Grade 8 Block Schedule Guidance

Unit 7: Exponents and Scientific Notation

Block	Original Lessons	Plan to Do	If Time Allows	Notes
1	Check Your Readiness Lesson 1 Exponent Review	CYR 1.1 1.2* 1.3 Lesson 1 Synthesis 1.4		The Check Your Readiness assessment could be given before or after Lesson 1 because none of the items are addressed in the lesson. This lesson reviews previous work with whole number exponents.
2	Lesson 2 Multiplying Powers of Ten Lesson 3 Powers of Powers of 10	2.1 2.3* Lesson 2 Synthesis 3.1 3.2* 3.3 Lesson 3 Synthesis 2.4	2.2	In these lessons, students explore exponent rules for multiplying values with the same base.
3	Lesson 4 Dividing Powers of 10 Lesson 5 Negative Exponents with Powers of 10	4.1 4.2* 4.3 Lesson 4 Synthesis 5.1 5.2* 5.3 Lesson 5 Synthesis 5.4	4.4 (optional)	This block explores exponent rules when dividing values with the same base. The optional activity gives students the opportunity to be creative with the exponent rules.

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4	Lesson 6 What about Other Bases? Lesson 7 Practice with Rational Bases	6.1 6.2 6.3 Lesson 6 Synthesis 7.2* 7.3 Lesson 7 Synthesis 7.4	7.1	Up to this point, students have only used base 10 for exploring the exponent rules. These lessons allow students to practice the rules using other values as the base.
5	Lesson 8 Combining Bases Lesson 9 Describing Large and Small Numbers Using Powers of 10	8.1 8.2* Lesson 8 Synthesis 9.1 9.2 9.3* Lesson 9 Synthesis 9.4	8.3 (optional)	To help transition between the lessons, during the Lesson 8 synthesis, tell students to use technology to calculate the value of the last entry on the table from Activity 8.2 ($7^4 * 2^4 * 5^4$ = 24,010,000). Then, select a student to read the number in words. Tell students that the next set of activities will lead us to another way to write very large (and very small) numbers. The optional activity is a game to practice using the rules of exponents students have learned.
6	Lesson 10 Representing Large Numbers on the Number Line Lesson 11 Representing Small Numbers on the Number Line	10.1 10.2 10.3* Lesson 10 11.1 11.2* 11.3 Lesson 11 Synthesis 10.4		These lessons explore putting very large or very small numbers on a number line being careful how the power of 10 affects the marks on the number line.

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7	Lesson 12 Applications of Arithmetic with Powers of 10 Lesson 13 Definition of Scientific Notation	12.1 12.2 Lesson 12 Synthesis 13.1 13.2* 13.3 Lesson 13 Synthesis 13.4	12.3 (optional)	In this block, students work towards writing numbers in scientific notation. The optional activity is another opportunity to play with numbers in scientific notation similar to Activity 12.2.
8	Lesson 14 Multiplying, Dividing, and Estimating with Scientific Notation Lesson 15 Adding and Subtracting with Scientific Notation	14.1 14.2* 14.3 15.1 15.2* 15.3 Lesson 15 Synthesis 14.4	14.4 (optional) 15.4 (optional)	These lessons examine ways to combine numbers written in scientific notation. The optional activities provide additional practice with real-world situations in which students combine values written in scientific notation. The cool-down from Lesson 14 is listed in the suggested sequence because, outside of the classroom, numbers in scientific notation are more often used to compare orders of magnitude than summed.
9	Lesson 16 Is a Smartphone Smart Enough to Go to the Moon? End-of-Unit Assessment	16.1 16.2 EUA		Lesson 16 could be used as a review of the material from the unit before the assessment if students could benefit from the review. Otherwise, it can be given as a project to play with the concepts after the assessment.

Unused cool-downs: 3.4, 4.4, 6.4, 8.4, 11.4, 12.4, 15.4

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