



# BetterLesson Professional Learning Webinar

Strategies for Differentiating  
Math Tasks



**Ohio Educational Service Center**

Date: June 24th, 2024

Lisa Fik

## Ways to Engage with Us Today



**Chat Box**

**Share your thoughts!  
Make sure the chat box says Send to 'Everyone'.**



**Q & A**

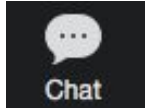
**Use the Q&A button to add your questions.**



**Handout**

**Follow along with the handouts.  
Slides will be shared with the recording.**

# Welcome!



Welcome!

**Share in the chat:**

- **Where are you joining us from today?**
- **What is your current role?**

# Your Hosts



**Annika Moore**

Math Consultant  
DEW



**Lisa Fik**

BetterLesson  
Instructional Coach

# Let's Check In!

How familiar are you with differentiating a task?



I have a basic understanding.



I adjust lessons occasionally.



I adjust lessons for either content, process or product.



I adjust lesson regularly for content, process, or product.



I support others with differentiating tasks.

# Aligned & Tailored for Ohio ESC Partnership



## Aligned

Our partnership is specifically designed to amplify the impact of other state-wide infrastructure and initiatives.

Our coaches will be familiar with key efforts, including:

- Materials Matter
- HQIM-related work streams with EdReports & Instruction Partners
- Ohio Standards for Math Practice



## Tailored

Our team has worked with leadership from the ESC of Central Ohio, OESCA, and the Department of Education to tailor our workshop, coaching, and learning walk content to the unique needs of ESC Math Specialists

# Our Webinar Series: Differentiation in a Student-Centered Math Classroom

- 1 Accessing and Engaging Student-Centered Mathematics
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# Our Series: Differentiation in a Student-Centered Math Classroom



## Goal

Examine the importance of providing grade-level, high-quality instruction while being responsive to students' diverse backgrounds and experiences

DEFINE

How to differentiate a math task.

EXPLORE

1. A classroom in action.
2. Identify differentiation strategies in a lesson plan.

BUILD

A differentiation strategy into your instructional practice.

TRY, MEASURE, LEARN



# Qualities of a Powerful Math Classroom



## The Content

Students have opportunities to experience coherent and meaningful disciplinary ideas.



## Cognitive Demand

Students engage in productive struggle, grappling with challenging problems.



## Equitable Access to Content

Classroom structures invite and support active engagement of all students.



## Agency, Authority, Identity

Students provided opportunities to contribute to discussions and build on others' ideas.



## Formative Assessment

Instruction “meets students where they are” and gives them opportunities to deepen understanding.

# Define

## Types of Differentiation

# UDL Principles



Multiple means of  
**Representation**

The **WHAT**  
of learning



Multiple means of  
**Engagement**

The **WHY** of  
learning



Multiple means of  
**Action & Expression**

The **HOW** of  
learning

# Differentiation is...

The efforts of teachers to **respond to variance among learners** in the classroom. Teachers can differentiate at least **four classroom elements** based on student readiness, interest, or learning profile:

- Content
- Process
- Products
- Learning Environment

# Differentiation



## Differentiate by Content

What you present to your students



## Differentiate by Process

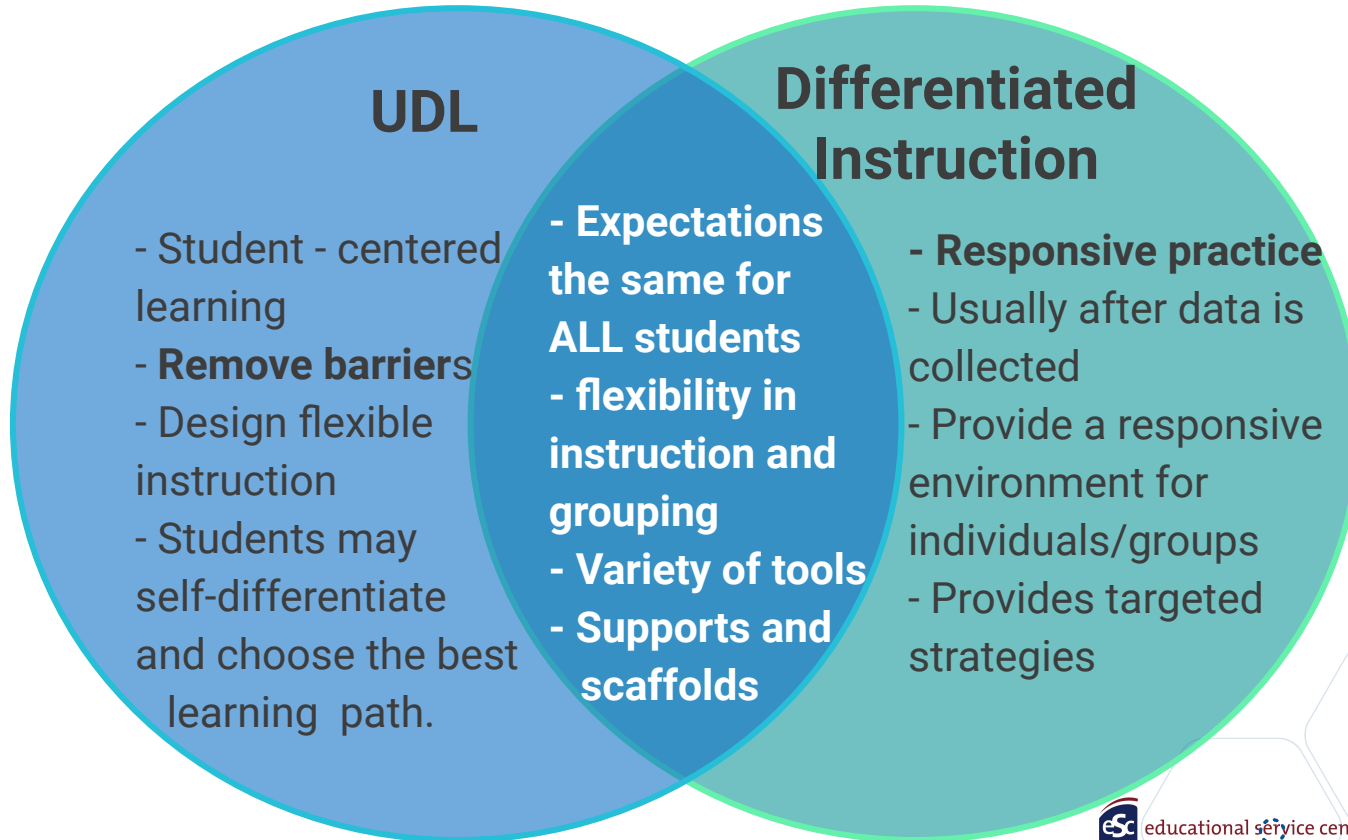
How students make sense of information



## Differentiate by Product

How students show what they've learned

# UDL vs. Differentiated Instruction



# Differentiate by Content

- **Student choice:** find ways to give students choices in the materials you present
- **Student interests:** include your students' interests in your content
- **Extra resources:** have some extension activities for your early finishers and some extra practice ready for students who need more time with the material

What are some examples of these that are already part of your teaching practice?

# Differentiate by Process

- **Student levels:** tier activities you give to students to fit different levels.
  - Do make sure that students are all held to high expectations!
- **Learning preferences:** make activities multi-sensory, include multiple ways of engaging with the learning

What are some examples of these that are already part of your teaching practice?



# Differentiate by Product

- **Level of challenge:** provide assessments that are at levels matching student needs
- **Options:** use tools like assessment menus to let students choose how they will show off their skills

What are some examples of these that are already part of your teaching practice?

# Keys to Differentiation



Know your students



Collect data to identify specific needs



Ensure that there is access before differentiating

# Layered Systems

TAKE ACTION

Differentiated Supports



DIAGNOSE

Formative Assessment and  
Feedback

UNDERSTAND

Strategic Planning

# Explore

## Differentiation in a Lesson

Engagement	Representation	Action & Expression
<ul style="list-style-type: none"> <li>❑ Choice is given in the learning process</li> <li>❑ Learning is authentic and relevant to their lives</li> <li>❑ Learning is driven by student goals</li> <li>❑ Varying levels of challenge are embedded in the learning</li> <li>❑ Flexible grouping is used to support students' needs</li> <li>❑ Learning is broken into manageable chunks</li> </ul>	<ul style="list-style-type: none"> <li>❑ Information is presented using a variety of modalities</li> <li>❑ Students engage with accessible content and tools</li> <li>❑ Multiple examples, ideas, and relationships are provided for content</li> <li>❑ Prior knowledge is activated through a variety of methods</li> <li>❑ Students self-assess the determine their own path for learning</li> </ul>	<ul style="list-style-type: none"> <li>❑ Students are given multiple ways to demonstrate their learning</li> <li>❑ A variety of scaffolds and supports are used</li> <li>❑ Assistive and adaptive technology is used to drive personalized learning</li> <li>❑ Students monitor their own progress for their goals</li> <li>❑ Formative feedback is provided regularly</li> </ul>

# Watch Party!



We are going to **Explore** a video!

As the video is playing, identify differentiation look-fors using document shared in the chat. **Reflect** on how you might adjust the lesson to differentiate.

Be ready to **Connect** in the chat to share your reflections.

# Classroom in Action



# Watch Party!



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Another mistake we make, again especially with struggling students, is over-scaffolding instruction. Remember, the curiosity we're trying to spark comes in the wondering, in the process of trying to figure something out, in the complexity of seeing connections between things that don't seem like they go together.

- Zaretta Hammond

# Let's Analyze a Lesson Plan!

## Ohio State Standard:

F.IF.3 Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by  $f(0) = f(1) = 1$ ,  $f(n + 1) = f(n) + f(n - 1)$  for  $n \geq 1$ .

## Ohio State Standard:

F.BF.1 Write a function that describes a relationship between two quantities.

★ Modeling Standard

# Analyzing a Lesson Plan

1. Skim the math lesson shared in the chat.
2. Open the Lesson Planner shared in the chat.
3. Identify differentiation supports for Content, Process, and Product.

## **Complete Step 2 of the Lesson Planner**

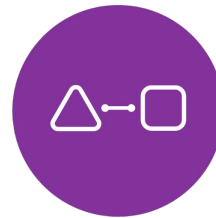
4. Be ready to share what you noticed and how you might adjust the lesson.



**EXPLORE**



**REFLECT**



**CONNECT**

<b>Content</b>	<ul style="list-style-type: none"><li>● Using visuals and connecting to a formula, then a graph.</li><li>● Making sense in multiple ways</li></ul>
<b>Process</b>	<ul style="list-style-type: none"><li>● Students finding similarities and differences</li><li>● Turn and talk comparing strategies</li><li>● Exit ticket: helps to self-assess</li></ul>
<b>Product</b>	<ul style="list-style-type: none"><li>● Scaffolded version of the activity to help students organize information.</li></ul>

# Debrief

Reflect on the lesson video and lesson plan. What is one strategy that you want to remember when preparing to teach a lesson?



# Build

How can we make this work actionable?

**Targeted  
Small Group  
Intervention**

**Peer  
Support**

**Individualized  
Scaffolds**

**Differentiated  
Supports**

# Let's Explore: Strategy Choice Board

Choose any of the sections below and explore the related BL resources & strategies.

**Using Data to  
Group Students**

[BL Strategy](#)

**Differentiating  
By Content**

[Interest Surveys](#)

**Differentiating  
By Process**

[Mild, Medium,  
Spicy](#)

**Differentiating  
by Product**

[Tiered  
Assignments in  
Math](#)



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# Reflect and Connect

Jot down one strategy from this series you want to remember when preparing for the new school year.



# Progress D Webinar Series: Elements of a Student-Centered Classroom

- 1 **Creating Positive Learning Experiences in Math**
- 2 **Developing Mathematical Fluency**
- 3 **Using Visual Representation to Support Math Reasoning**
- 4 **Developing Multiple and Varied Checks for Conceptual Understanding**

## Q & A

**What questions do you have about our conversation today?**





**We value your feedback!**

“

**Your input is important to us, please take a moment to complete our survey using the link in the chat.**

# Thank you!

