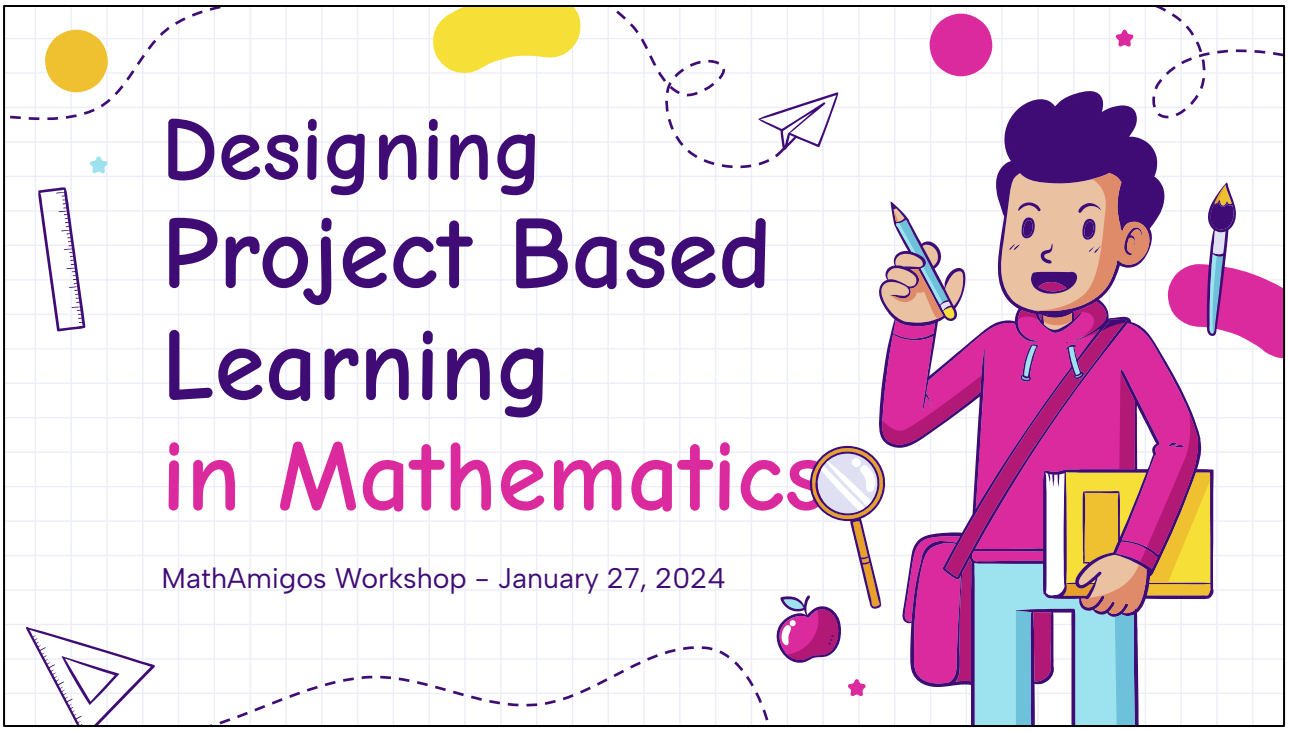
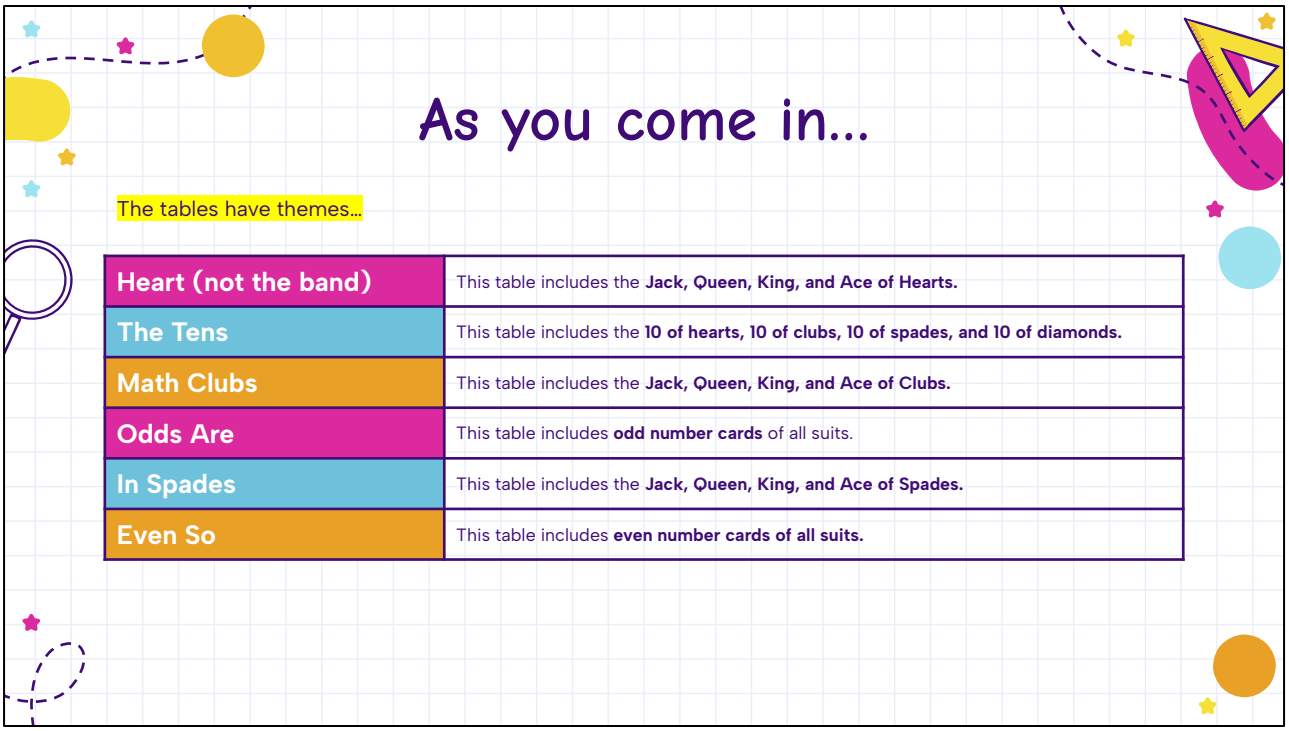


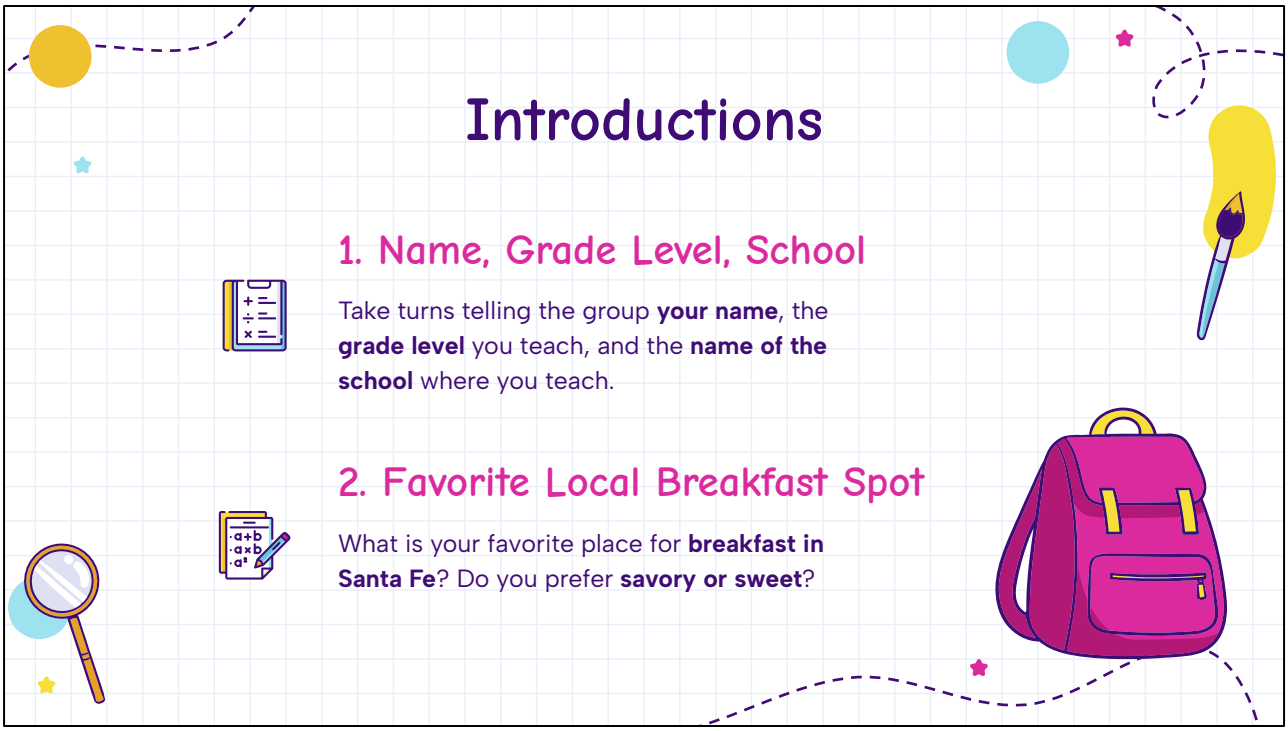
Could have this playing at 8:45… Kid President

6-7 groups of 4?
On Tables:
Post-its, pens, highlighters, sign for table theme
*Write your name on the board to start. At slide 3, when they are introducing, write role and school on the board, too.



Materials:
Deck of Cards - face cards and Aces of hearts, clubs, and spades; all four 10s, 3-5-7-9 of all suits, 2-4-6-8 of all suits (extra is face cards and Ace of diamonds)
Signs on tables to indicate groups

8:50am



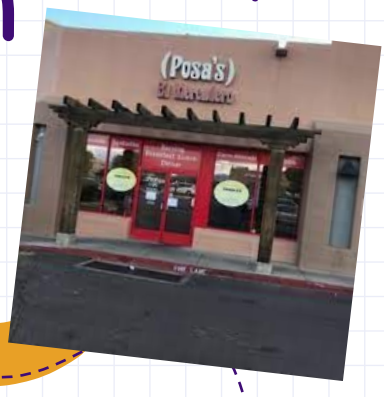
Take a moment to introduce yourselves to each other, even if you happen to be teamed up with someone you already know.
Please share your name, grade level, and school in the first round.
Then, in the second round, which could go in a different order, share your favorite place for breakfast in Santa Fe.

5-7 minutes

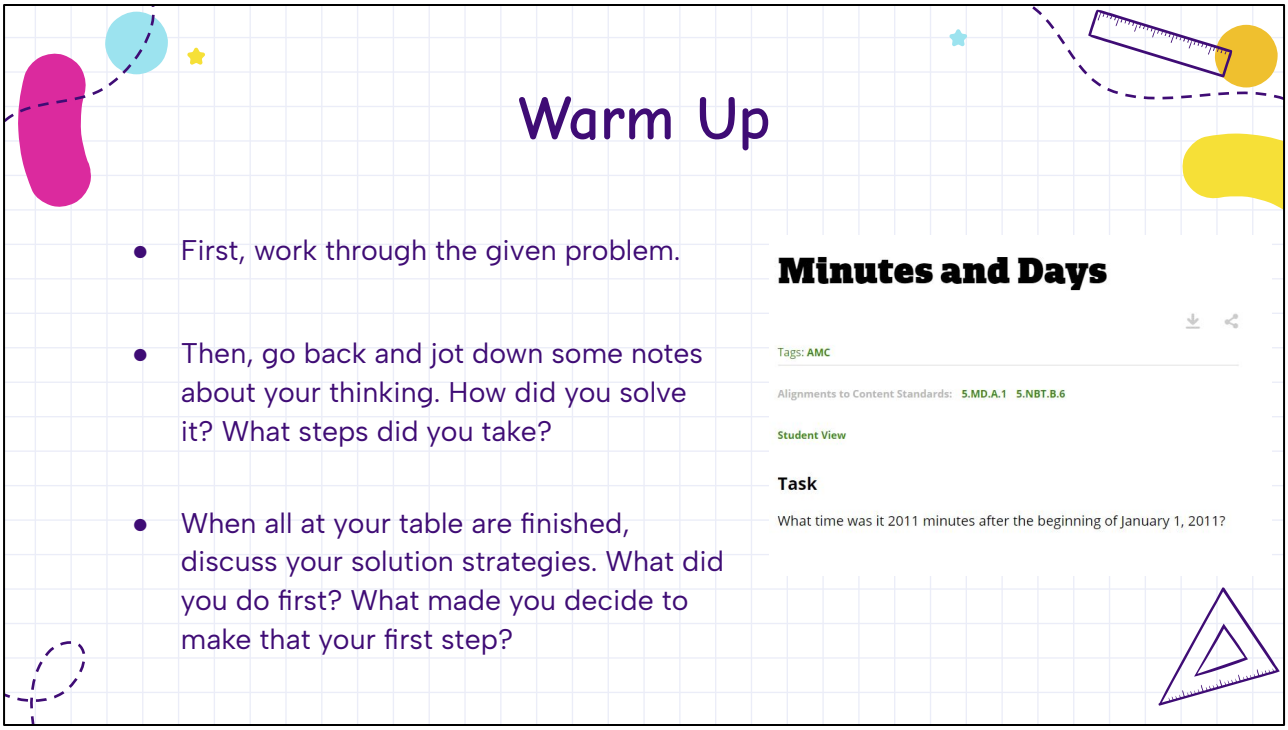
Actions:
As people get settled and are chatting, by 8:55, start handing out Warm Up problem.

Jenifer Hooten

Academy for Technology and the Classics
Math Coach/Specialist, Math Chair



I'm Jenifer Hooten, Math Instructional Coach and Specialist and the Math Dept Chair at ATC.
Our favorite go-to for a breakfast treat is Posa's - breakfast burrito with chorizo and bacon, beans, christmas, and deep fried. :)

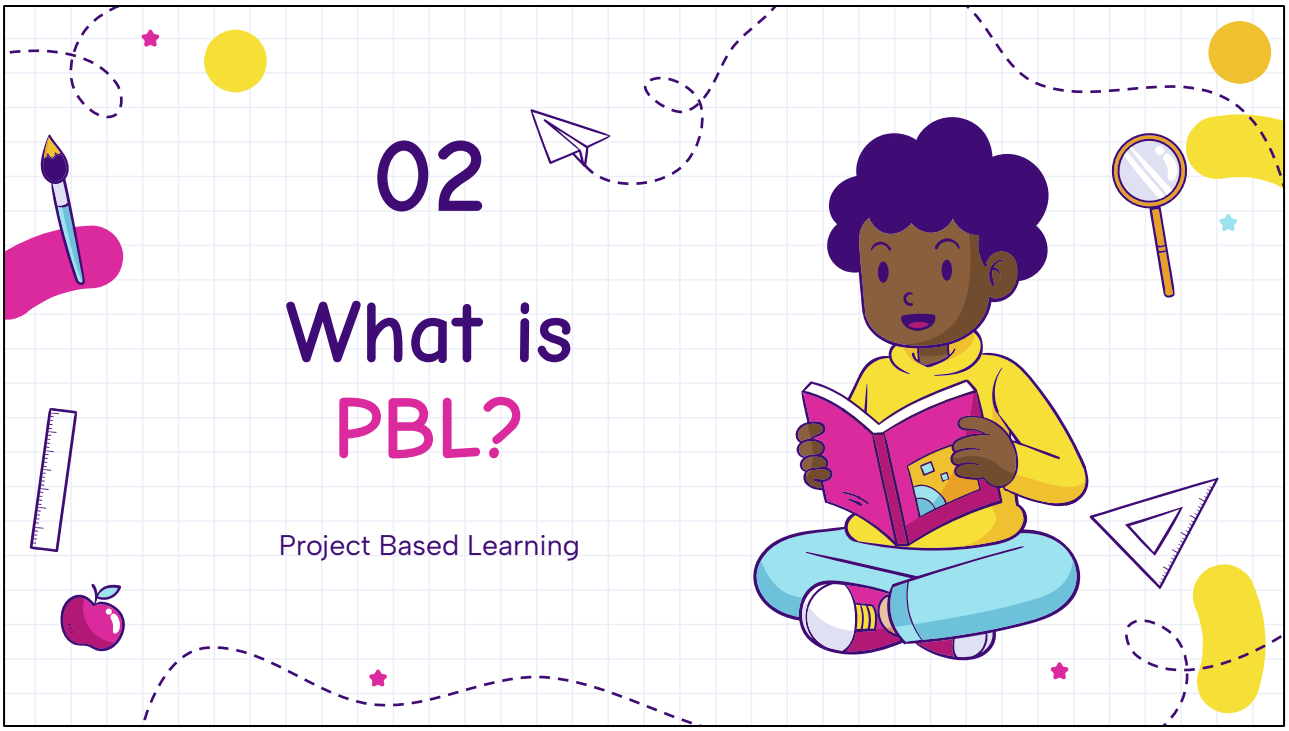


(animation!) This is a quick warm up math task to get our brains moving.
First, work through the problem as you normally would.
(pause for 3-5 minutes, checking in after 1-2 minutes)
Now, look over your work and jot down some notes about your thinking. How did you go about answering the question? Did you use mental math? What steps did you take?
(pause for 1-2 minutes while participants write)
And now, take turns to share responses to the questions: What did you do first? What made you decide to make that your first step? This is a general discussion, and there are no right or wrong answers. Everyone goes about solving math tasks in their own way.
(allow 3-5 minutes for discussion)
Great discussion! In an effort to maintain transparency about what I'm doing, my goal here was to not only engage you in some math thinking, giving you the opportunity to experience this session as a student experiences a lesson, but to also help make your thinking visible so other students can deepen their understanding and extend their own solution toolbox.

10-15 minutes (9:10)

Talk through the agenda and ask if there are any questions.

1-2 minutes (9:12)



Transition slide

Projects vs Project Based Learning

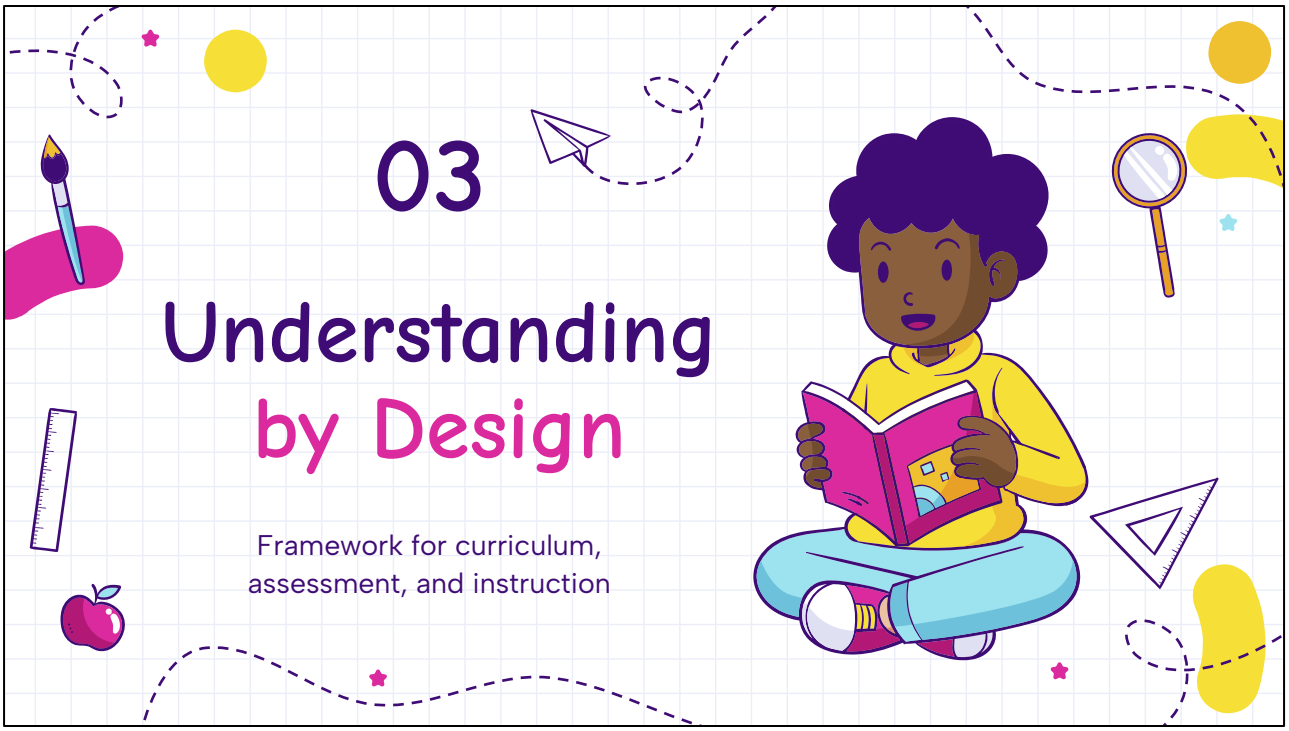
To deepen our understanding of project based learning, we'll watch a short video on the difference between 'projects' and Project Based Learning.
[watch video]
Any comments on the video? Have you heard that before? Have you tried project based learning strategies in your classroom? What did that look like?
[brief discussion depending on volunteered comments]

I would not say I'm an expert on PBL yet and am still learning as I try new things. I've used PBL in AP Statistics and Data Science, which really lend themselves to project based learning, especially when working with and analyzing data. Mostly, I've tweaked project based learning units. Last year, my school focused on project based learning, and we had some training with a facilitator.

So it sounds like we've got some who may have dabbled, maybe have designed their own unit around project based learning, and maybe there are some who are interested in trying it out for the first time. One thing to keep in mind is that learning is on a continuum, and the design rubric we're going to look at describes three levels of implementation of PBL.

5-8 minutes (9:20)

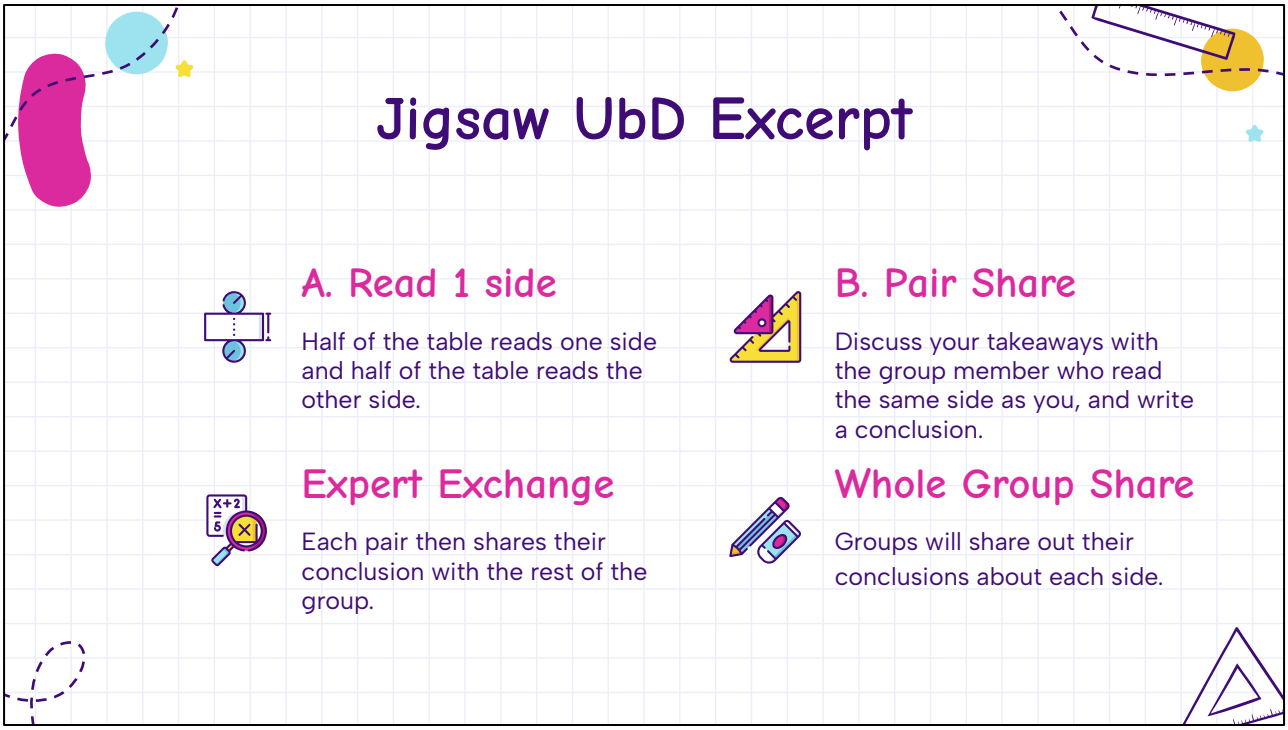
To start off our learning, I'd like to talk briefly about Understanding by Design. Project Based Learning, at least the approach adopted by the Buck Institute, uses the UbD framework as a foundation for teaching and learning.



Transition slide

Has anyone ever used a jigsaw strategy with your students? (wait for responses)

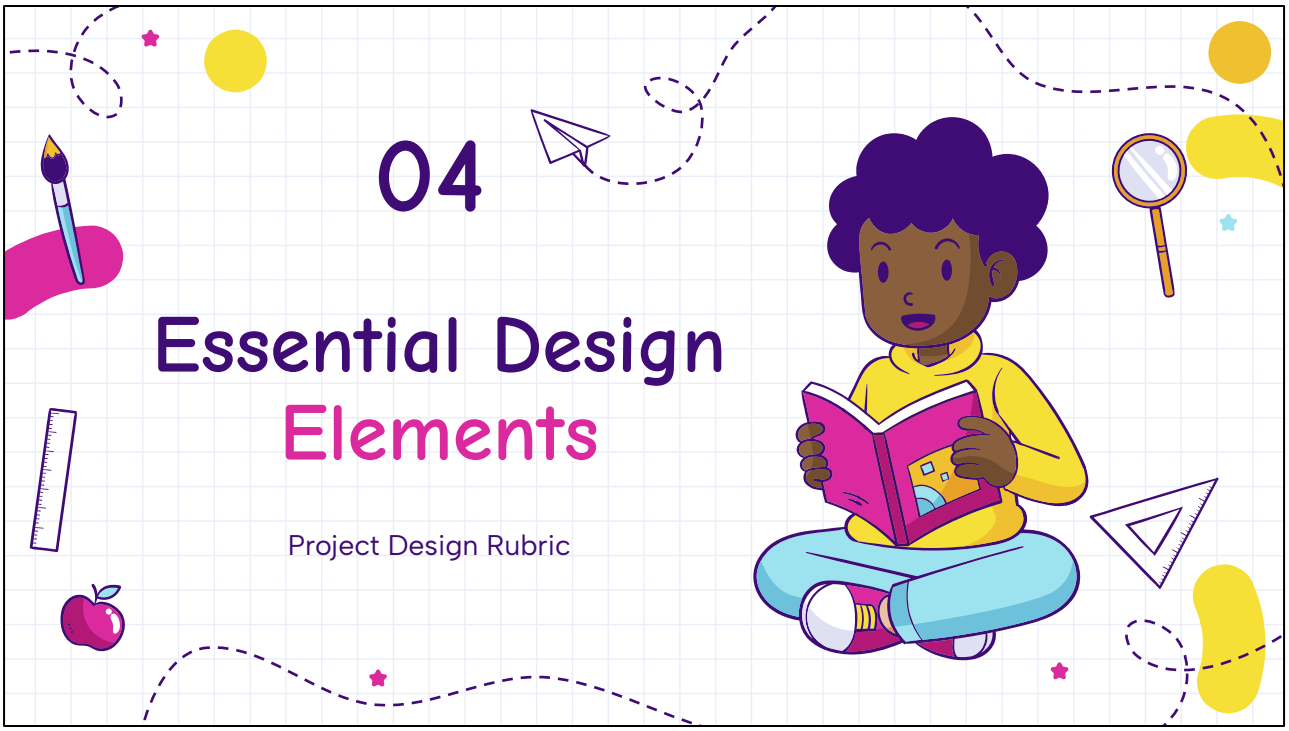
Actions:
Hand out copies of UbD tenets and stages of planning.



We're going to split up the reading and collaborate to understand and process the information in the excerpt from the white paper on UbD. Two people at your table should read side 1 and two people should read side 2. Then you'll share your takeaways with the person who read the same side as you.
(pause 2-3 minutes for reading)
Now turn to your reading partner and share your takeaways.
(3-5 minutes for discussion)
And then once both pairs have had a chance to write a conclusion, they each become the experts on their side of the paper and share the conclusion and any other important points with the rest of the group.
(3-5 minutes for discussion)
Now we'll go around the room to hear what groups feel is important to take away.
(1-2 minutes?)
[If not mentioned: #3 - formative assessment strategies; #7 - using formative assessment data to inform instruction (don't assume what was taught was learned)]

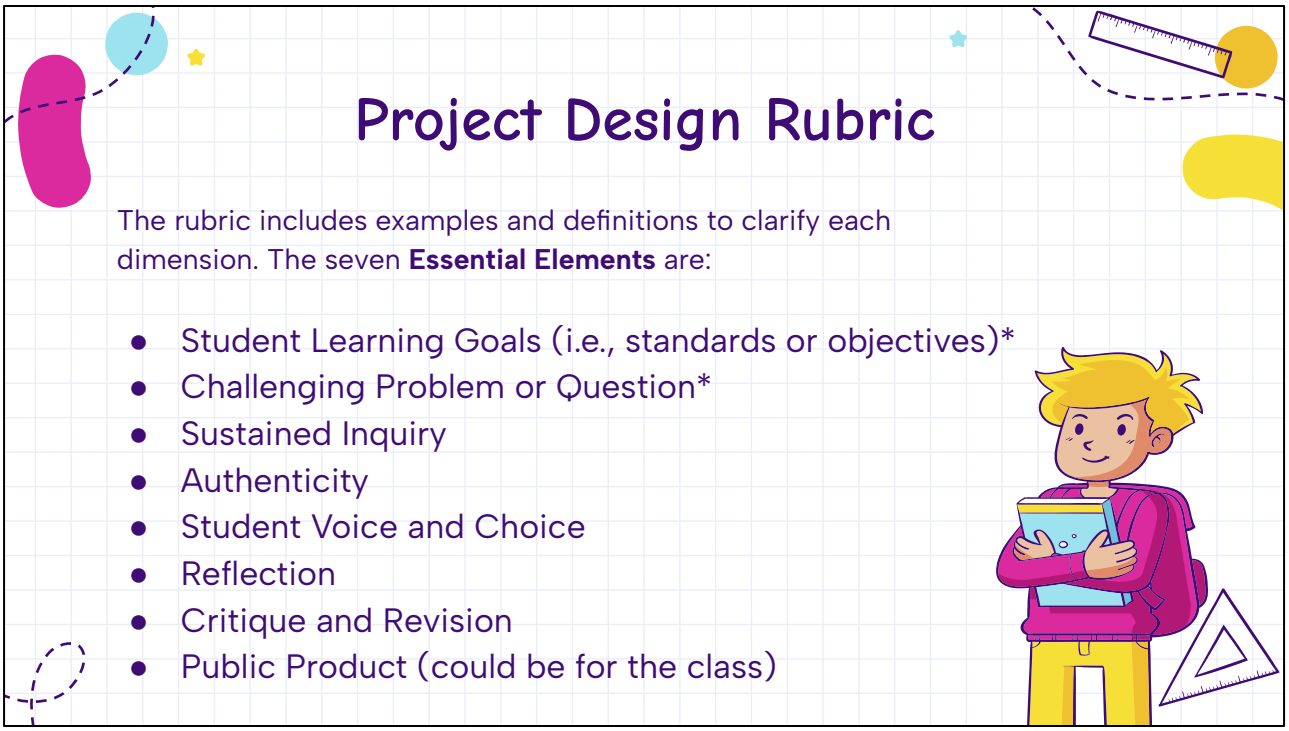
12-15 minutes (9:35)

https://files.ascd.org/staticfiles/ascd/pdf/siteASCD/publications/UbD_WhitePaper0312.pdf



Transition slide

Now we're going to look at what the Buck Institute feels are the essential elements of a true 'PBL project' or unit.



(animation!) PBL Works uses this rubric to evaluate projects for each of these criteria. The first two are marked because we'll look more closely at those shortly. Becoming a master PBL teacher takes time. You could basically thinking of your project based teaching as its own long term project, each of us has goals for what the projects will look like - the challenging question is how to guide student learning to achieve the desired results - the sustained inquiry is how to deepen the learning for students - being authentic in lesson planning - voice and choice around how to plan and design projects - reflection on lessons to inform instruction - revising them for future use or informing the next week's lessons - and the lessons are the public product.

I'll give you a few minutes to look over the rubric more closely. As you're reading, think to yourself about where you are in each dimension and what aspects you feel are important to prioritize in your planning. Feel free to highlight, make notes, annotate in ways helpful to you.

Invite discussion - would anyone like to share? Questions? Comments?

Actions:
Hand out copies of rubric as they read through the elements.

5-7 minutes (9:42)

Not necessarily because these are the first two on the Design rubric, which was convenient, but because I think these are places to start the planning process. Aligning to the Standards is likely something you are already doing, meaning that you are looking at your standards or have a deep enough knowledge of them as you are planning to identify which ones students will tackle next. This is the same idea. You can start with the standard you need them to 'master' and look through resources for ideas, or come up with your own, to generate a driving question.

I brought some resources and examples with me. (talk through using IM tasks; talk about Geometry project with kites, combining quadrilaterals with dilations and scale factor)
4th grade Garden; 4th grade Buttons
5th grade Park and Field
6th grade Laundry Detergent
7th grade Water Well Rig
8th grade Shipping Oats (alternate 8th grade - Stats/Prob)

Actions:
Hand out SFPS standards and Illustrative Mathematics tasks.

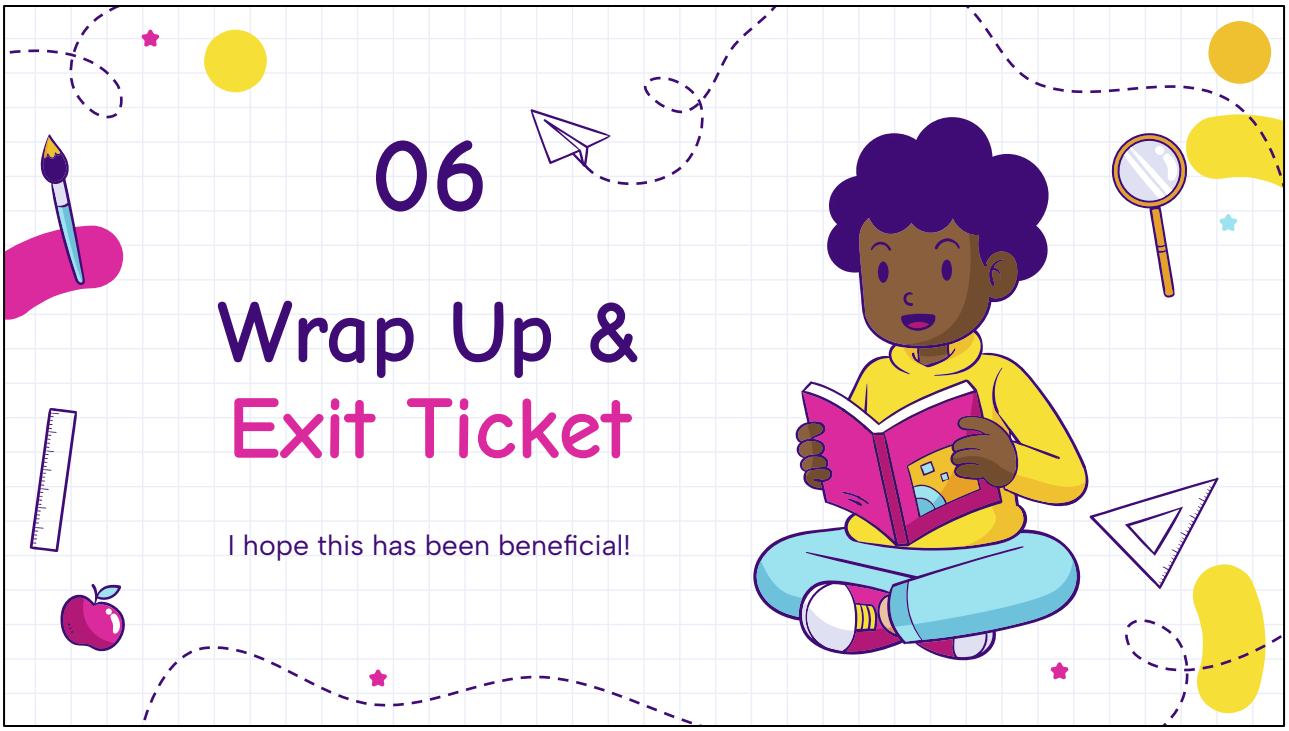
2-3 minutes (9:45) But keep on this slide for a bit… or until someone asks about sustained inquiry or other resources

Designing Project Based Learning

(if time allows)
This is a video by the authors of Project Based Teaching, talking about designing and planning Project Based Learning.

Now you have time to start on the planning process for a PBL unit of your own.

Remaining minutes until 10:05am.



Transition slide

Thank you so much for joining MathAmigos today, and I hope you enjoy the rest of your sessions.

To wrap up

Understanding by Design

Foundational tenets for teaching and learning

Projects vs Project Based Learning

Working with content learned vs learning through the project

Project Design Rubric

Essential elements for designing or evaluating a project based learning unit

Learning goals and a Driving question

Aligning the objective to state standards and creating a driving question to guide student work

To wrap up our session today…

This is our exit ticket, and the next slide will have Slido, which will show responses to the exit ticket.

slido

What is something you are excited about incorporating into your instructional toolbox?

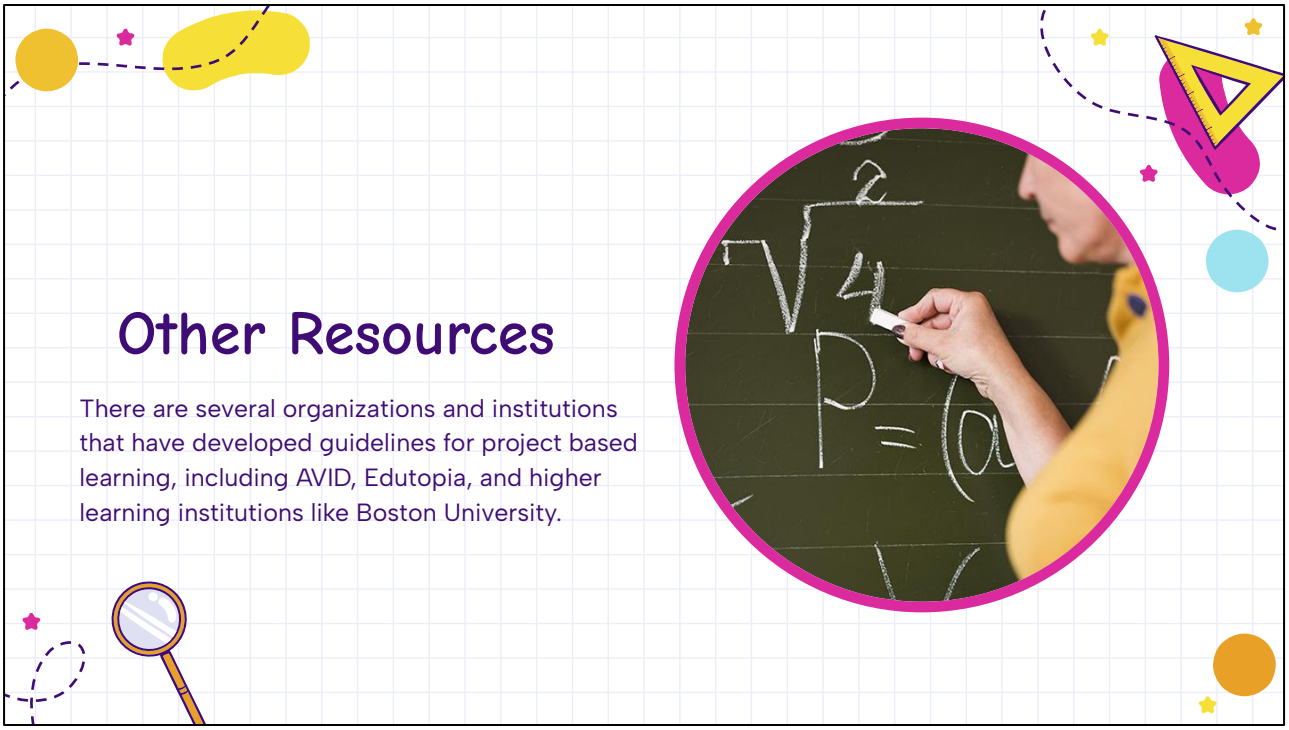
ⓘ Click **Present with Slido** or install our Chrome extension to activate this poll while presenting.

📣 This is Slido interaction slide, please don't delete it.
✅ Click on 'Present with Slido' and the poll will launch automatically when you get to this slide.

Thanks!

Do you have any questions?

youremail@freepik.com | +34 654 321 432
yourwebsite.com

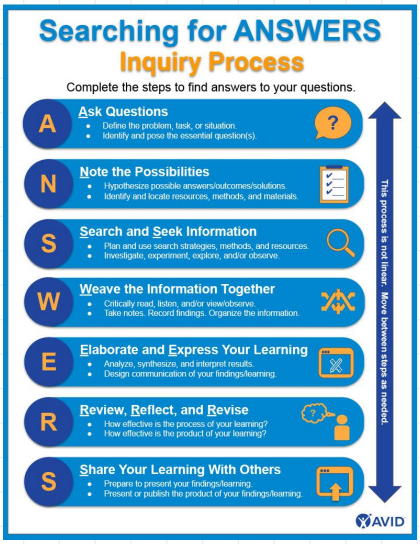


Shifting to a more project based learning approach will take time, and you may have to train your students to engage with the questions and be comfortable with open-ended problems that have multiple solutions that can always be revised and improved, the idea that nothing is ever really finished, especially our learning.

Just sharing - these links will be included in the slides, which will be shared after today's workshop. I can also email links to people if they would like.

PBL Teaching Practices Rubric
AVID - Engage Students Through PBL
High Quality PBL
Edutopia - Project Based Learning (collection of articles and guides)
Boston University
Detailed information on PBL teaching practices

Supporting Sustained Inquiry



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For example, AVID has suggestions for supporting the sustained inquiry dimension in the Design rubric, which really keeps the project going and the work engaging. If you're past the driving question part of planning, you may be ready to think about the inquiry piece.

*stop talking and allow them to work by 9:50 or before