

# Teacher Guide

**Lesson:** Home Purchasing and Exponential Growth

**Grade Level:** High School

**Oregon State Standard:** HS.PFE.A.2

**Goal:**

1. Students will understand the relationship between the principal amount and the total they will pay over the life of a loan.
2. Students will reflect on the ways to save money over time through their investments.

**Procedure:**

1. Use the companion PowerPoint, “**Home Purchasing and Exponential Growth**” to guide the students through a discussion about exponential growth.

**Note:** If using this as a distance learning tool – use this as a 3-day learning guide

Day 1 – Send out the **PowerPoint** with a possible **class discussion** planned after to discuss in detail. Have students work through the exponential growth equation as the PowerPoint presents it.

Day 2 – Send students the first handout, “**Exponential Growth and Home Buying**”

Day 3 – Send out the second handout, “**Down Payments**”. Students should have the first handout completed to use as a comparison tool.

2. As you go through the PowerPoint, guide students through the example equation – each student should do the equation in their notebook to have it to look back on as they do the worksheets on their own.
3. **Review opportunity:** Students will need to remember the order of operations (PEMDAS) while doing this equation. This is a great opportunity to review the concept with students.
4. Finish reviewing the PowerPoint and allow the students to play with the different mortgage calculators at <https://www.mortgageclick.org/calculators/purchasecalcs.asp?siteId=BADA46B0-6B75-4E28-A519-202641504C18>
5. Assign the first worksheet, “**Exponential Growth and Home Buying**”. Give the students a day or two to work on it. Go over the answers and discuss trends students notice.
6. Assign the second worksheet, **Down Payments**”. Give students time to complete the worksheet, go over answers, and compare them with answers from the previous assignment, “**Exponential Growth and Home Buying**”.
7. Big Take Away? What is the number one thing you can do to make the home-buying process less expensive for you? SAVE! The more downpayment you’ve saved, the less you’ll pay because of the interest you’ll accrue.