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| **We are creating an online game or mobile app** | | | | |
| **SOLO LEVEL** | **One** | **Many** | **Relate** | **Extend** |
| **SOLO VERB** | ***Identify Isolated Skills*** | ***Describe, and Combine Serial Skills*** | ***Integrate Skills*** | ***Evaluate Skills*** |
| **DECLARATIVE knowledge** (knowing about – talking or writing about the programming code)  Create a digital game or app.  Success Criteria | I can **DEFINE** a problem and identify functional requirements such as usability, technical or social constraints/ considerations and data requirements  I can **IDENTIFY** key elements by decomposing the problem.  I can **IDENTIFY** parts of a programming solution that uses a microcontroller | I can **DESCRIBE** two or three different design ideas and in detail discuss:   * the ‘user experience’ * the instructions to operate the solution | …AND I can **EXPLAIN** my programming choices –   * that involve branching (where decisions by the user are enabled), * iteration (where loops and repeat functions have reduced the script length and detail) * other functions for example the use of variables.   I can **EXPLAIN** the syntax of the particular programming language required to code the programming board  Page 1 of 2 | AND I can **EVALUATE** the effectiveness of mine and other’s digital solutions in meeting its functional requirements by explaining:   * how well it meets its intended purpose * how the solution met one functional requirement and one constraint. |
| **FUNCTIONING knowledge** (knowing how to)  Create a digital solution using visual programing language.  Success Criteria | I can interpret an algorithm presented as a flow chart and follow the steps  I can use a visual programming language or a general purpose programming language **IF** I copy programming examples created by someone else such as a sketch of an Arduino program. | I can use functional requirements to create an algorithm that I use to plan out a program for a digital solution.  I can create a paper-prototype of my design to show screen transitions  I can independently program a digital solution using a visual programming language  BUT I am still not confident to program using a general purpose programming language | I can independently and confidently create a digital solution that incorporates a microcontroller and use a general programming language  AND I can debug as I build. (correct my own code) | AND I can create a 60 sec video to pitch my innovative design |
| **Digital Technologies**  **Way Of Thinking** | **Design thinking** | **Computational thinking**  **Design thinking** | **Computational thinking** | **Systems thinking** |

As learning progresses, it becomes more complex. SOLO stands for the Structure of the Observed Learning Outcome.  It is a means of classifying learning outcomes in terms of their complexity. It can help differentiate a task to enable students to operate at their level and provide learning tasks that are progressively more challenging.

**For more about SOLO Taxonomy refer to these websites**

[**John Biggs Solo Taxonomy**](http://www.johnbiggs.com.au/academic/solo-taxonomy/)

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[**HookED: Solo Taxonomy**](http://pamhook.com/solo-taxonomy/)