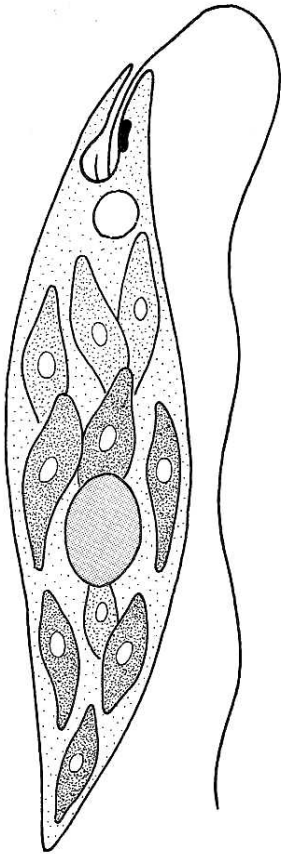


Black Box *Golf*



Instructions

- **PUTT** the ball into the **In** hole
Your ball will be held inside until you press the **black** or **white** button which represent a **success** or **fail**. Even the most elaborate algorithm is not a black box on it's own, but made by people.
- Have a **LOOK** down the microscopes provided.
- If your microscope does not work or you can't see anything visit bit.ly/EuglenaSwim.
You will see tiny algae creatures called *Euglena gracilis* swimming in tiny channels made from the grooves of old vinyl records. This is a lesser known technique used by microbiologists in Lancaster University to observe tiny model organisms, simple creatures that teach biologists about how living things work.
- **OBSERVE** how the creatures behave.
- **ACT** out what you observe with your body.
Use the green Euglena Onesies (one Large, one Small) to help you!
- Get someone playing with you to **JUDGE** how well you do and press the **black** or **white** based on your performance.
Pressing **black** will send you on a more difficult putting course to the next hole. Pressing **white** will send you to the easy route to the next hole!

Thanks for playing!

If you want to know how this was made visit

github.com/cheapjack/BlackBoxGolf

Black Boxing is where a very complicated technology or system (like a computer or a bank) is simplified. In practice much technology we use everyday is more like a box hiding how it works, how it was made and how it might affect other living things: all we know is we put something in and something comes out. Most of the time this doesn't matter but in a complicated world where what we make and how we make it matters maybe we need to wonder what is behind the black boxes we use and what humans and non-humans are part of that.

In this golf hole a classic black box has a space for your decisions based on looking at microscopic algae and the people playing with you.

Euglena gracilis

Euglena is a genus of single celled flagellate eukaryotics. Species of Euglena are found in freshwater and salt water. They are often abundant in quiet inland waters where they may bloom in numbers sufficient to colour the surface of ponds and ditches green.

The species we are looking at *Euglena gracilis* has been used extensively in the laboratory as a model organism. Interestingly they can photosynthesise like plants but can eat and move like animals, with an 'eye pit' to sense light which they move toward, blurring the boundary between plant and animal.

Today you can see them on specially prepared microscope slides, where they swim around tiny microscopic channels. These channels have been made by pouring silicon into the grooves of vinyl records, a cheap way of isolating individual model organisms of this size and is a technique developed by Alexandre Benedetto, a researcher & lecturer at Lancaster University.

Domestic Science are interested in what knowledge & commons can be constituted as domestic science today. Our key approach is not to use science & technology as a subject for our practice but rather to critically take part in it as a culture.

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