

Lewis Lesson Plan

Teacher Name:	Rebecca Lewis	Date :	March 7 th , 2012
Class Subject:	Algebra II	Period:	2nd
Student Grade Levels:	10 th and 11 th	Lesson Length (min):	1 hour
Description of Students, including special needs: <i>(1.4b)</i>	<p>Period two consists of 18 students.</p> <p>There are no students in this period with IEPs.</p> <p>The class is majority Hispanic, some English Language Learners.</p> <p>The average test score of this class is 54% . There are three students who regularly perform at the proficient or advanced level.</p>		

Standard(s):	11 .1 , 11.2 and 14.0
Lesson Objective(s): <i>(1.1a, 1.1b)</i>	<p>SWBAT apply log properties in order to condense and expand logarithms.</p> <p>(Student friendly language: Learning Target 9.5: "I can condense and expand logs.")</p>
Rationale for Objective(s), including relevant student data: <i>(1.2b, 1.4a, 1.5a, 4.2a)</i>	<p>Students are in the middle of the logarithm and exponential unit. There are 7 questions in total on the CST connected to standards 11.1, 11.2 and 14.0. Student data (previous exit slips) demonstrate that students struggle with the concept of logarithms (40% correctly answered a question pertaining to 11.1 during a previous lesson). This lesson will be used to reinforce the concepts of 11.1 and additional new concepts on logarithms.</p>

Lesson Assessment(s): <i>(1.1b, 4.1a, 4.2)</i>	<p>Informal assessment during do now- teacher observes student progress and teacher monitors student answers (A, B, C or D) in a multiple-choice (CST released) question.</p> <p>Informal assessments/checks for understanding during the guided notes section.</p> <p>Informal assessment during Mix Match practice- teacher walks around, observes student progress and assesses misconceptions.</p> <p>Formal/summative assessment via Exit slip at the end of the class period.</p>
Related unit assessments: <i>(4.2b)</i>	<p>Unit Quiz on Thursday will re-assess this learning objective.</p> <p>Unit test on March 15th will re-assess this learning objective.</p>

Instructional Plan *(1.2a, 1.3, 1.4b)*

Teacher Actions (incl. Lesson Agenda)	Time	Student Actions
<p>Teacher posts do now on the projector. Circulates to stamp homework assignments and informally assess students' progress on the do now.</p> <p>Teacher asks students to hold up their index card with their chosen answer (A, B, C or D). (This serves as an informal assessment of previous knowledge).</p> <p>Teacher reviews the Do Now with students and relates to lesson of the day. She also discusses standardized test-</p>	0:00-10:00	<p>Students silently work on the do now.</p> <p>Students write on their index card if they chose A, B, C or D.</p> <p>Students review the Do Now and take notes. They self-assess their own understanding of the previous lesson's materials.</p> <p>Students fill in section on notes: "Why do I need to know</p>

<p>taking strategies.</p> <p>Teacher presents the learning target for the day, "LT 9.5: I can condense and expand logs." She tells students that they will need this skill for chemistry next year and college when they take higher level math courses. In addition, using log properties is like solving puzzles, students will use their brains in new ways and develop critical thinking, which also is a necessary skill for college and life.</p> <p>Log Properties are reviewed. Teacher uses cold calling cards to have students explain the different log properties. If a student says "I don't know" she will say, "alright, let's ask a classmate, and they'll come back to you." Then she will jump to another student and ask them. Then, the teacher will return to the student to give him/her another chance to repeat the answer. (this utilizes No opt out and Check for Understanding)</p> <p>Teacher will show students how to use these properties (previously learned) to expand and condense logs. She will show one example, then they will do an example together. She will call on students to help with each step using the cold-calling technique again. Then, she will have the students try examples on their own and call on them for answers. (Serves as a check for understanding and informal assessment)</p> <p>Teacher will explain the Mix Match Game. Students will be paired up to match up problems and solutions. They will fill out the Mix Match worksheet to ensure they are showing their work and using the correct properties. Every student is required to participate and fill out their practice. The teacher will state, "As I walk around to check on your progress, I expect to hear you using the correct academic terms and the vocabulary on this list (list will be projected): Product property, quotient property, exponent property, log, expand, condense... etc" (Serves to enhance academic vocabulary, set the tone and expectations for student behavior and rigor)</p> <p>Teacher will circulate and check progress as students work together- this serves as an informal check for understanding.</p> <p>Teacher will hand out the exit slip, tell students they have 4 minutes to complete it silently and individually, and then collect their work. (This serves as a summative lesson assessment)</p>	<p>11:00-20:00 minutes</p> <p>21:00-30:00 minutes</p> <p>31:00-50:00 minutes</p> <p>51:00-60:00 minutes</p>	<p>this?"</p> <p>Students begin to take notes on their graphic organizer, fill in review of log properties. As students are cold called, they will answer the questions about log properties. If they do not know the answer they will know that the teacher will come back to them for the answer or another answer.</p> <p>Students fill out graphic organizer with notes and example problems. They will answer problems and questions from the teacher using the correct terminology and academic language. Students will also try the student example problems on their own.</p> <p>Students will work in pairs to complete the Mix Match practice and get through as many problems as possible in the allotted time. Students will fill out their organizer, (sample attached). They will discuss with a partner and practice this skill actively.</p> <p>Students will complete the exit slip individually.</p>
---	---	--

<p>Prerequisite knowledge and anticipated student misconceptions and how they will be addressed.</p> <p>(1.5a/b)</p>	<p>Students have previously learned log properties in the previous lesson. Teacher anticipates student confusion and lack of sound understanding with log properties at this point, so they will be reviewed as part of the intro to the lesson. Teacher will produce and display a poster with the log properties on it, up front for students to review and recall.</p>
---	---