*How is the topic of evolution currently taught?*

Biology is taught out of a textbook at different levels to both Year 11 and Year 13 students.

Exam specification?

Class size?

Length of time on topic? (how many other topics per year)

*What is the aim of the project?*

To demonstrate the basic principles of evolution in an interesting way preferably with graphics.

*What aspects of evolution should the simulation show?*

The simulation should show how mutations are random events and so do not tend to good or bad adaptations.

The simulation should show how good characteristics often come with limiting affect which causes negative affects e.g. a large exoskeleton would cause an ant to move slower in the environment.

*What should the simulation do?*

The simulation should model a basic environment including regenerating food sources..

The simulation should use ants as the subject through which to show the effects of evolution. Ants should evolve randomly through the species with each species having a set of unique characteristics which define it.

A basic colony structure should be created maybe including only workers and Queens. The whole set of behaviours of the colony are not expected to be model.

*How do you wish to use the tool?*

It needs to be used both in the classroom and at home by students on most types of computers. It should be quick to setup and simple to setup and use. There should be a very shallow learning curve to use the tool in order to maximise its effectiveness for everyone.

To make it interesting for the pupils perhaps the pupils should be able to design their own species at the start and can then watch how it mutates over time and how long their species lasts compared with other pupils.

The pupils should be able to step through the simulation to trace how mutated species play out compared with the original species.

Interview with Dr Sheffron on 18/10/13