Online teaching in STEM
Goals

- Provide same learning opportunities to students as face-to-face
  - Should be evident in assessment results
- Be flexible
  - Stress
  - Difficult to study at home
  - Lost regularity

All my teaching choices were centred around these ideas
Origins and Evolution of Life

- Traditional tutorial
  - Introduction to topic
  - Student exercise
  - Share and wrap-up discussion

- Online formats

  Video

  Audio

  Text
Strategy: Break it down

- Each tutorial can be broken into its smaller components
- **Introduction to topic → Video**
  - Panopto + other means when necessary
- **Activity → Online mode**
  - Student exercise generally centres around answering a question
  - Moved to submission of online response
    - Google Forms
    - Moodle quiz/questionnaire
    - Moodle assignment submission
- **Discussion → Video response**
  - Go through anonymised responses on Panopto
  - See where student understanding is - adapt
Initial reflections on strategy

- Breaking down is necessary
  - Students less likely to sit through long content

- Loss of discussion
  - Cons
    - Students can’t bounce ideas around to improve
  - Pros
    - Students can (and do) re-watch content
    - See more responses than a typical tutorial
    - Students with unsure answers more likely to respond

Final step as Zoom could allow students to discuss further + keep pros
Reflections now

Main issues I was concerned about:

- Actually engaging students
- Did they learn?
- Have their assessments suffered?
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Final changes for future

- Experiment with Zoom for discussion section
- Focus more tutorial components on assignments - particularly poster