Summative Journal

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| Date | Description |
| December 3 | Returned from vacation, began working on robot arm on inventor |
| December 4 | Continued working on robot arm in inventor   * Completed base stand * Began working on base arm |
| December 5 | Continued working on arm inventor   * Completed base arm * Working on base claw and claw |
| December 6 | Continued arm in inventor   * Completed claw and claw arm * Began adding small additions   + Shaft collars   + Screws |
| December 7 | Finished arm in inventor   * Added chain * Submitted work |
| December 10 | Began brainstorming on how to edit initial robot design   * How to apply edits required mentioned in previous report |
| December 11 | Continued researching and experimenting with designs   * Attempted to create a metal slide for pipes * Discontinued because omni wheels seemed like a better alternative |
| December 12 | Attempted to attach omni wheels but rendered more useless than useful   * Required more space and became an obstacle to some mechanisms |
| December 13 | Resumed experimenting with design   * Resumed creating a metal slide * Found that it was too unstable so began looking for ways to improve |
| December 14 | Was unable to find solution to slide design problem so put it on pause  Began learning about VEX sensors |
| December 17 | Continued looking at different VEX sensors   * Bumper switches * Line sensors |
| December 18 | Found a solution to slide problem   * Decided to create a trey-like slide shape   + Could be built more sturdy   + Easy to attach on back of VEX unit |
| December 19 | Continued working on trey-slide   * Measured to make sure pipe would be ale to fit and pass through * Reinforced structure with metal plates |
| December 20 | Finished working on trey-slide   * Added railings to prevent pipe from drifting off the slide * Attached the metal trey-slide to supporting beams of VEX unit |
| December 21 | Attended Talent Show |
| January 7 | Tested pipe slide   * Found that the pipe could drop too fast * Concluded to create a pipe stopper |
| January 8 | Began constructing pipe stopper   * Created gear and chain system to allow user to raise and lower stopper |
| January 9 | Completed pipe stopper   * Built metal bar to stop pipe and attached to a motor * Attached mechanism to trey slide |
| January 10 | Began attaching line sensors to VEX unit |
| January 11 | Tried to adjust line sensors such that robot movement could function solely on line sensors |
| January 14 | Found that attaching an additional ultrasonic sensor would allow robot movement to become a lot smoother |
| January 15 | Created autonomous code for autonomous phase of summative |
| January 16 | Testing |
| January 17 | Testing |