

Evolving Butterflies Game

Some animals are brightly coloured to say to potential predators: ‘don’t eat me, I taste bad!’ Some animals that are perfectly tasty copy these colour patterns to avoid being eaten. This is called *Mimicry*. We are going to use the Evolving Butterflies game (www.heliconius.org/evolving_butterflies) developed by the Jiggins Lab in the University of Cambridge Department of Zoology to look at how mimicry might have evolved.

Hypothesis: Before we start, we have to develop a hypothesis that we are going to test with this experiment. We have an inedible specie with a particular colour pattern, and a lot of edible species with a range of colour patterns. What do you think will happen over different amounts of time?

Method: Describe what we are going to do to test this hypothesis

Data:

See over the page for a suggestion on how you could collect data to fill out a table like this. Can you think of another way to collect data? This is your ‘experiment’.

Time reading	Number of edible species looking like inedible species before	Number of edible species looking like inedible species after

Conclusion: What does this tell us about the evolution of mimicry in these butterflies?

We have been looking at a computer simulation. How do you think you might study evolution using real butterflies? Take a look at the website of the Jiggins Lab to find out more about their research into these fascinating butterflies: www.heliconius.org

Data Collection



This is the results screen when you have finished the game. It shows the data that you need to fill out your table. The first piece of data is the time you took – that can be found near the top of the screen.

You then want to count the number of edible species that looked like the poisonous species at the start of the game. Look at the butterflies in the block on the left of the screen – how many have a wing pattern that looks identical to the poisonous species (the larger butterfly near the top of the screen)? We have circled them in blue for this example.

Click through to learn more about the evolution of these butterfly wing patterns.

