Name________________________________ Date_____________________

Financial Literacy
Unit 1 Line Master 1a

Exploring the Effects Different Factors Have on Compound Interest

- Open the Loan Calculator Spreadsheet (Master 2).
- The blue cells indicate the variables you can change:
  - **Purchase Price:** the cost of the purchase you are making
  - **Down Payment:** the amount of money paid toward the purchase upfront
  - **Annual Interest Rate:** the yearly interest rate, as a percent
  - **Loan Duration:** the length of the loan, in years
  - **Number of Payments per Year:** 12 if paid monthly, 24 if paid bi-monthly, 52 if paid weekly, and 26 if paid bi-weekly
- The **Principal** (the amount borrowed) is the purchase price, less the down payment.
- Select a variable. Choose to increase or decrease the value of that variable. Predict how the total interest will change, then change the value of the variable in the spreadsheet to check.

Variable	Change in variable	Effect on total cost	Explanation

Name_______________________________ Date____________________

Financial Literacy
Unit 1 Line Master 1b

Exploring the Effects Different Factors Have on Compound Interest (cont'd)

Suppose you work as an advisor in a bank and are helping different clients get a loan for their purchase. Use the loan calculator to provide two very different loan options for each scenario.

1. Your client needs a loan to purchase a new vehicle that costs $28 000.
   Criteria:
   • monthly payments must be as close to $500 as possible.
   • interest rate must be between 2% and 10%.
   • maximum loan duration is 7 years.

2. Your client needs $50 000 to make some home improvements.
   Criteria:
   • they have saved some money that can be used as a down payment.
   • monthly payments must be as close to $400 as possible.
   • interest rate must be between 4% and 8%.
   • maximum loan duration is 20 years.

3. Your client needs a loan to purchase a home in a small town for $380 000.
   Criteria:
   • they have saved more than 5% of the purchase price, which they can use as a down payment.
   • monthly payments must be less than $2500.
   • interest rate must be between 5% and 7%.
   • maximum loan duration is 25 years.