

8th Grade Mathematics – Distance Learning

Underlying focus: 10 days of learning to help prepare for success in Algebra 1

	Day 1	Day 2	Day 3	Day 4	Day 5
Focus Standard(s)	8.NS.A.1 8.NS.A.2	8.EE.C.7	8.EE.C.7	8.EE.B.5	8.EE.B.6
Warm-ups can be found here	The Number System Warm-up (p. 2)	Solving equations Warm-up (p. 6)	Solving equations Warm-up (p. 5)	Proportions Warm-up (p. 4)	Slope Warm-up (p. 13)
Building a Math Belief youcubed (See note on page 3)	You cubed – How to learn math	Elisa's and Brandon's story	Montse's and Jodie's story	Math and Mindset	Brain Crossing
Apply the Skill – Desmos (Directions on page 4)	Desmos <i>Battle Boats (30-45 min.)</i> (coord.) –find the boats	Desmos <i>Polygraph: Lines (30-45 min.)</i> <i>Slope, quadrant, etc.</i>	Desmos <i>Polygraph: Lines Part 2 (30-45 min.)</i> – <i>development of academic language</i>	Desmos <i>Marble slides: lines (45-60 min.)</i> students learn how to plot the path of a marbles o domain, range, $y=mx + b$	Desmos <i>Put the point on the line (30-45 min.)</i> <i>Students experiment with slope – slope equation not needed</i>
Extend the Skill	Transition Tasks Mowing Lawns p.1-6	Transition Tasks Cell phone plans p.35-43	Coupon versus Discount Solving Equations	Transition Tasks Rolling tennis balls Tasks p. 27-34	Slopes Between Points on a Line DVD Profits

	Day 6	Day 7	Day 8	Day 9	Day 10
Focus Standard(s)	8.F.A.1	8.F.B.3 8.F.B.4	8.F.B.3 8.F.B.4	8.EE.C.8	8.EE.C.8
Warm-ups can be found here	Functions, Tables, Graphs Warm-up (p. 12)	Writing equations Warm-up (p. 16)	Writing equations Warm-up (p.18)	Systems Warm-up (p. 8)	Systems Warm-up (p. 11)
Building a Math Belief youcubed	Speed	Patterns	Mistakes	Strategies for Learning Mathematics	Have students use daily reflections to summarize what they have learned from the videos & set goals for the next year
Apply the skill – Desmos	Desmos <i>LEGO prices (30-45 min.) – use slider to compare prices</i>	Desmos <i>Function carnival (45-60 min.) Watch a video and graph</i>	Desmos <i>Function carnival part 2 (30-45 min.) – cannon man and bumper cars</i>	Desmos <i>Polygraph: Linear systems (30-45 min.) students determine where lines meet</i>	Desmos <i>Solutions of two linear equations (30-45 min.) – explore graphical and numerical solutions</i>
Extend the skill	Use Math Tasks from Illustrative Mathematics aligned to the focus standard of the day. These can be found here Answers are available online at: http://tasks.illustrativemathematics.org/content-standards/8				

YouCubed Resources

Important: Have students reflect each day on the video in some manner (writing, discussion, graphic organizer etc.)

Day 1: Four math message from Jo and Her students (How to Learn Math) (8:35)

1. No math brain
2. Anyone can grow their brain
3. Believe in Growth mindset
4. Mistakes grow your brain
5. Speed is not important
6. Not about memorization
7. Math is a broad, visual subject

Day 2:

- Elisa's story (4:31) – summary: math is cool and exciting, one minute test (could not finish in a minute) and felt anxious (stuck thru middle school and high school (panic attacks) – time pressure
- Brandon's story (3:10) – summary: struggled, falling behind – felt he was good at everything else, tried a lot of things to improve himself – learned to believe in himself (math award)
- Questions:
- (Elisa: What does anxiety feel like? Share a time you were anxious. How did you calm yourself down?)
- (Brandon: What are you good at? What is your reaction to things you feel you are not so good at? Share a time you were good at something you previously struggled on. How do you build up your self-esteem to try things that are difficult?)

Day 3:

- Montse's Story (3:02) – summary: excited but not good at memorizing, 6th grade teacher challenged her with interesting problems, label gone by 7th – math Olympiad
- Jodie's story – (3:21) – Summary: struggled in high school, didn't understand as well, talked to teacher, work with your partner, take advantage of the resources (including other students) – valuable to have good math discussions
- Questions:
- (Montse: When do you find you are good at memorization? When does challenge make you work harder?)

- Jodie: What resources do you use when you are struggling in math? What other resources are available that you don't always remember to use?

Apply the skill/ Desmos: For the tasks that are on Desmos. Log on to <https://teacher.desmos.com/?r=w.hd> and create an account. Click on Manage Classes – Add a New Class - Desmos will then trigger a class code which you give your students (who log on to student.desmos.com). Search for the title of the activity in the search bar. Assign it to your class.

Need help with Desmos? <https://learn.desmos.com/activities-get-started#assign>
You can view their results and progress in live time.