Highest Priority *Everyday Mathematics* Lessons
for last quarter of school year

Introduction

To help *Everyday Mathematics* teachers plan and prioritize what content to try to cover while teaching remotely, the lists on the following pages (see table below) include the lessons from the last several units of each grade level in *Everyday Mathematics 4* that the EM author team believes are the **most essential** in terms of content coverage for standards at that grade level and preparation for next-grade content. Of course, all lessons require adaptation for remote teaching and learning, but see the Notes column for some specific suggestions related to implementing the Part 2 Focus activities that may be helpful for particular lessons.

Also see this document (Kindergarten) and this document (Grades 1 through 6) for some ideas for teaching *Everyday Mathematics* remotely.

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Kindergarten

Lesson	Title	Notes
7-1	Number Line Addition and Subtraction	Encourage families to create a 0-20 walk-on number line at home using masking tape, sheets of paper with numerals, or chalk outside. They can customize a regular die for the game by covering 3 sides with tape and marking them with a -1, -2, and -3 dots. (The other sides can represent "+" that number of dots.)
7-2	Domino Addition	Children can use real dominoes if they have them, the domino card Math Masters, or digital dominoes.
7-3	Teen Collections	Have children create teen collections with objects from home and arrange, record, and compare them with double-10 frames.
7-4	*Solid-Shapes Match Up*	Modify by having children find objects in their homes that match the shapes on the cards. If kids likely have the materials at home, complement with ideas from **Lesson 8-2: Marshmallow and Toothpick Shapes.**
7-5	Count and Skip Count with Calculators	Calculators on iPhones will count up or skip count from any number using the same key sequence as the TI-108.
7-9	Bead Combinations	Children can do this activity using cereal or pasta on a string.
7-12	*Dice Addition*	Children can use tape/sharpies to customize dice or use digital ones on ConnectEd.
8-4	Interrupted Counting	
8-5	*Dice Subtraction*	Children can use tape/sharpies to customize dice or use digital ones on ConnectEd.
8-8	*Car Race*	See game instructions/demo online here. Also see videos for Ten Bears on a Bus and Hiding Bears for slightly easier version games practicing the same concept (numbers that sum to 10).
8-11	*Addition Top-It*	
8-13	Name-Collection Posters	Children can work on their own name-collection poster and share with a photo.
9-2	*Subtraction Top-It*	
9-4&9-5	Backpack Math	Adapt these lessons so children explore various and compare size dimensions of different backpacks, bags, suitcases, or other containers in their homes.
9-6	*Roll and Record with Numeral Dice*	
9-7	Making Classroom Maps	Children can make maps of their homes or part of their homes and share them with pictures. If possible, use children's photos to plan and facilitate a synchronous "re-engagement" discussion about their maps later in the week.
9-11	*Fishing for Ten*	

Grade 1

Lesson	Title	Notes for Part 2 Focus Activities
6-4	Introducing Near Doubles	As needed, adjust Math Message to be writing doubles facts from real life (e.g., Two front feet and two back feet makes 4 feet for my dog.). Adjust follow-up similarly.
6-6	Introducing Making 10	Make sure students have (or make) double ten frames before the lesson. Students can use coins or other objects to fill them in.
6-8	Pencils for the Writing Club (Open Response)	Think in advance how you would like to organize students to complete the open response problem.
6-10	More Place Value	
7-1	Fact Families	If dominoes are not available to students for the introductory Focus activity, you can simply display more dominoes for the whole class to discuss.
7-3	Relating Special Addition and Subtraction Facts	Encourage students to play *Salute!* at home with family if it is too difficult to do as a class.
7-4	More Subtraction Fact Strategies	
7-5	Attributes of Shapes	The Focus activities may have to be adjusted to simply displaying and discussing different examples of shapes (rather than students sorting themselves into shape groups or holding certain shapes). If possible, however, you could virtually send each student an assigned shape in advance.
7-7	Defining and Nondefining Attributes	You may need to display the pattern-block template.
8-2	Halves	If possible, have students find clay in their homes for the first part of the lesson and find rectangular paper or index cards and scissors for the crackers activity. If not available, students could use a whiteboard or paper to draw and partition shapes. Or, you may need to demonstrate the hands-on activities, with students providing suggestions for how you partition the shapes.
8-3	Fourths	You will likely need to make similar adjustments to the materials as in 8-2.
8-4	Sharing Paper Squares (Open Response)	Think in advance how you would like to organize students to complete the open response problem.
8-6	Three-Dimensional Shapes	You will likely need to make similar adjustments to the materials/lesson as in 7-5. You may simply need to display and discuss examples of 3-D shapes. Students can also seek out examples in their homes.
8-11	Mentally Finding 10 More or 10 Less	
9-2	Two-Digit Number Stories	

Grade 2

Lesson	Title	Notes for Part 2 Focus Activities
6-2	Comparison Number Stories	
6-5	Two-Step Number Stories	
6-7	Partial-Sums Addition, Part 1	Virtual base-10 blocks are available in the eToolkits [ConnectED>Hamburger Menu>eToolKit>eTools]. If you and the students do not have access to virtual base-10 blocks. Skip Lesson 6-7 and Teach Lesson 6-8.
6-8	Partial-Sums Addition, Part 2	
7-2	Four or More Addends	This is an Open-Response Lesson. Consider doing a synchronous intro, followed by trying to have the kids work together via phone or in a breakout room, etc., followed by some carefully-planned teacher reengagement.
7-4**	Measuring with Yard	May be difficult to do online but the concepts are important. Consider a synchronous discussion around MRB, pages 100-104 then have students estimate lengths of objects in their homes.
7-5**	Measuring with Meters	May be difficult to do online but the concepts are important. Consider a synchronous discussion around MRB, pages 100-104 then have students estimate lengths of objects in their homes.
8-1	Attributes of 2-Dimensional Shapes	Teachers can access the Shape Cards to send to students in ConnectED>Lesson 7-9>Resources>Page 3. Consider having the students take pictures of their shape sorts and Sending them to you or uploading them onto your class.
8-3	Comparing Triangles, Pentagons, and Hexagons	In place of straws and twist-ties students can toothpicks and small marshmallows or any other materials from home to build shapes. Consider having the students take pictures of their shapes and upload them onto your class site if you have one.
8-6	Partitioning Rectangles, Part 1	Students can cut out and use the 1-inch squares from Home Link 8-6 to use for the lesson.
8-7	Partitioning Rectangles, Part 2	Students can cut out and use the 1-inch squares from Home Link 8-6 to use for the lesson.

8-8	Equal-Groups and Array Number Stories	
9-1	Creating and Naming Equal Parts	Students will need to make 8 5-inch paper squares for this lesson.
9-6	Expand-and-Trade-Subtraction Part 1	Virtual base-10 blocks are available in the eToolkits [ConnectED>Hamburger Menu>eToolKit>eTools]. If you and the students do not have access to virtual base-10 blocks. Skip Lesson 9-6 and Teach Lesson 9-7.
9-7	Expand-and-Trade Subtraction Part 2	If you and the students do not have access to virtual base-10 blocks. Skip Lesson 9-6 and Teach Lesson 9-7.

Grade 3

Lesson	Title	Notes for Part 2 Focus Activities
6-6	Multiplication and Division Diagrams	Students can access Math Master TA38 on ConnectED using the eToolkit or Activity Kit → eTools → Backgrounds → Situation Diagrams → Multiplication/Division Diagram 1 For the practice activity "Identifying Parts of a Whole," students can access Fraction Circle pieces in the eToolkit. Consider having students create a fraction and submit it via picture or a screenshot. You could choose to revisit these at the beginning of the next day, or add this activity to a Math Menu.
6-7	Multiplication with Larger Factors	Students can access Multiplication Top-It in the ConnectED EM Games Online → Multiplication Top-It 100. Students can play one player against the computer, or two players with someone at home. Highlight Top-It as a great game for students to play at home to practice math facts. Encourage family members to ask students, "What strategy did you use to figure out the answer?"
6-8	Number Sentences with Parentheses	Students can access Name That Number in the ConnectED EM Games Online → Name that Number (+, -. x , /). Math Master G21 can be found digitally in eToolkit → Backgrounds → Games → Name that Number Record Sheet (Sheet 2). Name that Number can also be played at home with a regular deck of cards by making Aces =1 and face cards labeled as 11-20 with stickers or removed. Practice Activity "What's My Polygon Rule" can be played digitally using the eToolkit → eTools → Card Deck- Other → Card Deck - Shapes (Grade 3).
6-11	Number Models for Two-Step Number Stories	Students can access Math Masters TA16 and TA38 on ConnectED using the eToolkit or Activity Kit → eTools → Backgrounds → Situation Diagrams → Diagrams for Number Stories and Multiplication/Division Diagram 1
7-4	Fraction Strips	Consider sending Math Master TA39 to have students cut out strips to follow along synchronously or asynchronously. Students can also use the Fraction Models eTool in the eToolkit. Students can practice this concept using the Geometer's Sketchpad Activity "Fraction Strips" on p. 139 of the digital Student Reference Book or from the sketchpad button in the Student Learning Center. *Have student save folded fraction strips for lessons 7-5, 7-6, 7-9, 7-10
7-5	Fractions on a Number Line, Part 1	Consider giving students a completed Fraction Number Line poster to support their exploration. Downloaded from ConnectED Teacher Edition → Resources → Posters Students can also use the Fraction Models eTool in the eToolkit in place of Fraction Strips.
7-6	Fractions on a Number Line, Part 2	Students can access Fraction Circle pieces in the eToolkit. Students can also use the Fraction Models eTool in the eToolkit in place of Fraction Strips.

		Students can access Baseball Multiplication in the ConnectED EM Games Online → Baseball → Baseball Multiplication 1-10 Facts. Students can play one player against the computer, or two players with someone at home.
7-7	Comparing Fractions	Consider giving students a completed Fraction Number Line poster to support their exploration. Downloaded from ConnectED Teacher Edition → Resources → Posters

Students can access fractions cards to play Fraction Top-It in the eToolkit → eTools → Card Deck- Other → Card Deck- 2-sided Fractions (Grade 3)

Students can practice this concept using the Geometer's Sketchpad Activity "Comparing Fractions" on p. 157 of the digital Student Reference Book or from the sketchpad button in the Student Learning Center.

Students can access Fraction Top-It in the ConnectED EM Games Online → Top-It → Top-It Fractions with Pictures 1 or Top-It Fractions with Pictures 2. Students can play one player against the computer, or two players with someone at home. |
| 7-9 | Locating Fractions on Number Lines | Consider giving students a completed Fraction Number Line poster to support their exploration. Downloaded from ConnectED Teacher Edition → Resources → Posters

Students can also use the Fraction Models eTool in the eToolkit in place of Fraction Strips.

The fraction number line tool is available in the eToolkit → eTools → Number Line → (choose fractions from the choices)

Students can access fractions cards to play Fraction Top-It in the eToolkit → eTools → Card Deck- Other → Card Deck- 2-sided Fractions (Grade 3)

Students can practice this concept using the Geometer's Sketchpad Activity "Fractions on a Number Line" on p. 140 of the digital Student Reference Book or from the sketchpad button in the Student Learning Center.

Students can access Fraction Top-It in the ConnectED EM Games Online → Top-It → Top-It Fractions with Pictures 1 or Top-It Fractions with Pictures 2. Students can play one player against the computer, or two players with someone at home. |
| 7-10 | Justifying Fraction Comparisons | Students can also use the Fraction Models eTool in the eToolkit in place of Fraction Strips.

Students can access Fraction Circle pieces in the eToolkit.

Consider giving students a completed Fraction Number Line poster to support their exploration. Downloaded from ConnectED Teacher Edition → Resources → Posters

Students can play the Area and Perimeter Game by pulling up both decks in the eToolkit → eTools → Card Deck- Other → Area and Perimeter Game. The record sheet can be found in the eToolkit → Backgrounds → Games → The Area and Perimeter Game Record Sheet |

8-1	Measuring to the Nearest ¼ inch	Students need to have Math Masters TA43 with rulers cut out prior to the start of the lesson. For the Practice Activity "Matching Fractions on a Number Line" consider giving students a completed Fraction Number Line poster to support their exploration. Downloaded from ConnectED Teacher Edition → Resources → Posters
8-2	Extended Facts: Multiplication and Division	Plan to model with eTool Base-10 Blocks or real Base-10 Blocks and/or have students access eTool Base-10 Blocks for this lesson. Students can engage more with this concept using the Tutorial Videos "Extended Multiplication Facts" on pp. 57-58 of the digital Student Reference Book or from the Tutorial Videos button in the Student Learning Center. For the Practice Activity "Measuring Book Height" students will need access to a tape measure and books from their house. Focus on questions 1 and 2 only on Student Math Journal, p. 257 or have students submit book measurements to you and revisit the class line plot at a different time.
8-3	Factors of Counting Numbers	Students can practice this concept using the Geometer's Sketchpad Activity "Factors" on p. 65 of the digital Student Reference Book or from the sketchpad button in the Student Learning Center. Teachers and students can access Math Master TA9 in the eToolkit → Backgrounds → Fact Practice → Fact Triangle (x, /). Teachers and students can access Math Master TA26 in the eToolkit → Backgrounds → Fact Practice → Fact Table (x, /), or an interactive Fact Table in eToolkit → eTools → x,/ Fact Table Students need to have Math Masters p.280 prior to doing the Practice Activities.
9-2	Multiply and Divide with Multiples of 10	Students can access a version of Beat the Calculator in the ConnectED EM Games Online → Beat the Computer → Beat the Computer Multiplication Facts (x) 1. Students can play one player against the computer.
9-5	Multidigit Multiplication	Students can access digital Fraction Number-Line Squeeze (ConnectED EM Games Online → Number-Line Squeeze→ Fraction Number-Line Squeeze) and Fraction Top-It (ConnectED EM Games Online → Top-It→ Choose a version of Fraction Top-It.) Students can play one player against the computer, or two players with someone at home.

Grade 4

Lesson	Title	Notes for Part 2 Focus Activities
6-1	Extended Division Facts	Encourage students to play Divide and Conquer at home with family. Students may need to recreate fact triangles by writing out a list of basic multiplication/division facts, if they do not have access to *Math Masters* G38-G40.
6-3	Strategies for Division	Note that partner work on journal pages 195-196 could be done individually and/or outside of whole-group time.
6-4	Partial-Quotients Division, Part 1	Note that the worked examples (such as in Introducing Partial-Quotients Division) could be video-recorded for student reference and to save synchronous time. Then synchronous time can be used for questions. Also see algorithm videos here. Math Masters TA49 will be helpful for students as they create "easy" multiples. Student Reference Book pp. 113-114, Partial Quotients
6-7	Partial-Quotients Division, Part 2	Again, consider videorecording worked examples (e.g., Exploring Partial Quotients with 3- and 4-Digit Dividends) in advance.
6-8	Expressing and Interpreting Remainders	
6-9	Measuring Angles	Provide options for students to construct their angle measurers in advance of any synchronous meeting.
6-13	Extending Understandings of Whole-Number Multiplication	Note that students do not *need* fraction circle pieces to be successful with this lesson.
7-2	Exploring Fraction Multiplication Situations	Students may need a reminder/reteaching regarding cups/gallons for a portion of the Focus.
7-3	A Fraction as a Multiple of a Unit Fraction	If students do not have access to concrete/virtual fraction circle pieces, adjust the Focus to use drawings instead.
7-4	Multiplying Fractions by Whole Numbers	
7-5	Multiplying Mixed Numbers by Whole Numbers	
7-12	Decimal Number Stories	Students will need access to *Math Masters*, TA 57-58
8-6	Fractions and Perimeter	
8-8	Areas of Rectangles with Fractional Side Lengths	Provides a review of many geometry concepts. May need to reteach some as part of the lesson.

Grade 5

Lesson	Title	Notes for Part 2 Focus Activities
6-1	Multiplying and Dividing Decimals by Powers of 10	You may need to adjust the activity Multiplying and Dividing Decimals by Powers of 10 depending on your students' access to calculators. An iPhone has a scientific calculator that can multiply and divide decimals by powers of 10, but the keystrokes are different than what appears in the *Student Reference Book*. (The exponent must be entered before the 10^x button is pressed.)
6-3	Application: Converting Measurements in the Metric System	If you think students will need support with the conversions in this lesson, consider making *Math Masters,* p. TA34 available to them If you think students will not know the unit conversions in this lessons and they do not have access to the *Student Reference Book*, consider creating a conversion resource for this lesson.
6-8	Estimating Decimal Products and Quotients	It is helpful if students have access to a calculator, but it does not need to be a scientific calculator. The eTools in ConnectEd include a calculator students can use if they have online access. The game *Doggone Decimal* can be played at home with a modified deck of cards: remove the 10s and face cards, and have aces represent 1. There will be no 0s, but that is fine for this game. Students can use labeled scraps of paper instead of index cards in the game.
6-9	Multiplication of Decimals	It is helpful if students have access to a calculator, but it does not need to be a scientific calculator. The game *Decimal Domination* can be played at home with a modified deck of cards: remove the 10s and face cards and have aces represent 1. There will be no 0s, but that is fine for this game.
6-11	Division of Decimals by Whole Numbers	
6-12	Division of Decimals by Decimals	Students need a calculator to complete the Math Message, but it does not need to be a scientific calculator.
7-1	Multiplication of Mixed Numbers, Part 1	
7-2	Multiplication of Mixed Numbers, Part 2	The Math Message asks students to use their fraction circle pieces or the Fraction Number Lines Poster. If your students have access to ConnectEd, there are fraction circle pieces in their eToolkit. The Fraction Number Lines Poster can be found on *Math Masters,* p. TA15.
7-10	Identifying and Visualizing Patterns	
7-11	Rules, Tables, and Graphs, Part 1	
7-12	Rules, Tables, and Graphs, Part 2	

Unit 8

The lessons in Grade 5, Unit 8 all have a slightly different style than the lessons in previous units. The Unit 8 lessons give students the opportunity to explore applications of the math from previous units. They are designed around open-ended, challenging problems. You might want to consider using these lessons as challenge activities or projects that your students could work on independently. The lessons could be framed for students with a short video or document and students could work independently on the problems, sharing their progress and getting feedback as necessary. The lessons that we think would be especially conducive for this approach are:
- Lesson 8-1: Planning an Athletic Center
- Lesson 8-3: Planning an Aquarium
- Lesson 8-5: Spending $1,000,000
- Lesson 8-6: Earning $1,000,000
- Lesson 8-7: Paying Off the National Debt

Lessons 8-5 through 8-7 build off of each other and should be completed in order.

Lessons 8-9 and 8-10 could be completed if students have a partner they could work with at home. Lessons 8-11 and 8-12 could be completed if students have the materials necessary to make pendulums at home.

Grade 6

In your content management system (e.g., Google Classroom, Seesaw) or weekly menu, consider having a "Reference" section that includes not only the important vocabulary for the week, but also the SRB pages that might apply.

You may want to consider producing a brief video *introduction* to each new lesson. The video might consist of selected Mental Math and Fluency problems as well as the introduction to the lesson. For the Mental Math and Fluency, consider posing the problem and instructing students to pause the video so they have a chance to solve the problem before you provide the answer. Be sure to leave a couple of seconds pause in the video so students have time to pause it before you give the answer. Consider encouraging students to contact a classmate to compare ideas and answers as they work.

Ideally, most lessons would have some synchronous *summary* where students can share work and/or ideas related to the lesson discussion questions. Suggestions for the introduction (part of a possible video introduction) and summary are included below.

Lesson	Title	Notes for Part 2 Focus Activities
6-1	Finding Solutions with Trial-and-Error	**References**: *open sentences* SRB p. 208; *trial-and-error solution strategies* SRB p. 214 **Introduction**: Describe situations that involve trial-and-error. Provide a hint that it might help students identify what is going on in number sentences if they translate the number sentences into words. Translate the Math Message problem into words. **Summary**: Focus the discussion on what knowledge helps them use a trial-and-error strategy and when a trial-and-error strategy might be most useful.
6-3	Using Bar Models to Solve Equations	**References**: *bar models* SRB p. 216 **Introduction**: Show the Math Message bar model example. Explain that this example shows three steps for solving the equation. Provide students with a hint that it is important to think about the structure of the bar model—for example, what does each row represent? What happens as you move from left to right with each new representation? Note: You may want to assign only journal page 273 before the class meeting and the number stories on page 274 after a class meeting or office hours. **Summary**: Focus the discussion on how a bar model works, what is challenging about using bar models, and how you can check your answer.
6-4	Solving Simple Equations with a Pan Balance—Part 1	**References**: *pan balances* SRB pp. 217 & 218 **Introduction**: Introduce how a pan balance works by doing a demonstration. You may want to use a virtual pan balance with shapes. See, for example, https://www.nctm.org/Classroom-Resources/Illuminations/Interactives/Pan-Balance----Shapes/ Consider having students explore this tool before watching the video. **Summary**: Focus the discussion on what kinds of things you have to remember when you use a pan balance to solve problems.
6-5	Solving Simple Equations with a Pan Balance—Part 2	**References**: *pan balances* SRB pp. 217 & 218 **Introduction**: Display an unbalanced pan balance (with shapes). The first should need something added in order to be balanced. Ask students to pause the introduction and consider how they would balance the pans. Then demonstrate. Provide a second example where the balancing requires multiple steps. Pause before demonstrating so students can think about the problem. Repeat the demonstration with equations. The tool at the website below might be useful. https://www.nctm.org/Classroom-Resources/Illuminations/Interactives/Pan-Balance----Numbers/

		Summary: Focus the discussion on the similarities and differences when using pan balances with numbers and pan balances with shapes. Conclude with discussing what it is important to remember when working with pan balances—that is, what rules you lead to successfully using pan balances.
6-6	Combining Like Terms	**References**: *coefficient* SRB p. 201; *simplify, term, constant, like terms* SRB pp. 219 & 220 **Introduction**: Display the first name-collection box from the Math Message. Have students pause the video and think of other expressions they could include in the name-collection box. Then add several other expressions that work. Ask students to pause and consider how they would know whether an expression fits. Explain combining like terms in the context of the name-collection box expressions. **Summary**: Focus the discussion on how to tell when an expression can be simplified (both combining like terms and constants) and how to tell when an expression is completely simplified.
6-7	Generating Equivalent Expressions and Equations	**References**: *simplest form*, *equivalent expressions* SRB p. 206 *properties of numbers and operations* SRB p. 231 **Introduction**: Display a pan balance with $x + 4x + 3$ in one pan and 14 in the other. Have students pause to consider what changes could be made while keeping the pans in balance. Then describe the changes that you can make in terms of replacing expressions with equivalent expressions. Review the meaning of simplest form and how to tell when an expression is in its simplest form. **Summary**: Focus the discussion on how the associative, commutative, and distributive properties might be helpful for determining the necessary steps for simplifying equations.
7-1	Inequalities and Mystery Numbers	**References**: *bar models* SRB p. 216 **Introduction**: You may want students to play the *Number* Squeeze game (online in G1 games) before completing the journal pages. You can use the Number Line tool in the eTools if you want to demonstrate the game. Make connections between inequalities and the game. **Summary**: Focus the discussion on key points to consider when writing inequalities that describe a solution set shown on a graph and how they can check whether their inequalities work.
7-3	Computer Spreadsheets	**References**: *formula, spreadsheet program, cell, address box, display bar* SRB pp. 228–230 **Introduction**: Consider making a spreadsheet in a program (e.g., Google Sheets) to share an overview of how spreadsheets work. You may want to explore graphing in https://www.desmos.com/calculator You can enter information in a table (from the + sign) and it automatically creates the graph. **Summary**: Focus the discussion on how students used spreadsheets in this lesson and what some of the advantages and challenges might be for using spreadsheets.
7-4	Using Spreadsheets to Solve Problems	**References**: *formula, spreadsheet program, cell, address box, display bar* SRB pp. 228–230 **Introduction**: Introduce how to record a formula in a spreadsheet and what the outcome is. For example, you may want to do something like a lunch menu that calculates a total cost based on an order—where students can see how the formula is entered. **Summary**: You may want to save problem 7 to do together as a class. Focus the discussion on advantages of using a spreadsheet as well as on what you need to know to use spreadsheets.
7-5	Unit Rate Comparisons	**References**: *unit ratios* SRB pp. 49 & 50 **Introduction**: Consider priming students for thinking about rates related

		to sugar in beverages using Dan Meyer's 3-acts videos: http://threeacts.mrmeyer.com/sugarpackets/ **Summary**: Focus the discussion on what you know and do not know based on the rates provided in nutritional information. Have students compare ideas on what to consider when reading these labels.
7-6	Running and Measures	**References**: *unit ratios* SRB pp. 49 & 50 **Introduction**: Explain that this lesson is about identifying patterns in rates and making predictions based on the patterns. If students have used electronic spreadsheets and Desmos for graphing, you may want to suggest these tools are available for this lesson as well. **Summary**: Focus the discussion on interpreting the graph that they made using the questions in the Predicting Record Time activity.
7-8	Connecting Equations, Tables, and Graphs	**References**: *representing patterns with algebra* SRB p. 225 **Introduction**: One option would be to have them do a Desmos growing pattern activity before completing the lesson. One such activity is: https://teacher.desmos.com/activitybuilder/custom/572f417c0716870b1c78a97f There are other growing pattern activities in Desmos as well. You can access the activities and create a class code by creating a free teacher account at: https://teacher.desmos.com/ Another options would be to walk students through a growing pattern example before they tackle the lesson pages. If you want a pattern not in the lesson, the site below offers a resource. http://www.visualpatterns.org/ Note that you want to pick a pattern where the change is constant (goes up or down by the same amount each time) so that the results are linear. Have students pause and consider what the next two steps would look like. Then show and describe the next steps. Demonstrate constructing the table. Have students pause to think about the change in words. Describe and record the change in words. Have them pause and think about how to translate the change into an equation. **Summary**: Focus the discussion on what students learned about growing patterns and predicting the nth step. Use discussion questions from the Graphing the Rule activity to guide the discussion.
7-9	Independent and Dependent Variables	**References**: *independent/dependent variables* SRB pp. 223 & 224 **Introduction**: You may want to introduce the lesson with a video related to triathlons. There are some "motivation" videos in Youtube that would provide a nice overview of what a triathlon is. After students pause to consider which variable they think might be dependent and which might be independent (time and distance traveled), then describe the relationship and which is which. **Summary**: Focus the discussion on comparing the graphs—how are they similar, how are they different. You might want to recreate the display in Desmos.
7-11	Mystery Graphs	**References**: *bar models* SRB p. 216 **Introduction**: You may want to introduce this lesson with a graph from the graphing stories website: http://www.graphingstories.com/ Note what the dependent and independent variables are for whatever example(s) you choose to use. Pose questions for students to consider related to why different parts of the graph look the way they do—for example, why are parts of the graph drawn vertically, horizontally, diagonally, with steep areas or less steep areas. **Summary**: Focus the discussion on what features of a graph helps students match a graph to a situation.
Lessons in Unit 8 are all application lessons and revisit earlier content. Families might have fun with the		

Anthropometry lesson (8-8) or Planning a trip (8-9). If they are likely to have the materials available, Making a Mobile (8-6) could also be interesting.