



**Prize Winner**

**Programming, Apps &  
Robotics  
Year 7-8**

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## **Digital Selection – Natural selection simulation**

Digital Selection is a simulation of natural selection that I have created in Godot using .gd script. It is a realistic scenario where creatures are placed into a simulation where they must hunt for food to survive and reproduce. In the simulation, the creatures are put into the first round where they must gather food to survive, they have limited energy, indicated by the battery. Before the battery runs out, they must eat as much food as possible, they can also eat each other. When their battery runs out, those who have no food will die, those with 1 piece of food will survive, for every extra piece of food, it will have a child whose traits will be slightly different. All creatures start with the same traits (mandible size, feeler size and tail size). The higher a trait is, the better it will be and the more energy it will use. The idea is that after many generations, the creatures will evolve to have an adapted balance of traits. Before every simulation, you can set parameters like starting traits, food amounts, how food changes and much more. I created this game with the intention that it would be a fun and interactive way that students could be introduced to the concept of natural selection and evolution.

**Oliver Hawkins**