a picture of the main character.	Perform a play that shows the conclusion of a story.	Write a song about one of the main events.		
Write a poem about two main events in the story.	Make a poster that shows the order of events in the story.	Dress up as your favorite character and perform a speech telling who you are.		
Create a Venn diagram comparing and contrasting the introduction to the closing.	Write two paragraphs about the main character.	Write two paragraphs about the setting.		

Learning Contracts

Learning contracts are **agreements** between a teacher (or teaching team) and a learner (or occasionally a group of learners). They normally concern issues of assessment and provide a useful mechanism for reassuring both parties about whether a planned piece of work will meet the requirements of a course or module. This is particularly valuable when the assessment is not in the form of a set essay title or an examination.

Adapted From Carol Tomlinson 2013

Name	arning Contract	t #1
My question or topic is	:	
To find out about my o	uestion or topic	
I will read:	I will look at and listen to:	I will write:
I will draw	I will need	:
Here's how I will share	what I know:	
I will finish by this date	:	
	Adapted From Carol Tomlinson 2013	

Learnin	ng Contract #2
To demonstrate what I have learned	d about, I want to
_ Write a report _ Put on a demonstration _ Set up an experiment _ Develop a computer presentation _ Build a model This will be a good way to demonstrate unc	_ Design a mural _ Write a song _ Make a movie _ Create a graphic organizer or diagram _ Other derstanding of this concept because
To do this project, I will need help with	
My Action Plan is	
The criteria/rubric which will be used to ass	sess my final product is
My project will be completed by this date	
Student signature: Teacher signature:	Date// Date//
Adapted Fe	rom Carol Tomlinson 2013

Think-Pair-Share

- Now begin thinking more specifically to your subject, grade level, etc.
- Sketch out a simple plan for one or two ways to differentiate instruction in your classroom this year.

AN EXAMPLE...START TO FINISH

Adapted From Carol Tomlinson 2013

Pre-Assessment

- Administered during previous week
- Writing prompt
- What do you think?
 - Read the following prompt and let us know what you think about this issue. Write a <u>paragraph</u> that would help someone know what your point of view is about the decision.
 - The school board met and decided that recess would no longer be needed in school. They felt that it would help students spend more time learning without being interrupted each day for recess. What do YOU think?
- Include a question about what interests them—in order to select topics that students are passionate about.
- Results:
 - Group A—Writing indicated that they were comfortable with the organization of their argument
 Group B—Writing indicated that they struggled with organizing their argument

Steps in Lesson

- Reintroduce the pre-assessment topic and have the students Think-Pair-Share about their own opinion of the topic. Ask pairs to read the two sample paragraphs (both with the same opinion, but one is organized well, and another is not) and talk about which one they felt was more persuasive.
- Introduce to the whole group the vocabulary of organizing a introduce to the whole group the vocabulary or organizing a paragraph (topic sentence, supporting details, elaboration, concluding sentence). As a class, go through each definition while all students highlight the example in the example paragraph with markers (Green – topic sentence, Bluesupporting details, Orange-elaborations, Red-concluding sentence).

Beasley, 2012

Sample Paragraph

There are many reasons why we shouldn't have recess during the school day. First of all, if we didn't have recess during the school day. First of all, if we didn't have recess, we would have more time to work on projects in school without being interrupted. Sometimes I am in the middle of something really, really important and then all of a sudden, we have to stop and I have to leave it behind. By not having recess, fewer students would get hurt. It seems that every time we are out on the playground, someone trips or falls and needs to go to the nurse. Finally, by not having recess, we might do better on tests. Everyone would have longer to study and we could all get A's. So you see, if we didn't have recess, it would be good for our school.

Groups based on Assessment Info.



Quarter Pounder Group - Grab your boxes and meet at the left side table



Big Mac Group - Grab your boxes and meet at the right side table

Beasley, 2012

Quarter Pounder Group

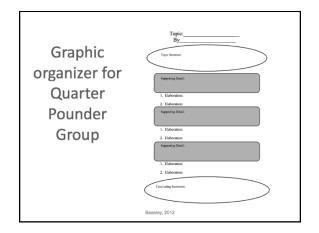
- Pick up the Quarter Pounder boxes. With a partner, work on the jumbled paragraph inside your box. When you feel that it is organized, retrieve the answer key and check your work. Glue your corrected paragraph to your paper and turn in.
- Meet with teacher to talk about a model for persuasive paragraphs. Your teacher will give you a graphic organizer that will be used to organize your paragraph.
- Complete the following assignment

Using the graphic organizer, choose one of the following topics and tell us what you think about...

Whether chewing gum should be allowed in class, whether students should be allowed to bring toys to school, whether dogs make better pets than cats.

Your task will be graded according to how well you demonstrate an understanding of the organization of a persuasive paragraph.

Beasley, 2012

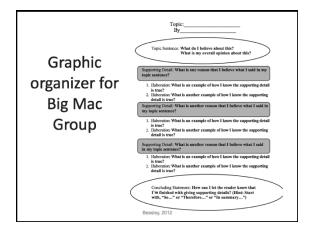


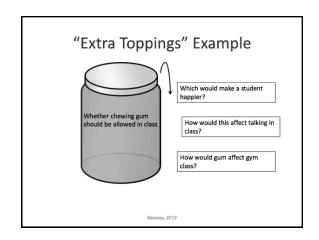
Big Mac Group

- Pick up the Big Mac boxes. With a partner, work on the jumbled paragraph inside your box. When you feel that it is organized, raise your hands to have your teacher check your answer. Glue your corrected paragraph to your paper and turn in.
- Meet with teacher to talk about a model for persuasive paragraphs. Your teacher will give you a graphic organizer that will be used to organize your paragraph.
- · Complete the following assignment:

Using the graphic organizer, choose one of the following topics and tell us what you think about...

- Whether chewing gum should be allowed in class, whether students should be allowed to bring toys to school, whether dogs make better pets
- If you need a hint, go to retrieve an "extra topping" from our jars! Your task will be graded according to how well you demonstrate an understanding of the organization of a persuasive paragraph.





Future Steps in Lesson (cont'd)

- Students present their writing; teacher assesses products for student understanding of the organization of persuasive paragraphs
- Re-teach as necessary
- Formative assessment of and instruction on making a link between supportive details and opinion
- Eventual summative assessment: Writing a persuasive paragraph
 - Students will choose a side of an argument and build a Students will choose a side of an argument and build a logical case for their opinion.

 The paragraph will need to be

 clear, and logical

 Have a strong, clear topic sentence staging the writer's opinion

 - Have supporting details with elaborations
 Includes a concluding sentence that restates the author's point of view



Huddle!

What's your initial response to this example?

In what ways do you find it appealing? Problematic?

What would you like to take away from it?

What questions does it raise for you?