JORDAN SCHOOL DISTRICT

Defining Problem Based Learning
Launching the Open Up Resources (OUR) 6-8 Math Curriculum
JSD OUR 2020 SUMMER HIVE Session 1

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Learning Goals

- **Mindset:** Teachers believe a problem-based curriculum is an effective tool for student-centered math instruction
- **Curriculum Design:** Teachers understand how the units, lessons, and activities are designed to support problem-based learning
- **Strategic Planning:** Teachers understand the purpose of each of the curriculum materials and use them in both their long-term and daily planning

Session 1 Agenda

Time	Section	Resources
30 minutes	**Welcome & Connections** •	• Hopes and Fears Break Out Rooms New Groups from breakout session ○ Group 1 ○ Group 2 ○ Group 3 ○ Group 4 ○ Group 5

		• Community Agreements Padlet • Setting Agreements • Questions/concerns type in chat
30 minutes	**Engaging in a Problem** Essential Questions: • What does a problem-based approach to math feel like for students? • What are the goals for our work together?	• Noah's Ark • Desmos Check for Understanding • OUR Course Guide: What is a "Problem-Based" Curriculum?
5 minutes	**Break**	
60 minutes	**Learn by Doing: An OUR Math Lesson** Essential Questions: • What does it feel like to work through an OUR lesson as a student? • How are the components of an OUR lesson designed to promote problem-based math learning?	• 6th Grade Unit 1 Lesson 1 (Teacher's Guide) • 6th Grade Unit 1 Lesson 1 Student Handouts • Digital Applet for Activity 1.2 • Community Created Resources for 6.1.1 • Slides for 6.1.1 from Brooke Powers
5 minutes	**Break**	

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30 minutes	**Key Characteristics of the OUR Math Curriculum- Mary**
	Essential Questions:
	• How do the key characteristics show up in this lesson?
	  ○ Group 1: Classroom Culture
	  ○ Group 2: Launch - Work Time - Synthesis
	  ○ Group 3: Lesson/activity purpose
	  ○ Group 4: Learning sequenced to build conceptual understanding over time
		• 6th Grade Unit 1 Lesson 2
		• 6th Grade Unit 1 Lesson 2 (PDF)
		• Group 1: Classroom Culture
		• Group 2: Launch - Work Time - Synthesis
		• Group 3: Lesson/activity purpose
		• Group 4: Learning sequenced to build conceptual understanding over time
		• Group 5: Lesson/Activity Purpose

20 minutes	**Reflection & Closure- Mary** Essential Questions: • What progress have we made toward our goals? • What would we like to do the same/differently the next time we meet?	• Workshop Survey • Today's Slides • HIVE STIPEND REFLECTION Form

Name	What is your role? (Coach/teacher/SpEd	What is a hope you have for this curriculum?	What is a fear you have about this curriculum?
Group 1			
Angela Alm	teacher	Better understanding of the new resource. Better engagement	Implementation

Julie Barnson	teacher	Better understanding/more engaging	Implementation
Jen Ramso	teacher	Engaging and fun content	Implementing with all the weirdness of this year and all the unknowns
Kris Kimball	teacher	Deeper understanding for students	How do we implement group work and pairs with social distancing?
Brandon Maulis	teacher	Making math more interactive, deeper for all students	How to do this without having students complete their work working with other students - social distancing?
Hallie Caldwell	SpEd 4-6	Better understanding the core curriculum and getting my students engaged and successful.	Helping students who struggle with motivation during online learning.
Jolene Pruyt	teacher	Understanding of materials	Using total computer teaching
Kate Aragon	teacher	My hope is that it will build on what they already know but also prepare them for what they need in 7th grade	Implementation, but it looks good so far from what I've seen
Kim Vance	teacher	I hope it is engaging	Switching the curriculum with everything else we have going on this year.

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Name	What is your role? (Coach/teacher/SpEd	What is a hope you have for this curriculum?	What is a fear you have about this curriculum?
Group 2			
Stefanie Walker	Teacher	It's more rigorous than M.E.	It can be dry if you let it
Wendy Gardner	Teacher	That it will get the students where they need to be for middle school	The students are behind and that there will be a lot of catch up. Will we have the time?
Dan Davenport	Teacher	Improve student performance	Just different
Melissa Raymond	Teacher	Students will be able to perform well with this	Making sure students are where they need to be at the start and at the end
Julie Muir	Teacher	Improve student performance	Implementation
Elaine Cloward	6th grade Teacher	Deeper Understanding	Not enough practice.

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Name	What is your role? (Coach/teacher/SpEd	What is a hope you have for this curriculum?	What is a fear you have about this curriculum?
Group 3			
Sarah LeGrande	6th Grade Teacher	I hope that this curriculum will help students have a more hands on experience with math so that they may comprehend the material better.	A fear I have about this curriculum is that students may have a hard time transitioning from the old model to this new way of learning. I am also worried about being overwhelmed.
Marie Kastleman	6th grade	I hope that the curriculum will be sequenced in a way that helps the students gain a deeper and more complete understanding of the standards. I hope that it will engage the students better than traditional programs because they will get excited or at least interested in solving the problems.	A fear I have about this curriculum is that there won't be enough direct instruction of strategies and this will make it difficult for students that already struggle with math.
Deborah Craver	SpEd 6th grade	I hope I can help the students that struggle with math due to a disability to see math not stressful but something they can enjoy.	Students tuning out of math from past years experience
Brittany Cates	6th	I hope this will help students become more engaged and recognize that math is about exploration rather than just finding right or wrong answers.	I'm overwhelmed with having to learn a new curriculum amidst the numerous changes we will be going through this year.
Jason White	6th	To feel comfortable with this	I'm not sure if the new

		text as I do with the previous one.	text is going to be engaging or is it going to be the same as the old one?
Laura Packard	6th	I hope it will be easy to use.	I'm nervous about implementing a new program with all of the things going on with Covid-19.
Kimi Siddoway	6th	Ease, and Good resources	Implementation

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Name	What is your role? (Coach/teacher/SpEd	What is a hope you have for this curriculum?	What is a fear you have about this curriculum?
Group 4			
Kylee Hone	Teacher	It will be easy for students to work through, follow along with, and keep up with.	It will be too rigorous/fast paced, not leaving enough time for interventions.
Spencer Groves	Teacher	It will be a student friendly program	Too much to cover and not sure about how to do interventions as well.
Jen Joos	Teacher	It will help me reach more students	It will be too time intensive and I won't have time in my schedule to do it with fidelity.Doing it online.
Matthew Denison	Teacher	It will engage both myself and my students	Try to implement too much at a time. I don't want to overwhelm myself or my students.
Joe Mckay	Teacher	Engage the students	That it will be overwhelming
Christie Matheson	Teacher	A fluid way to teach online and in person and be able to switch back and forth- a compatible and friendly program	Too many changes and getting my team to follow the schedule.

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Name	What is your role? (Coach/teacher/SpEd	What is a hope you have for this curriculum?	What is a fear you have about this curriculum?
Group 5			
Linda Irick	6th Grade ALPS teacher	My hope is that it will create excitement about math and build positive attitudes toward math.	I am wondering how difficult it will be to feel like an effective teacher with the program.
Kristin Sproul	6th teacher	Hope: This program will make math an engaging academic experience for the students.	Fear: This is my first year teaching 6th, so the learning curve is steep with a new grade and curriculum.
Abigail Murray	Teacher 6th	I hope that this program will be easy to follow and learn, so that I can support students and encourage their learning.	My fear is that I don't know the curriculum as a new 6th grade teacher well yet.
Teresa Rossetti	6th teacher/coach	I hope that I will be able to learn this program and feel confident teaching it.	My fear is that there is a lot to learn and right now I feel overwhelmed.
J.D. Copier	6th Grade Teacher	My hope is that this program will build a positive attitude about math with students	Mf fear is that I will be unable to teach this program effectively enough to do what it is intended to do.

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Breakout Rooms

Room 1	Room 2	Room 3	Room 4	Room 5
	Elaine Cloward Sherri Peisley Daniel Davenport Melissa Raymond Stefanie Walker Francisco Javier Lamela Pablos Patti Simister Wendy Gardner	Deborah Craver Jason White Sarah LeGrande Brittany Cates Rebecca Mortimer Kimberlee Siddoway Marie Kastleman Laura Packard	Kylee Hone Jolene Pruyt Spencer Groves Matthew Denison Christie Matheson Jen Joos Joe McKay	Linda Irick Abigail Murray Kate Aragon J.D. Copier Julie Muir Kristin Sproul Teresa Rossetti Jennifer Ramos
Key Characteristic: *Classroom culture*	**Key Characteristic:** *Launch - Work Time - Synthesis*	**Key Characteristic:** *Lesson/ activity purposes*	**Key Characteristic:** *Learning sequenced to build conceptual understanding over time*	**Key Characteristic:** *Lesson/ activity purposes*

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Group 1: Classroom Culture		
Roles		
Task	**Task**	**Task**
Name: Wendy Gardner	Name: Julie Barnson	

Member Gems (one each team member)

It's taking an investigational approach instead of a right or wrong answer.

Students use collaboration and feedback from one another

Students ask questions to one another and clarify

Draws on the students previous experience

Peer tutors create an inclusive culture so that everyone feels included

It's providing questions that provide inquiry-based approach

Name: Laura Packard	Name: Abigail Murray

Name: Hallie Caldwell	Name: Brandon Maulis	Name: Kristin Sproul Melissa Raymond

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Group 2:Launch/activity/purpose		
Roles		
Task	**Task**	**Task**
Name: Elaine Cloward		Name: Sherri Peisley
	Member Gems (one each team member) 1. Question-Teacher needs to ensure understanding of the question. 2. Individual-teacher gives 7-8 min of thinktime using a timer. 3. Groups-Students are separated into groups as the teacher clarifies and listens in. 4. Synthesize-Teacher brings them back and solidifies understanding by using open ended questions as students journal a response about definitions or key concepts.	
Name: Teresa Rossetti		Name: Joseph Mckay
	Name: Linda Irick	

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Group 3: Lesson activity/purpose		
Roles		
Task	**Task**	**Task**
Name Kylee Hone - The applet helps students conceptualize the idea that different shapes can have the same area. This tool is a helpful manipulative to help visualize	Name: Matthew Denison - Helps to build on understanding. Students will be better able to see these concepts in the real-world. Will add	
Member Gems (one each team member)	Name: Stefanie Walker -There is value in having multiple ways to access resources. -Beginning with a geometry unit gives all learners an opportunity to start the learning with a more familiar vocabulary while still building on the depth of concept	
Name: Sarah LeGrande - Helps students conceptualize that shapes create other shapes and fit within each other. - Builds on prior knowledge learned in previous lessons/ earlier grades	Name: Kristine Kimball Using the idea of square units to construct new shapes.	

Name:Kathlyn Aragon
The conceptual/ physical, and representational decomposing and composing of polygons within this lesson will give students the practice and background to find the area of these polygons and eventual the surface area of 3-d shapes.

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Group 4: Learning sequenced to build conceptual understanding over time		
Roles		
	Task	**Task**
Name: Dan Davenport “Building on” - “Addressing” - “Building towards” is shown in each lesson		Name:
	Member Gems (one each team member)	
Name: Angela Alm • There is a section in each lesson that shows what we are building ON, Adressing, & Building TOWARD. It’s cool because hopefully with this we can identify holes to help see the gaps. Also it shows what the end result will hopefully be.		Name:
	Name:	

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Group 5: Lesson activity/purpose		
Roles		
Task	**Task**	**Task**
Name:	Name:	
Member Gems (one each team member) Each lesson activity has the potential to bring up multiple levels of understanding and multiple concepts.		
Name:	Name:	
Name:		

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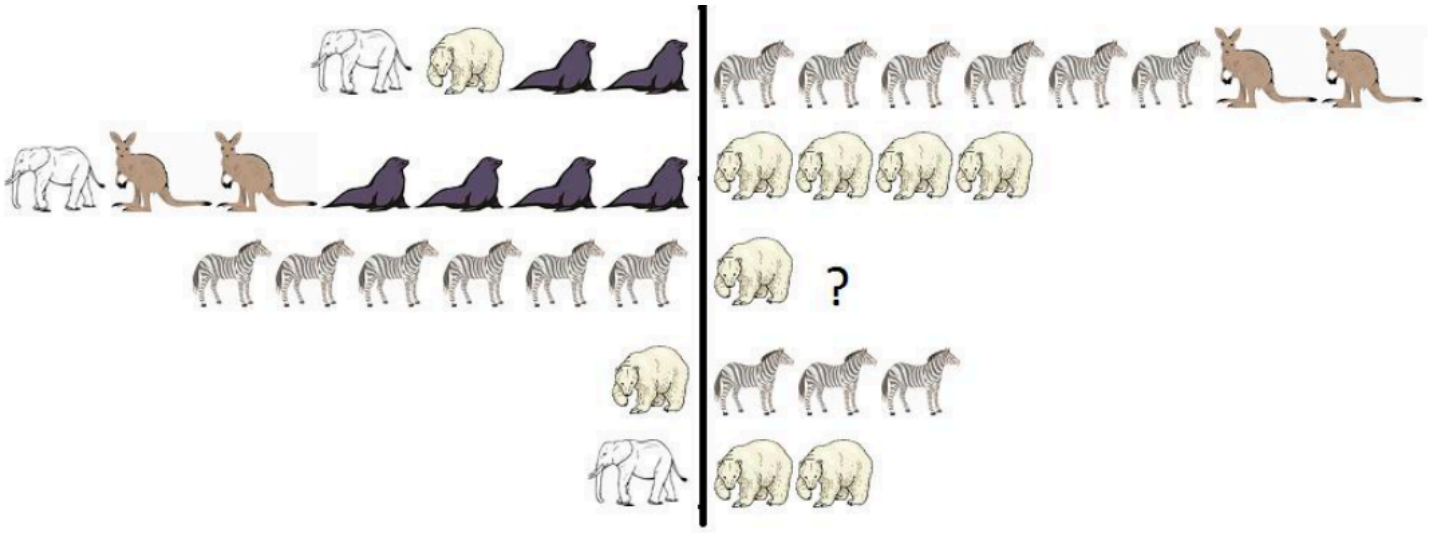


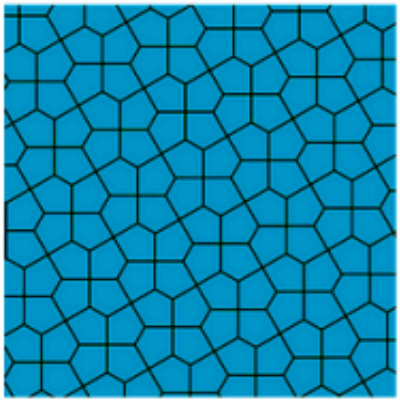
Noah's Ark

Mr. Noah wants his Ark to sail along on an even keel. The ark is divided down the middle, and on each deck the animals on the left exactly balance those on the right – all but the third deck. Can you figure out how many SEALS are needed in place of the question mark so that they (and the bear) will exactly balance the six zebras?

1.1 Which One Doesn't Belong: Tilings

Which pattern doesn't belong?

A



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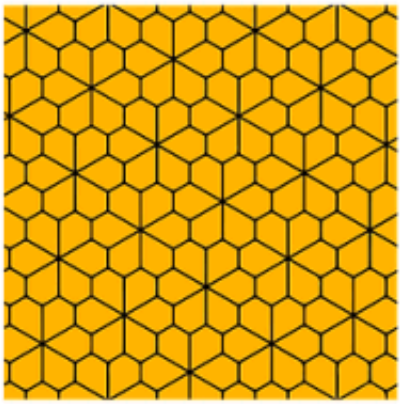

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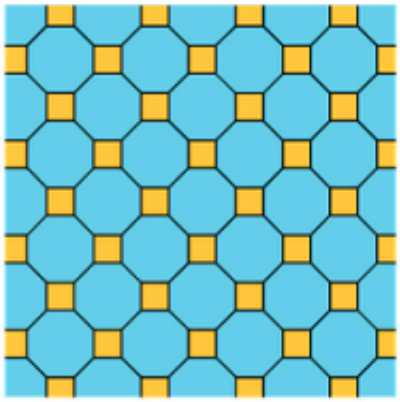

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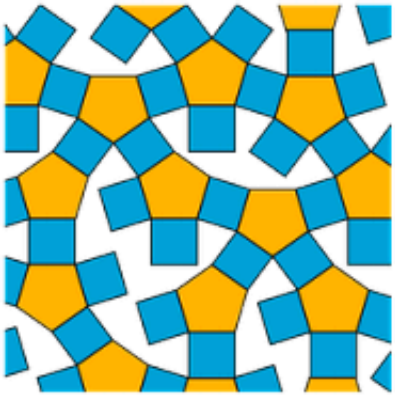
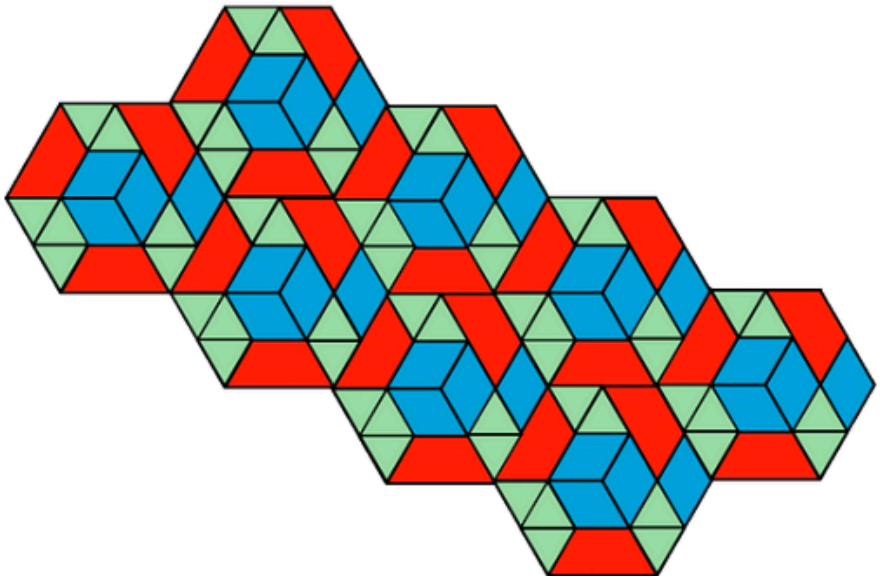


1.2 More Red, Green, or Blue?

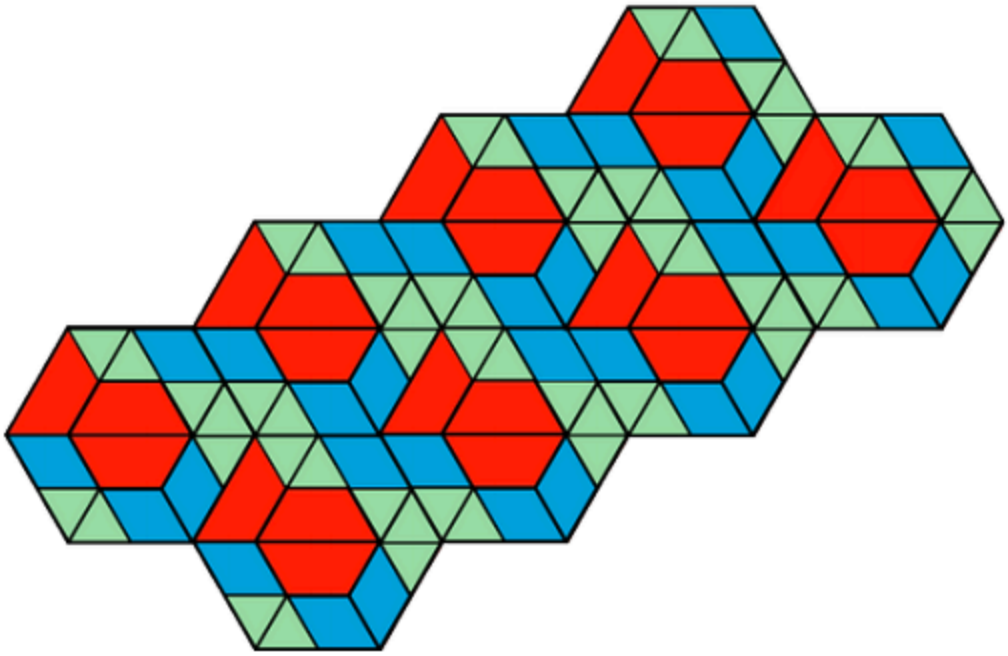
Your teacher will assign you to look at Pattern A or Pattern B.

In your pattern, which shape covers more of the plane: blue rhombuses, red trapezoids, or green triangles? Explain how you know.

Pattern A



Pattern B



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Unit 1, Lesson 1

Cool-down

1.3 What is Area?

Think about your work today, and write your best definition of area.

Key Characteristics of the OUR Curriculum

- **Classroom culture** where students learn by trying, sharing & listening to each other
- **Launch - Work Time - Synthesis** structure of classroom activities
- Specific lesson & activity **purposes**
- Carefully sequenced learning experiences that help students develop **conceptual understanding** over time
- A focus on student communication & **discourse**