

Evolution in a test-tube

Rise of the Wrinkly Spreaders

- Acquiring practical microbiological skills.
- Understanding experimental design and using statistical analyses to test hypotheses.
- Qualitative and quantitative analyses.

Mechanistic Explanation

linking mutation, ecological preference and fitness advantage

Further extensions

for discussion and project work

- *Evolution and Ecology* Selective pressures, changing environments, fitness, competition and co-operation; ecological opportunity, origin and maintenance of diversity, species invasion; from microcosms to macrocosms.
- *Molecular Biology* Structure and function of DNA; from genes to genomes; translation and transcription; mutation, variation, and the link between genotype and phenotype; signal transduction; protein crystal structure, protein function and enzyme activity.
- *Experimentation* Designing further experiments to test adaptive radiation under different conditions and environments; microscopy and time-lapse photography.
- *Science Communication and Awareness* Accessing research literature; interpreting, critiquing and presenting science for different audiences using different media.