So All Can Learn: Differentiation through 21st Century Skills

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So All Can Learn: A Practical Guide to Differentiation Book Site: http://johnmccarthyeds.net/soallcanlearn/

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www.P21.org

### Session Resources

### Differentiation

- Conceptual Ideas: <a href="http://johnmccarthyeds.net/soallcanlearn/sacl-conceptualresources/">http://johnmccarthyeds.net/soallcanlearn/sacl-conceptualresources/</a>
- Practical Strategies: http://johnmccarthyeds.net/soallcanlearn/sacl-practicalresources/
- Additional Resources: http://openingpaths.org/blog/resources/di/
- Articles
  - o The 1<sup>st</sup> Truth about Differentiation: <a href="http://johnmccarthyeds.net/the-1st-truth-about-differentiation/">http://johnmccarthyeds.net/the-1st-truth-about-differentiation/</a>
  - 3 Ways to Plan for Diverse Learners: What Teachers Do: <a href="https://www.edutopia.org/blog/differentiated-instruction-ways-to-plan-john-mccarthy">https://www.edutopia.org/blog/differentiated-instruction-ways-to-plan-john-mccarthy</a>

### 21st Century Learning Skills

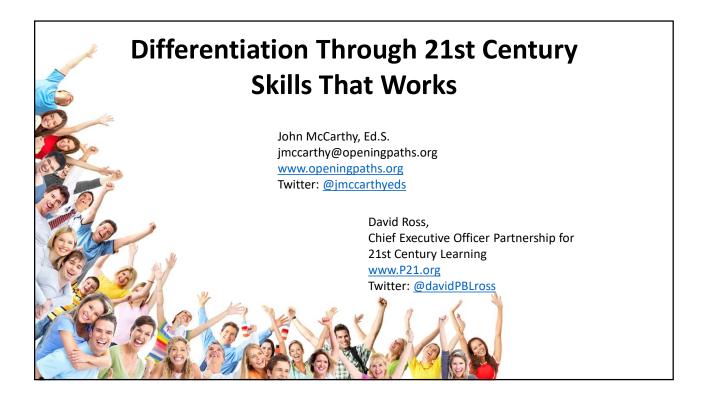
- Framework for 21<sup>st</sup> Century Learning <u>http://www.p21.org/about-us/p21-framework</u>
- Additional Resources: <a href="http://openingpaths.org/blog/pbl-guide/">http://openingpaths.org/blog/pbl-guide/</a>
  - o 21<sup>st</sup> Century Anchor Charts (examples): <a href="http://bit.ly/5cscharts">http://bit.ly/5cscharts</a>
- Henrico 21
  - o Lessons, Units, and Projects: http://blogs.henrico.k12.va.us/21/
  - o TIP Chart for teacher reflection: http://blogs.henrico.k12.va.us/21/tip-chart/
- Articles
  - The Skills Colleges and Employers Are Looking For: <a href="https://www.edutopia.org/article/skills-colleges-employers-looking-for-john-mccarthy">https://www.edutopia.org/article/skills-colleges-employers-looking-for-john-mccarthy</a>
  - o PBL, Kazakhstan, and Global Success Skills: <a href="https://www.edutopia.org/blog/pbl-kazakhstan-global-success-skills-john-mccarthy">https://www.edutopia.org/blog/pbl-kazakhstan-global-success-skills-john-mccarthy</a>

### Differentiating through Student Voice (Agency)

- Student-Centered Learning: It Starts with the Teacher:
   https://www.edutopia.org/blog/student-centered-learning-starts-with-teacher-john-mccarthy
- Practices: Genius Hour, Maker Space, Design Thinking, and Project Based Learning Differentiation through Collaboration & Communication

Establishing a Culture of Student Voice: <a href="https://www.edutopia.org/blog/establishing-culture-of-student-voice-john-mccarthy">https://www.edutopia.org/blog/establishing-culture-of-student-voice-john-mccarthy</a>

- Classroom Culture Norms
- Discussion Protocols:
  - Save the Last Word,
  - Say Something,
  - Socratic Seminar,
  - Fishbowl,
  - Spider Web (aka Harkness) Discussion
- Teamwork with roles & responsibilities
- SAMR Model: Level 3 & 4: File sharing: Google Apps + Drive, Office 360 (OneNote & OneDrive), Schoology, Edmodo.
- 21<sup>st</sup> Century Anchor Charts:
- Learning Profile Cards: <a href="http://openingpaths.org/blog/2014/01/learning-profile-cards/">http://openingpaths.org/blog/2014/01/learning-profile-cards/</a>





- Chief Executive Officer
- Partnership for 21st Century Learning
- www.P21.org
- Twitter: @davidPBLross





http://openingpaths.org

Book:

John McCarthy, Ed.S.

Follow on Twitter: @Jmccarthyeds "So All Can Learn: A Practical Guide to Differentiation"

### http://bit.ly/saclpraise

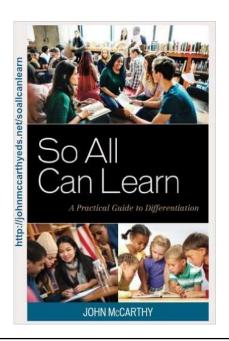
20% off Code: **RLEGEN17** 

@ Rowman site

http://bit.ly/rowman20

- Teacher
- Education Consultant
- Writer for Edutopia.org
- Co-Facilitator for #DI4ALL
- Published articles: http://openingpaths.org/blog/publications/

http://openingpaths.org/blog/resources/di/



### **Norms**

- Everyone contributing deepens everyone's learning
- Pay attention to self and others
- Monitor own Zone of Proximal Growth
- Seek to understand before being understood Stephen Covey (Questions are gifts)

Please tweet your learning takeaways for other professionals #ISTE2017 & #21CenturySkills

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Book:

# When does DI happen?

Intuitively
In the moment

Intentional Pre-planned

Chapter 2 from
"So All Can Learn: A Practical
Guide to Differentiation"
<a href="http://bit.ly/saclpraise">http://bit.ly/saclpraise</a>



# Starting Place for Differentiation

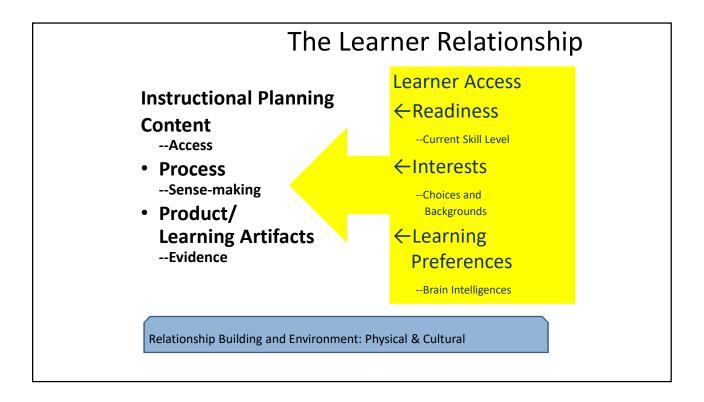
"Differentiation is making sure that the right students get the right learning tasks at the right time. Once you have a sense of what each student holds as 'given' or 'known' and what he or she needs in order to learn, differentiation is no longer an option; it is an obvious response."

Assessment as Learning: Using Classroom Assessment to Maximize Student Learning Lorna M. Earl, Corwin Press, Inc. 2003 – pp. 86-87



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Book:



### So All Can Learn, Chapter 5: http://bit.ly/saclpraise **Leveling Up Differentiation** Levels of Description of what Differentiation looks like Implementation Teacher practice is intuitive rather than intentional. Student needs are met during lessons only when the needs appear and are recognized by the teacher. For example, students not asking questions, lay heads on the table, little to no activity on the assignments, limited participation/ engagement. Supports may be organically developed. Two Teacher practice is mostly intuitive with some Intentional influences. Student needs are met during lessons as the needs appear, based on observations and planned formative assessments. Some support resources are readily available and provided to students as needed, based on previous experiences from teaching the lesson concepts. Three Teacher uses Intentional planning to begin supporting Intuitive practice, but may be used infrequently. Teacher reflects on assessment data as a means to develop and/or align resources that support the common learning gaps by students during the lesson. Data analysis is mostly group trends, rather than based on individual Teacher uses Intentional planning to target support for Crossroad lessons. Resources are developed and provided to address academic growth for struggling and advanced students based on their needs.

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### Why Differentiation through 21st Century Skills?

### Case Study #1



Juan is usually out of his seat. He's often found socializing with friends while instruction is happening. When confronted, Juan smiles, which the teacher interprets as he's not taking seriously his continuous disruption of the class. Other times, Juan is completing late work in class when the teacher wants him to focus on the current lesson. The parents never come to parent conferences even when Juan has been sent to the principal's office or served detentions.

Excerpt: "So All Can Learn: A Practical Guide to Differentiation"
(Chapter 4) http://bit.ly/saclpraise

### Why Differentiation through 21st Century Skills?

### Case Study #1



Juan is the caretaker for his three younger siblings at home. He feeds them, oversees and does chores, helps them with their homework, and gets them to bed. Juan then plays video games or reads gaming articles to decompress before going to bed. Someday he wants to become a professional gamer. His mother, a single parent, works three jobs to make ends meet. She counts on her eldest child to manage the house in her absence.

Excerpt: "So All Can Learn: A Practical Guide to Differentiation" (Chapter 4) <a href="http://bit.ly/saclpraise">http://bit.ly/saclpraise</a>

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Book:

### Why Differentiation through 21st Century Skills?

Case Study #2

Angel struggles with English and Government high school classes. She has low scores on tests and completes only 50 percent of the work. She's in danger of failing both classes. Her teachers have tried talking to her on several occasions about taking her work more seriously—that she needs strong communication skills and an understanding of citizenship—if she hopes to be successful someday.

> Excerpt: "So All Can Learn: A Practical Guide to Differentiation" (Chapter 4) http://bit.ly/saclpraise

## Why Differentiation through 21st Century Skills?

Case Study #2

Angel is a social media darling among her peers. Her video channel and social media following nears one million. The revenues from her video channel provide for her a comfortable living. Between marketing, scripting, and production, she works late at her computer. She's often too tired to do school work once she completes social media tasks for her business. Some of her best work exposes social ills in different communities like lack of good water. School seems like a rote and a tedious obligation in comparison to her world outside of school.



Excerpt: "So All Can Learn: A Practical Guide to Differentiation"

(Chapter 4) http://bit.ly/saclpraise

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Book:

# Why Differentiation through 21st Century Skills?

- What do the case studies show about the students' world in school and outside of school?
- How might you advise the teacher to best serve these students?





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Book:

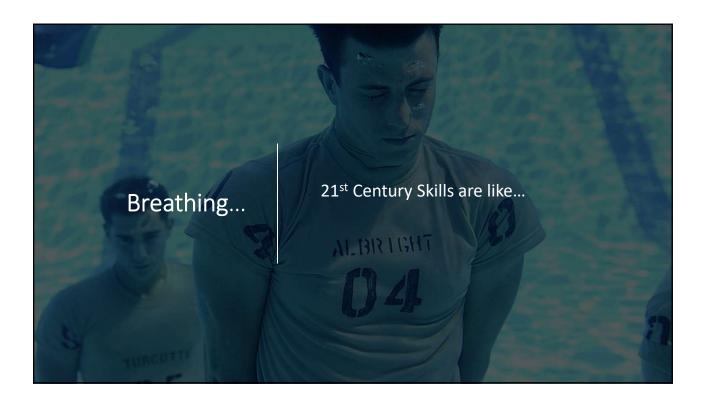
# Learning and innovation skills...

[I]ncreasingly are being recognized as the skills that separate students who are prepared for increasingly complex life and work environments in the 21st century, and those who are not.

A focus on creativity, critical thinking, communication and collaboration is essential to prepare students for the future.



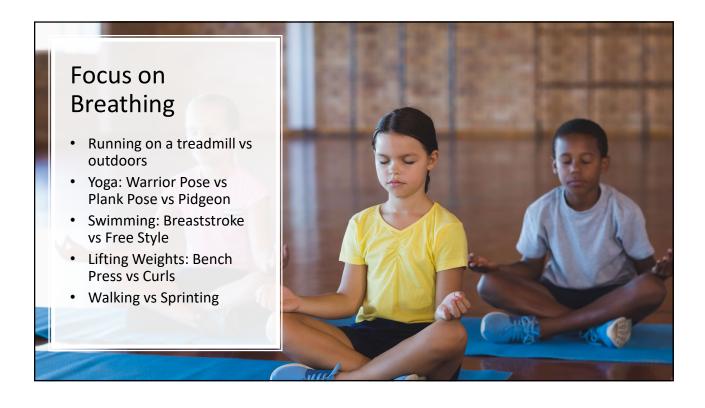
http://www.p21.org/about-us/p21-framework



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Book:

David Ross -Twitter: @davidPBLross





# What are the mechanics?

- Elbow aligned to the hoop.
- Eyes under the shooting hand.
- Guide hand on side softly.
- Shooting foot pointed to hoop, aligned to shooting hand.
- Reach above for the top shelf.

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Book:

# What are the mechanics?

- Writing informational text
  - Details: Facts, Examples, and Illustrations
- Solving equations
  - Order of Operations, math facts
- Conducting a scientific exploration
  - Genetics, bonds, body systems
- Research
  - Validating sources, Search tools, paraphrasing, and citations

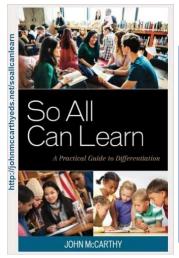
### What are the mechanics?

- Collaboration & Communication
- Critical Thinking & Problem Solving
- Creativity & Innovation
- Research & Information Literacy

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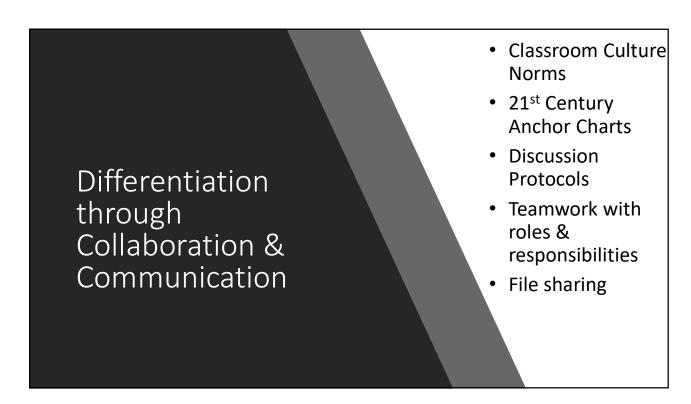
Book:

"P21's Learning and Innovation Skills are important for connecting curriculum to real-world applications."



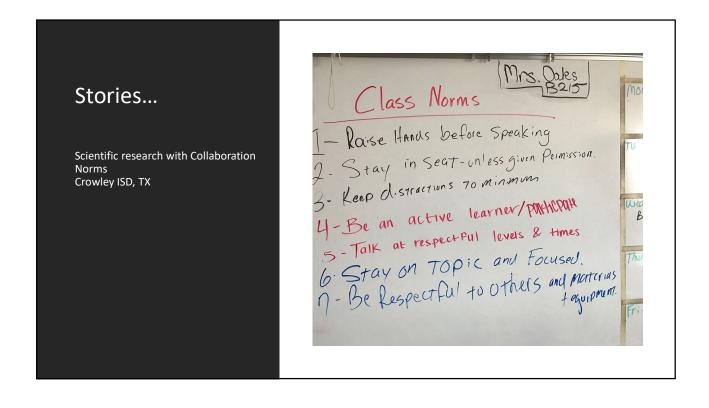
"The application of Learning and Innovation Skills such as communication, collaboration, problem solving, and innovation puts academia into a real-world context. This helps the learner to move from struggling with content as abstract and disconnected. They move towards understanding content as a concrete framework within the scope of real-world application."

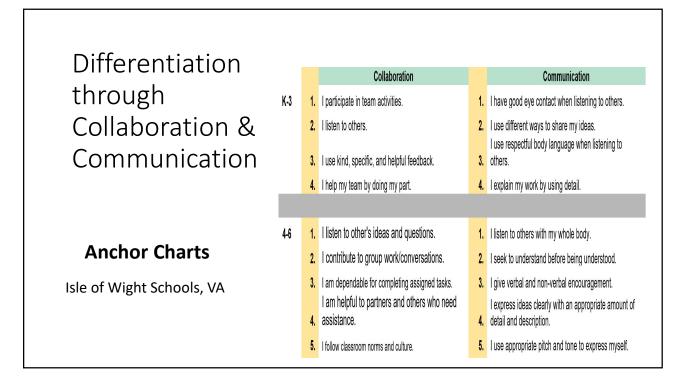
Chapter 6 of So All Can Learn: A Practical Guide to Differentiation



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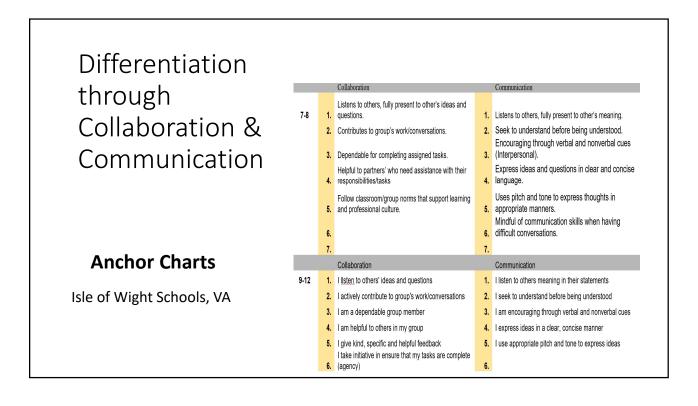
Book:





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Book:



# Differentiation through Collaboration & Communication

### **Discussion Protocols:**

- Harkness Discussion,
- Save the Last Word,
- Say Something,
- Socratic Seminar,
- **Fishbowl**

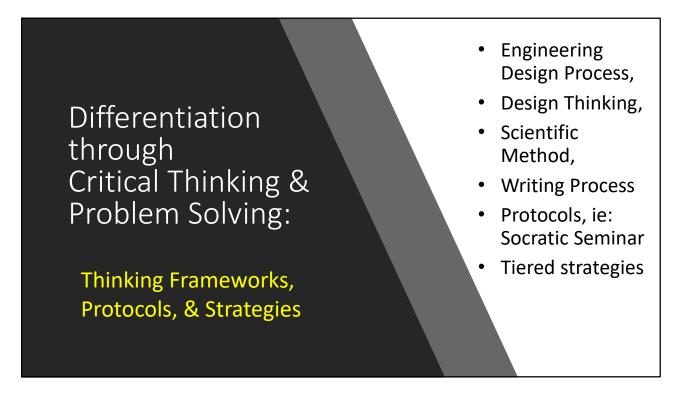


https://www.edutopia.org/blog/strategies-for-inquiry-based-learning-john-mccarthy

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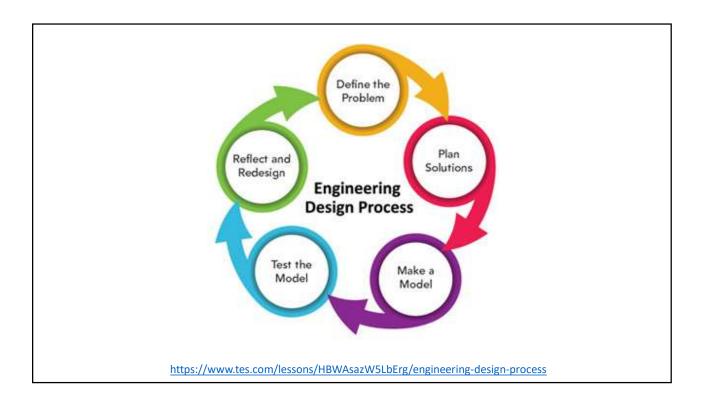
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# Differentiation through 21st Century Skills Lesson Example

DQ: How can we learn from the past for a better future?

Learning Target: Analyze use of narrative to be informational.

**Assessment: Partner article draft** 

- 1. Connect the DQ with the day's lesson objectives.
- Student teams read an article about the Holocaust using the Save the Last Word protocol (Content = Readiness & Learning Profile + Communication & Collaboration).
- Process: Reflect with a partner 1-2 takeaways with reasons from the conversation.
- Students interview a Holocaust Survivor via a video conference, after listening to his story. Starter questions are prepared prior. (Content = Interests & Learning Profile + Communication & Critical Thinking)
- Process: Students write a journal entry or webbing about the interview. This is followed by whole group discussion about the speaker's use of narrative to be informational.
- Assessment: In pairs, students compose a joint article draft about the experience with the Holocaust survivor. Complete 100-200 words.



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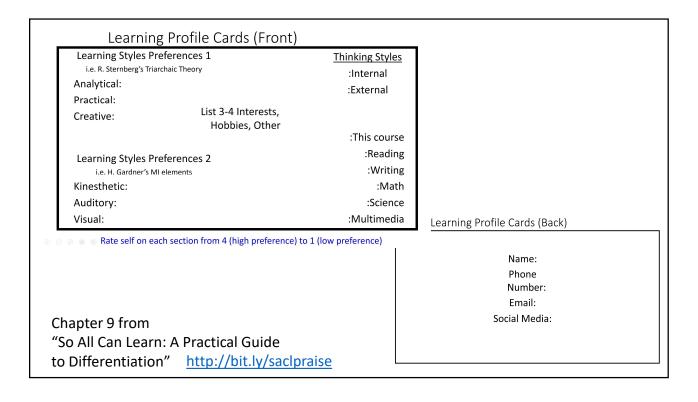
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TIP Chart for Reflection on Practice							
In a 21st Cen product. The	COMMUNICATION & COLLABORATION  In a 21st Century classroom, students communicate and collaborate ethically and effectively to reach a common goal or create a product. The teacher uses a variety of communication methods, structures student interaction in groups, and engages students in collaborative projects.						
	Entry (1)	Developing (2-3)	Approaching (4-5)	Ideal / Target (6-7)			
assig with interest Direct opposition	des information and nment expectations imited student etion. to the total tas communication rtunities that promote int comprehension.	Directly instructs on use of approved communication may be a dissociated digital tools. Provides opportunities and structures for students to work in groups on class assignments. Defines structures for student communication within the classroom.	Models a range of communication methods and digital tools.  Designs challenges that promote collaboration within and beyond the classroom to address an authentic task.  Teaches students how to collaborate purposefully without direct supervision.	Facilitates and formatively assesses authentic tasks seems of the seem			
towar	in small groups d a common product ut collaborating.	Work in teacher-selected groups with defined roles to accomplish class assignments.  Use digital tools to communicate to complete class assignments.	Establish group norms, form teams, and organize roles to address an authentic task. Use appropriate digital tools to facilitate collaboration.	Select appropriate digital tools to communicate and collaborate with peers and experts, regardless of time zone or physical distances.  Reflect on their roles as communicators and collaborators and set goals for future growth.			



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# The Mediation Clause

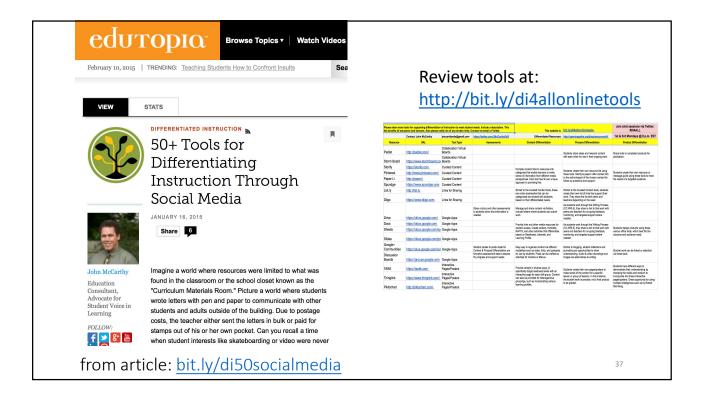
# **Teacher Monitored**

- 1. 1 to 1 meeting by a team member and the student (May occur 2-3 times)
- 2. Team meeting with the student
- Teacher meets with the team
- 4. Student relocation decision

http://bit.ly/mediationprotocol

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### **Think Dots**

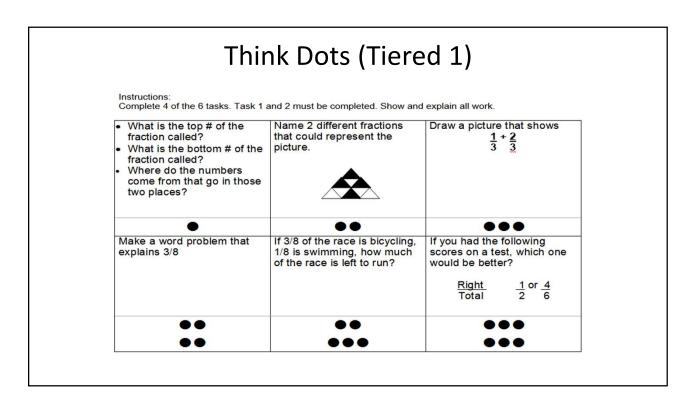
- Provides up to six tasks to complete for learning skills and/or concepts (e.g. fractions, plot analysis)
- Each task is progressively more difficult and connected to the learning objective.
- Students are grouped by readiness, interest, and/or learning profile.
- Students randomly pick (use a die) or choose a specific number of tasks to complete out of those provided (e.g. 3 of 6, 4 of 6, 6 of 6).
- Teacher might assigned some of the tasks as mandatory, and some as optional.

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# **Defining Fractions**

- Learning Objective: Understand the parts and function of fractions.
- Evidence/Assessment: Exit Card with 1-4 fraction problems to solve.
- Set up activity: Students have done some work with fractions.



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Instructions: Choose and complete 5 of the 6 tas	sks. Task 1 must be one of the choic	es. Show and explain all work.
What is the top of the fraction called? What is the bottom of the fraction called?	Write a fraction for the shaded area.	Draw a picture that shows 2/3.
•	••	•••
Make a word problem that explains 7/10.	If you have 3/5 of a pizza eaten, how many pieces are left in the pizza?	If you had the following scores on a test, which would be better?  Right 1 or 4 Total 2 6

# **RAFTS**

• Role The part/position to play

• Audience Who to communicate to.

• Format Product options

• Topic Focus of outcome

• Strong verb Turns topic action orientated

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# Student Voice (version 1)

Role	Audience	Format	Торіс
Red	Police	Deposition or plot chart	Tell what really happened.
Grandma	Red	1-2 minute conversation (script)	Save lives. Don't talk to strangers.
Wolf	Defense Attorney	1-2 minute conversation (script)	Help me! I was framed!
Neighbor	PTO	Flyer	Strangers & Red: Beware! (A Cautionary Tale)
Red	Friends	Obituary	Confess: A lesson I did not learn
Wolf	Talk Show Host	Memoir Letter	Save me! I'm misunderstood.

Excerpt from So All Can Learn: A Practical Guide for Differentiation (February 2017)

# Student Voice (version 2)

Role	Audience	Format	Торіс
Red	Police		Tell what really happened.
Grandma	Red		Save lives. Don't talk to strangers.
Wolf		1-2 minute conversation (script)	Help me! I was framed!
Neighbor		Flyer	Strangers & Red: Beware! (A Cautionary Tale)
Red		Obituary	
Propose your own			

Excerpt from So All Can Learn: A Practical Guide for Differentiation (February 2017)

http://openingpaths.org

Book:

Companion Article: "The 1st Truth about Differentiation" http://johnmccarthyeds.net/the-1st-truth-about-differentiation/

**MORE Resources for Differentiation:** 

http://bit.ly/di-resources

20% off Code: RLEGEN17

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