**Exponential Growth/Decay Project**

**Due: March 2 (Blue) and March 3 (Gold)**

You will have the option of working with **one partner** to complete a poster that models a real-world scenario.

You will pick one of the following scenarios with your partner:

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| The leatherback sea turtle’s population in 1980 was 90,000 turtles and has been decaying at a rate of 11% since. Find the turtle population for 2020. Round your answer to the nearest turtle. |
| The coronavirus originally infected 45 people in China. It is spreading at a rate of 48 % per day. How many people would be infected after 6 weeks? |
| During medical procedures a doctor will inject Thallium-201 (a color changing dye) to help with surgeries. The dye will decay at a rate of 12% per hour once it is injected. If a doctor injects 5 grams of this dye, how much will be left after 6 hours? |
| The most popular Youtube video in history was KONY 2012. When the video had 34,000,000 views, it was growing at a rate of 20% per day. How many views will the video have after 6 days. |
| You want to buy a brand new Honda Civic for $19,850. This car deprecates at a average rate of 15% per year, how much will the car be worth after 6 years? |

You will need to include the following information on your poster:

|  |  |
| --- | --- |
| 2 Points Each | 5 Points Each |
| * Question/Scenario (1 point) * Visual of the scenario * Y-intercepts * Asymptote * Domain * Range * Increasing/Decreasing Interval * End Behavior | * Equation * Table * Graph * A related article with a reflection on the reading * Presentation |

**Presentation**

On March 2nd and 3rd, you will be presenting your information with the class. This presentation should be about 2 minutes. You will need to report out individually or with your partner on the information you found while completing research.

Good luck and have fun!