IB MYP Math 9 Standard Level   **Name**_____

Exponential Modeling Checklist

Step 1: Data Intro – Table – Graph

___Project **Title**

___Organize data in a table

___Display data using a scatterplot

Step 2: Equation $y = a(b)^x$ $b = (1+r)^x$ **OR** $b = (1-r)^x$

___Calculate the constant multipliers between each data value

___Identify the starting value   ____ Justify your starting value

___Identify the constant multiplier   ____ Justify your constant multiplier

___Write Equation

___Verify the equation by substituting data from your table into equation.

____ Write a statement commenting on the validity of the equation

Step 3: Analysis (Using Table-Graph-Equation)

Interpret the real-life meanings of your equation:
____Starting value   _____Constant multiplier

_____ **r (*rate % of growth/decay*)**

_____Dependent variable (*y-value*)   _____Independent variable (*x-value*)

___Use equation to make a prediction that is **outside** the collected data.

___Discuss the accuracy of the prediction

___Use equation to make a prediction that is **inside** the collected data set.

___ Discuss the accuracy of the prediction

_____ Write a conclusion of the project.

Questions to consider for the conclusion:

- **What does the data show?**
- **What impact does this data have on me or my family?**
- **What impact does this project have on our community or society?**