

# Part 1: The City

**Sunday:** A group of 5 DVD students went out to The Galleria to hang out. When they each went home, they started to feel sick.

**Monday:** The next day they come to school; while in their classes, they start to go crazy. Each students bites one of their classmates. The zombie students are satisfied for the day and begin to walk around the campus at a slow pace. The school is now on lockdown as the Center for Disease and Control (CDC) tries to figure out what to do.

**Tuesday:** Now the infected students go on another rampage and each bite one more person on campus. They then go back to walking at a slow pace.

# Part 2: Get the facts

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| 1. How many people were initially infected? |  |
| 1. How many people were infected after one day? |  |
| 1. How many people does each zombie attack? |  |
| 1. Does a zombie attack multiple people in one day? |  |
| 1. How many people were infected after two days? |  |

# Part 3: Outbreak

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| 1. Discover how many total people **will** be infected.  |  |  | | --- | --- | | **Days** | **# of people infected** | | **0** |  | | **1** |  | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | | **7** |  | | **8** |  | | **9** |  | | **10** |  | | **11** |  | | **12** |  | | 1. Based on the information from question 1, determine how many people will be left. **HINT: There are 550 students**  |  |  | | --- | --- | | **Days** | **# of people NOT infected** | | **0** |  | | **1** |  | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | | **7** |  | | **8** |  | | **9** |  | | **10** |  | | **11** |  | | **12** |  | |

# http://www.clipartpanda.com/clipart_images/zombie-clipart-1118522-happy-26266545/downloadPart 4: Critical Thinking

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| 1. After 7 days, how many people will **not be sick** at DVD? |
| 1. Does this answer make sense contextually? Explain why or why not. |

# Part 5: Graphing your Findings

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| 1. Open the Desmos app | 1. Click the “+ “ sign and select table |
| 1. Plug in the values from your table | 1. Zoom in and out (+ or – on graph) so that you can see all points |

# Part 6: Using Math for the Real World

Check out part of your data. Use what you know to create an equation to represent the situation

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| **Days** | **# of people infected** | **Multiply** | **Expand** |
| 0 |  |  |  |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |

# Part 7: Critical Thinking

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| 1. http://www.clipartpanda.com/clipart_images/zombie-clipart-1118522-happy-26266545/downloadBased on the pattern you identified in Part 6, write an equation to represent the number of people infected. Check your work by inputting your equation in Desmos. |
| 1. Based on the equation you created, how many people will be infected after 20 days? |
| 1. Go back to Desmos, based on the graph, estimate how long will it take to infect the entire city of Wiseburn (population 6, 232.) |
| 1. Based on what you prior knowledge about equations, try to write an equation for the number of people NOT infected. |