**Exploring the Effects Different Factors   
 Have on Compound Interest**

**Financial Literacy**

**Unit 1 Line Master 1a**

* 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 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

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

**Financial Literacy**

**Unit 1 Line Master 1b**

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.