

Content Area	Pre-ASE Math	Grade Level	Level 2 / GLE 5-6.9	Allison has provided information about the content area, grade level, and so forth.
Topic	Unit: Pre Algebra Lesson: Exponents (L1)	Duration	2 hr	
CCRSAE	Mathematical Practices		Instructional Shifts	Notice that Allison is submitting a UNIT-- a set of lesson plans that will focus, this case, on all aspects of Exponents. This is the first LP in a set of several LPs that compose the Unit.
6.EE.1	SMP.7		<input type="radio"/> Focus	
8.EE.2	SMP.8		<input type="radio"/> Coherence	
			<input checked="" type="radio"/> Rigor	
Objective: <i>Students will be able to...</i>		Assessment: <i>Students will demonstrate mastery of the objective by...</i>		
<i>SWBAT evaluate numerical expressions with whole number exponents</i>		Student created equivalent pairs		
<i>SWBAT express and evaluate exponents as repeated multiplication</i>		Teacher observations of card sort		
<i>SWBAT use retrieval practice to reinforce content mastery</i>		Exit ticket reflections		
Materials	Do Now ● Spiral Review, Answer Key, Review Logs (Teacher Created) Card Sort ● Exponent Card Sort, Worksheet, Scissors (Teacher Created) Differentiated Practice ● Graphic Notes (Math Giraffe / Teachers Pay Teachers), Exponents Chart (EMPower. Seeking Patterns), Using Exponents (Number Power, <u>Pre-Algebra</u>), Exponents (Contemporary's GED Mathematics), Scientific Notation (Number Power, <u>Algebra</u>), HiSET Practice Problems Closing/Home Study ● Exit Ticket (Teacher Created) ● Khan Academy Article "Intro to Exponents" (Intro to Exponents)	Classroom supports and accommodations available to all students: -Volunteer classroom tutor -Calculators -Printed multiplication charts -Graph paper, rulers, highlighters -Collaborative/peer learning -Simplified or review materials during practice sessions -Challenging or extension materials during practice sessions -Self-paced work -Short breaks		
<i>authentic and meaningful materials related to the learning objectives</i>				<p>This class will focus on two math CCRAE standards:</p> <ul style="list-style-type: none"> • <i>Write and evaluate numerical expressions involving whole-number exponents. (6.EE.1)</i> • <i>Write, read, and evaluate expressions in which letters stand for numbers. (6.EE.2)</i> <p>And two Standards of Mathematical Practice:</p> <ul style="list-style-type: none"> • <i>Look for and make use of structure. (SMP.7)</i> • <i>Look for and express regularity in repeated reasoning SMP.8)</i> <p>And the Instructional Shift <i>Rigor</i>.</p> <p>Her chosen CCRSAE and Standard Mathematical Practices (SMPs) can be found in this resource: http://www.corestandards.org/Math/Practice/</p>

<p>Instruction</p>	<p>1.A. Do Now: Spiral Review, Individualized Review, Video (45 minutes) Students will complete cumulative review and correct with answer sheet. Students will add review scores and reflective comment to their cumulative review log, and will consult with teacher or volunteer classroom assistant to identify appropriate materials to address individual learning needs.</p>	<p>The SABES Mathematics PD Center provides the Math CCRSAE as well, with their comments, and other resources at https://www.sabes.org/pd-center/math-and-numeracy</p>
<p><i>How will I go about teaching this lesson?</i></p> <p><i>What instructional methods and engaging activities will lead students to mastery of the learning objectives?</i></p>	<p>1.B. Direct Instruction (15 minutes) Teacher will explain exponent vocabulary and notation. Teacher and students will write whole number exponents in expanded form and calculate their value using an <i>I do/we do/you do</i> format</p> <p>1.C. Card Sort (20 - 35 minutes) Students will work in pairs and small groups to match equivalent cards from a teacher-created deck featuring exponent and expanded form, English and final values. When complete, each student will create two pairs of equivalent cards with the values and format of their choice. Student cards will be checked, corrected as needed, shuffled and displayed using doc cam, and peers will identify equivalent pairs.</p> <p>1.D. Differentiated Practice (20 - 35 minutes) Students will consult with teacher and the student will choose an appropriate level of challenge for further practice.</p> <p>1.G.Exit Tickets + Homework Selection (5 minutes) Students will reflect in writing on the activities and mastery of the concept.</p>	<p>-----</p> <p>The teacher has created Learning Objectives (LOs) to express what students will be able to know or do as a result of the lesson. [Standard c(5)]</p> <p>For each LO, she has devised an assessment to make certain that students have mastered the new knowledge and skills covered in the class.</p> <p>-----</p> <p>The remainder of the LO provides descriptions of all the planned activities, from warm-up, to new learning, guidance for home study, and, finally, following the class, her notes on what went well and what could be improved for the future.</p>
<p>Home Study</p> <p><i>What activity will reinforce the learning objectives?</i></p>	<p>Students will select from “Differentiated Practice” materials described above, Khan Academy practice or materials selected during individualized review. When complete, students will write a log/comment describing their homework progress or challenges.</p>	<p>As you read through the descriptions of activities, note that the teacher uses a variety of instructional strategies (group and pair work, solo exercises, direct instruction followed by guided practice, etc.) [Standard c(6)]</p>
<p>Reflection</p>	<p><i>What did I learn about the students’ mastery of the learning objectives? What modifications, if any, will make the lesson more effective?</i></p>	<p>Please note also the highlighted sentences and phrases that required students to think critically or problem solve. [Standard c(7)]</p>