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| ***Crumble Evaluation Rubric*** | | | |
|  | Exemplary  3 points | Proficient  2 points | Needs Improvement  1 point |
| Sketches/Designs | Produced detailed sketches of possible solutions that included accurate labels for all essential components. | Produced sketches that had some inaccurate or missing labels. | Produced sketches that did not have any labels. |
| Design  Constraints | The final solution followed all constraints of the design challenge. | The final solution followed most constraints of the design challenge. | The final solution followed a few constraints of the design challenge. |
| Fabrication | The final product was neatly constructed and operated effectively during testing. | The final product was constructed and operated during testing. | The final product was constructed. |
| Programming and Electronics | The program and circuit had no errors. The sensors successfully operated. | The program or circuit had a few errors that prevented the sensors from properly operating. | The program or circuit was incomplete. |
| Final Solution | When sensing the orangutan escaped, the Crumble alarm system alerts Uncle Fred. | The Crumble is connected and programmed but does not alert Uncle Fred. | The Crumble is not connected to the enclosure or is not programmed. |
| Teamwork and Safety | Student provided significant contributions to their group’s solution while following all safety procedures. | Student contributed to their group’s design solution while following all safety procedures. | Student provided limited contributions to their group’s design solution or had safety violations. |