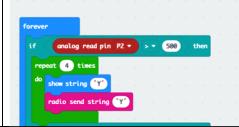
**Appendix**Summary Table of Computing Tasks Observed Within Student Projects

| Computational Thinking Skill Observed Sequences: Most projects demonstrated sequenced sections of code that sought to engage a series of events.  | Photograph of Exemplar Code  on button B * pressed  play tone (Middle D for 1/2 * beat  play tone (Middle F for 1/2 * beat  play tone (Middle D for 1/2 * beat  play tone (Middle D for 1/2 * beat  play tone (Middle F for 1/2 * beat   | Physics Content Engaged  1. Acceleration/ Freefall 2. Circuits 3. Kinematics Newton's Laws                                    |
|---|--|---|
| Loops: All puzzles also included code that used loops to ensure that data input was constantly engaged and monitored. The most commonly used loop was forever.  Events: Because of the nature of  | forever  If analog read pin Pi * > * (1000) then  show string (Yoy)  else  show string (X)  On button A+B * pressed  | <ol> <li>Acceleration/<br/>Freefall</li> <li>Circuits</li> <li>Kinematics<br/>Newton's Laws</li> <li>Acceleration/</li> </ol> |
| the design task given to students, all coded puzzles engaged events where something would happen.   | repeat 6 times  do play tone (High F2 for 1/2 = beat play tone (High C for 1/2 = beat  | Freefall 2. Circuits 3. Kinematics 4. Newton's Laws   |
| Parallelism: Many projects demonstrated parallelism as students coded various   | we believe that a present principle for a 1 a least they have contained for the least fore | <ol> <li>Circuits</li> <li>Kinematics</li> </ol>  |
| Conditionals: All puzzles' code included if/then statements as part of their coding. Most if/then statements were linked to sensor readings for input and outputs. If/then statements were most often used to engage sensor input and events desired from those inputs. | forever  if light level > 120 then show leds  else show leds   | <ol> <li>Acceleration/<br/>Freefall</li> <li>Circuits</li> <li>Kinematics</li> <li>Newton's<br/>Laws</li> </ol>               |
| Operators: Across all groups and projects very little coding or blocks were used to engage operators. Only strings were present in student code files.  | on radio received receivedString  show string receivedString   | Acceleration/     Freefall     Newton's     Laws  |

**Data:** Across projects, student code was observed to most often engage input data from Micro:bits sensors.



- 1. Acceleration/ Freefall
- 2. Circuits
- 3. Kinematics
- 4. Newton's Laws