Adapting **math**tutor *for the life sciences*

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National Teaching Fellowship Scheme

UNIVERSITY — OF CENTRAL — LANCASHIRE

ebs TRUST

Maths in Biosciences Project

1. Develop video-led, multimedia e-learning resources to support post-GCSE students in the life sciences

   - adapting the **math**tutor model & adopting its technologies

   - using a contextual, problem-based learning model

2. Identify & evaluate strategies for integrating their use in learning environments

3. Investigate their impact on mathematical competencies & transferability of skills

1. Establish the context

- student presented with a case study/scenario (**video documentary, narration & set of notes**)
- at level appropriate for student's current state of knowledge & understanding of biology
- motivate student to *want* to learn the maths

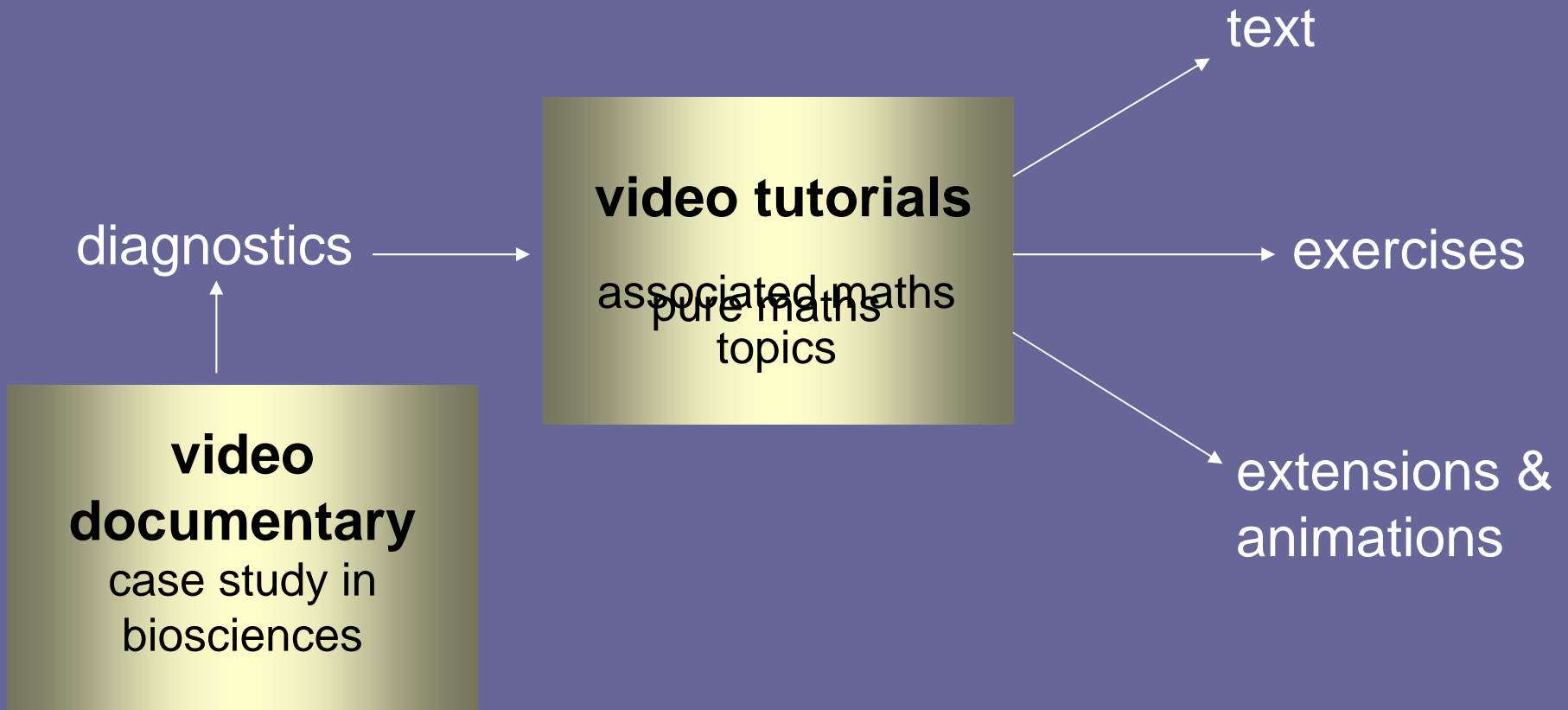# 2. Allow reflection & provide additional information

- student reflects on existing knowledge & skills (biological & mathematical)
- uses **diagnostic maths tests**
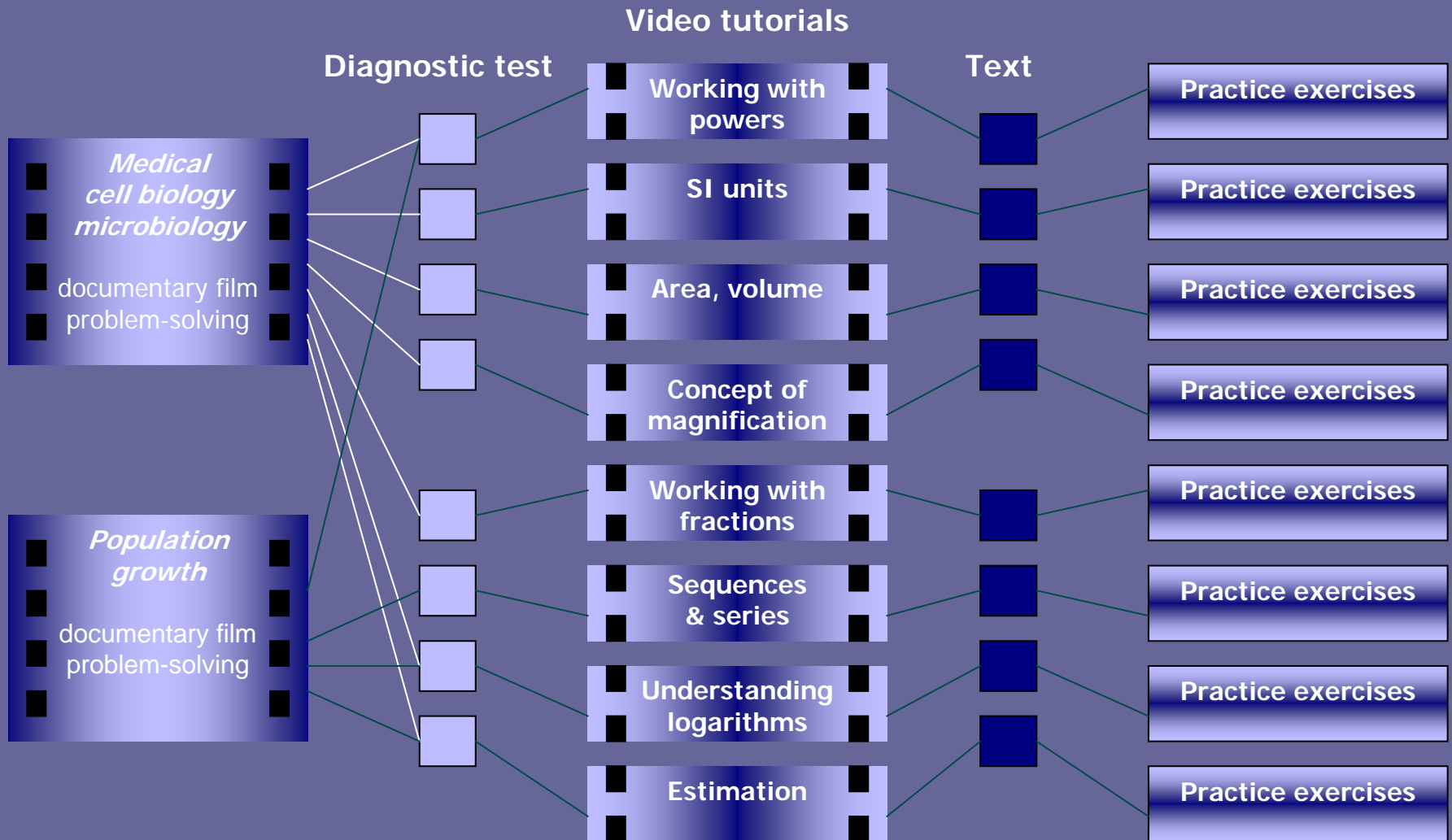- receives additional information & help (**video tutorials & extended notes**)

3. Provide opportunity to handle information & apply to new contexts

- student uses knowledge & skills to solve current problem
- applies knowledge & skills in new contexts (**practice exercises & new case studies**)
- student encouraged to make connections & link theory to practice

Maths in Biosciences

video tutorials

associated maths pure maths topics

diagnostics →

video documentary
case study in biosciences

text

exercises

extensions & animations

Maths in Biosciences Pilot

Collaborations & Funding

- EBS Trust (& its associates)

- 13 colleagues (>80 subscribers to Biomaths list)
  - HE & secondary education (with links to FE)

- HE Academy's Centre for Bioscience

- HEFCE (NTFS)

- Exploring expressions of interest from other funding organisations

www.jiscmail.ac.uk/lists/biomaths-ed.html

www.bioscience.heacademy.ac.uk/network/sigs/numeracy/index.htm