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## UNIT/MODULE/MISSION SYNOPSIS

This OPTIONAL unit provides resources for Culture Week. Campuses may already have decided upon activities for math teachers to do during the first week of school, but if they have not, the pages below offer five days' worth of activities teachers can facilitate that will support students' learning during the school year.

## ROADMAP

AT A GLANCE: Unit 0 – Culture Week <i>(the order can be rearranged to meet campus needs)</i>			
Day	Date	Lesson	Lesson Title
1		1	Painting Cubes (a.k.a. How to Collaborate in This Class)
2		2	Crackers (a.k.a. Math/Magic Trick)
3		3	Imagine Math Diagnostic
4		4	The RDW Model
5		5	Taking a Test in EdCite (and showing your work)

## Notes for Intellectual Preparation &amp; Lesson Planning

**Necessary Materials and Pre-Lesson Prep**

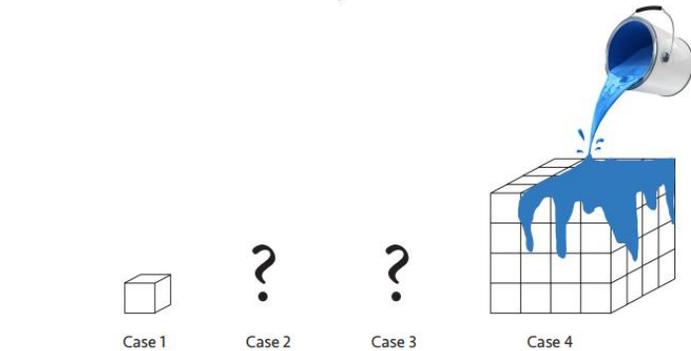
- Markers (one per team)
- Liquid glue (one per team)
- Lots of sugar cubes (about 15 per team)
- Student Handout



## Painting Youcubed

## Lesson Structure:

- Welcome (5 min)
- Directions (5 min)
- Exploration (25 min)
- Debrief (15 min)
- Closing (10 min)

**Mathematical Goal of this Lesson**

Students should have fun in math class and begin remembering how to work with with 1-2 other students. By the time the 25 minute exploration is over, if they can find the answer to the last question (“How many faces would be painted in a cube of any size?”), that would be phenomenal, but the MAIN GOAL is to get students to enjoy their first day of math class and reflect on collaboration norms they want their class to follow for the year.

**Other Notes to Inform Your Planning**

**In General:** The time stamps suggested are very flexible. During the first week of school, students, teachers, and administrators are working out scheduling issues. Do not worry if you have to adjust the time stamps or cut some time short.

For **Welcome:** Introduce yourself to students and give them the chance to introduce themselves to their group.

For **Directions:** Distribute the student handout and supplies the way you want items to be distributed all year long. State the task and your expectations for it.

For **Exploration:** Hold students to the expectations you set during the directions. You are setting the tone for the whole year! If you don’t want to purchase or work with sugar cubes and glue, you can also use snap cubes for this activity or have students make cubes out of paper. It is entirely up to you! (One drawback to snap cubes is that students shouldn’t color the sides, especially if the snap cubes are shared with other teachers.) Also, make sure you leave time for clean up.

For **Debrief:** When wrapping up the activity, if time allows, get students to share out what they think the answer is to “How many faces would be painted in a cube of any size?” More importantly, get them to discuss what it means to form a good partnership. Consider getting chart paper (or write on the whiteboard) a list of DOs and DON’Ts for future collaboration, of which there will be a LOT this year.

For **Closing:** Ensure students have cleaned up their space and collected their items. If your campus leadership wants you to practice transitioning to the next class, please do that. Either way, remind students of the collaboration norms you all discussed during the Debrief and let them know that they’ll get to practice those norms again tomorrow.

**Task Instruction**

Imagine that we paint a  $4 \times 4 \times 4$  cube blue on every side.

- How many of the small cubes have 3 blue faces?
- How many have 2 blue faces?
- How many have 1 blue face?
- How many have not been painted at all?

How many faces would be painted in a cube of any size? Think visually!

Notes for Intellectual Preparation & Lesson Planning

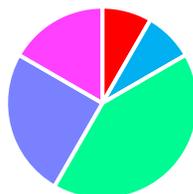
**Necessary Materials and Pre-Lesson Prep**

- Pencils and scratch paper
- Student Handout

**Crackers**

**Lesson Structure:**

- Welcome (5 min)
- Directions (5 min)
- Exploration (25 min)
- Debrief (15 min)
- Closing (10 min)



**Mathematical Goal of this Lesson**

Students should have fun in math class and practice how to work with a partner. By the time the 25 minute exploration is over, if they can figure out WHY this activity works that would be phenomenal, but the MAIN GOAL is to get students to enjoy math class, team build, and practice the collaboration norms they began working on in the previous lesson.

**Other Notes to Inform Your Planning**

**In General:** The time stamps suggested are very flexible. During the first week of school, students, teachers, and administrators are working out scheduling issues. Do not worry if you have to adjust the time stamps or cut some time short.

**For Welcome:** Consider starting class with the Name Game or some other way for students to get to know someone they didn't meet in class the previous day.

**For Directions:** Give students page 3 only, and consider making class sets of 4 and 5. Pages 1-2 are directions for YOU, the teacher.

**For Exploration:** Hold students to the expectations you set during the directions. You are setting the tone for the whole year! You can begin by either playing the game with your students, or giving them the directions and having them work with their partner. (See p1 of the linked handout above for more details on this.)

**For Debrief:** When wrapping up the activity, discuss the answers to the four bullet points under "Task" on p2.

**For Closing:** Ensure students have cleaned up their space and collected their items. If your campus leadership wants you to practice transitioning to the next class, please do that.

1	3	5	7	9	11	13	15
17	19	21	23	25	27	29	31
33	35	37	39	41	43	45	47
49	51	53	55	57	59	61	63

2	3	6	7	10	11	14	15
18	19	22	23	26	27	30	31
34	35	38	39	42	43	46	47
50	51	54	55	58	59	62	63

4	5	6	7	12	13	14	15
20	21	22	23	28	29	30	31
36	37	38	39	44	45	46	47
52	53	54	55	60	61	62	63

8	9	10	11	12	13	14	15
24	25	26	27	28	29	30	31
40	41	42	43	44	45	46	47
56	57	58	59	60	61	62	63

16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

- What do you notice & wonder?
- Create a convincing argument showing why this works. Can you make a visual proof?
- Make a presentation showing how this puzzle might have been created.
- If you were going to continue this pattern, what would the 7th card look like? What would be the greatest number your partner could choose if you had 7 cards? Would the puzzle still work?

## Notes for Intellectual Preparation &amp; Lesson Planning

**Necessary Materials and Pre-Lesson Prep**

- 1-to-1 devices for each student
- Imagine Math Video (3:24)
- Pencils
- Scratch paper

**Mathematical Goal of this Lesson**

By the end of this class period, students should complete their Imagine Math diagnostic.  
(If they don't finish it, they can complete it at a later time.)

NOTE: Imagine Math will be run through AR/Hotspot this year. Consult your manager and grade team to see whether the benchmark should be administered during math class or during AR/HS.

**Other Notes to Inform Your Planning**

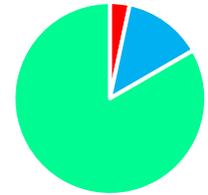
**In General:** The time stamps suggested are very flexible. During the first week of school, students, teachers, and administrators are working out scheduling issues. Do not worry if you have to adjust the time stamps or cut some time short.

For **Directions:** Explain WHY we have Imagine Math (in short, it is tailored to each individual student's needs and helps them close any gaps they may have.) Show the Imagine Math video linked above.

For **Diagnostic:** Begin the benchmark. Once students access Imagine Math through Clever, the first thing they'll be prompted to do is take the benchmark. (When time is up, practice the procedure for putting laptops away.)

**Lesson Structure:**

- Welcome (2 min)
- Directions (8 min)
- Diagnostic (50 min)



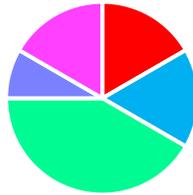
## Notes for Intellectual Preparation &amp; Lesson Planning

**Necessary Materials and Pre-Lesson Prep**

- Read this Teacher Quick Start Guide
- Student Handout (one per student)

**Lesson Structure:**

- Welcome (10 min)
- INM (10 min)
- Student Practice (25 min)
- Debrief (5 min)
- Exit Ticket (10 min)

**Mathematical Goal of this Lesson**

By the end of this lesson, students should be able to apply the RDW strategy when appropriate. They should also be able to determine whether a problem needs RDW or not. Additionally, they should come to the understanding that the RDW process can be slow and thoughtful when applied to a new type of problem, but when they're taking timed tests, a lot of the RDW process may happen in their head. (In other words, use RDW when it's beneficial, but don't let it slow you down on problems you deeply understand just for the sake of RDW-ing.)

**Other Notes to Inform Your Planning**

**In General:** It is imperative that you read the Teacher Quick Start Guide linked above. If you do not, you are unlikely to facilitate the lesson well. Also, even though the strategy is called Read-Draw-Write, in upper grade levels, it sometimes makes more sense to annotate than draw. (Sometimes, when a geometric figure is described (ex. "rectangle  $ABCD$ "), it still makes sense to Draw.)

**For Welcome:** Ask a few teambuilding questions that students can discuss with their partners or table group. (Ensure you use a timer so that one student per group doesn't dominate the conversation and all have a chance to share.) Here are some examples: *Would you rather eat pizza for the rest of your life, or salads for the rest of your life? Why? Would you rather have feet for hands or hands for feet? Why? If you could learn another language that you don't currently know, what would it be and why? Would you rather live in outer space or in the ocean? Why?*

**For INM:** Model the first problem or two with students. Make sure you communicate that we don't use RDW for every single problem we encounter. For example, if we are given an equation and it's not a word or application problem, we don't need to work through RDW. On a related note, we use RDW when we need to break down a word problem. If we're taking a timed test, we only slow down to RDW if we need to do it – RDW isn't mandatory for problems that are straightforward, and doing RDW on every single problem will slow you down and possibly cause you to run out of time before finishing the test.

**For Debrief:** Ask "What was easy, and what was difficult, about using RDW?" "Do you feel comfortable using it? Do you feel confident knowing when and when NOT to use it?"

**For Exit Ticket:** Facilitate a silent independent exit ticket. Set high expectations and maintain them.

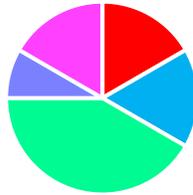
## Notes for Intellectual Preparation &amp; Lesson Planning

**Necessary Materials and Pre-Lesson Prep**

- 1:1 devices for each student
- Pencils
- Ensure you have access to “EdCite Practice Test 89”
- Scratch paper

**Lesson Structure:**

- Welcome (10 min)
- Directions (10 min)
- Practice Test (25 min)
- Debrief (5 min)
- Closing (10 min)

**Mathematical Goal of this Lesson**

By the end of this lesson, students should know how to log into EdCite and submit their answers online for different question types. They should also practice showing their work on scratch paper, and you should decide ahead of time how you want work to be organized and displayed.

**Other Notes to Inform Your Planning**

**In General:** The practice test currently exists on EdCite, but cannot be shared until the school year starts. Check back in this addendum (or on our TEAMS site) for directions on how to assign your students the practice test. Know that the test has a lot of non-math questions, as we are not trying to assess students’ math skills, but trying to give students the opportunity to familiarize themselves with how to use EdCite to show what they know.

For **Welcome:** Let students know that STAAR is changing this year. There will be several multiple choice items, but there will be new types of questions. They’re about to see some examples! (Note that NONE of the questions will be 7G math questions.)

For **Directions:** Use the doc cam to model how you want students to show their work. We must use EdCite for our Unit Exams and Mock Exams to practice online test administration because the STAAR will be administered online. While this has many benefits, one major drawback is that it doesn’t allow us to see student’s work, which means it will be hard to analyze student work once your test results come back. To address this issue, have students fold a piece of scratch paper into six equal sections (3 by 2) so they can number each box and show their work there. (Students that need more space can write in multiple boxes but mark the test number in those boxes.) Note that almost NONE of the practice test questions are mathematical, so students can ‘make up’ or sketch pretend work on their scratch paper.

For **Debrief:** Ask students to talk about what it was like to use EdCite. Get a pulse check to see how they’re feeling about transitioning to an online testing platform.

For **Closing:** Practice the procedure for putting laptops away.