Olmsted Falls Schools: Unit Design Framework

Subject: Algebra 1   **Unit: Ch 8 exponents**

Part I: Clarity of Learning Targets

What are the grade level indicators that go with this unit? Place a star next to the grade level indicators that are Power Indicators. Are the indicators in student friendly language? Place the level of Bloom's Taxonomy next to each Power Indicator.

Apply properties of exponents involving products. (EQ#1)
Apply properties of exponents involving quotients. (EQ#1)
Apply zero and negative exponents. (EQ#1)
Multiply and divide numbers in scientific notation (EQ#1)
Write and graph exponential growth functions.
Write and graph exponential decay functions.
Model real world situations using exponential growth and decay.

What are the Big Ideas that go with this unit?

1.) Properties of exponents are used to simplify and evaluate expressions.
2) Growth and decay functions help model real life situations such as loans, populations, etc.

What are the Essential Questions that go with this unit?

1.) How do you simplify and evaluate rational expressions?

2.) How can exponential functions help evaluate or predict real life situations?

What strategies will we use in order to make learning targets clearer for all students, before, during and after instruction? How will you communicate the learning indicators to students?

Learning targets on smartboard
Checklist
Daily discussion

Part II: Feedback and Assessments (Formative and Summative)

How will we provide students with feedback throughout the unit?

What formative assessments will we use? (Non-graded assignments that check for understanding and provide feedback to the students) Incorporate the 7 Strategies of Assessment for Learning here.

I can checklist of learning targets
Write and discuss daily learning target
Examples of strong and weak work (the loan project)
Learning chains to monitor targets – (pg 210)
Analyze my results –(pg 213)
Homework tallies
Entrance/Exit slips
White boards
Allowance problem – discussion between exponential and linear; how to solve, etc.

How will students be involved with keeping track of their own learning progress (note—this is different than tracking points for a grade)?

Checklist of learning targets
Learning chains
Analyze my results

What summative assessments will we use? (Graded, evaluative assessments)
Chapter test
8.1-8.2 Quiz
8.3-8.4 Quiz
Loan project

Part III: Instruction and Student Activities

What instructional and student activities will we use for this unit? These activities should directly align with the indicators and assessments.

Class notes
Examples of problems
Worksheets