Video Assignments: A Powerful Way to Introduce Creativity and Fun into your Program!

A Physics Education Story

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Types of video assignments we have tried to date

**Year 1**: demonstrate and explain a piece of maths or physics you have learned this year
(4-week deadline, team or individual)

**Year 2**: demonstrate and explain a specific physics phenomenon
(whole semester project, team)

**Year 2**: produce a film which demonstrates the contraption you built in a practical session
(one week to produce the video after the live session, team)

**MSc**: present a business case for an outreach project grant, propose a research plan
(approximately four weeks in parallel with supporting activities, team or individual)
Why do this? Here are some academic reasons...

- Allows students to be **creative!**

- By its nature a **fun** thing to do – very good engagement with this type of assignment

- More practice of **communication skills** – a lot of this is the same (structure, level, professional presentation etc.), as essays/presentations, but the different medium makes it feel refreshing

- **Authentic** assessment, **authentic** teamwork

**Not always many opportunities for this in physics!**
Why do this? Here is a staff workload and quality perspective...

- Everything is **archived online**, you can take your time to mark, and have more moderation than with live presentations

- No problems with scheduling live sessions, including staffing/rooms

- Generates **very useful resources** for teaching/outreach/open days etc. (remember to ask for permission!)

- Everything is available on LC for external examiners / accrediting bodies
What do you need to provide?

Clearly set out the requirements of the task:
- Define the audience
- Specify the topic**
- Assessment criteria/ marks assigned
- Maximum length of video
- Acceptable file formats
- Deadline and clear instructions for uploading

That’s all! 😊

No need to provide equipment or instructions on how to make a video

** not too broad a scope or the students will take forever to decide what to do…!
Recommendation: use Panopto!

Use Panopto via Learning Central for the submission of videos

Any videos can be uploaded, they do not have to be produced or edited through Panopto:
- Students cannot see each others’ submitted work
- You do not have to worry about backing up
- Easy to make available to other staff for marking and moderating

Solving this technical problem was the last obstacle to doing this (THANKS, Dig-Ed team!)
What can you expect?

Very slick talking head videos interspersed with imaginative use of diagrams, cartoons, animations, costume drama, annotated films, maybe even sock puppets!
Recordings of scrap-heap contraptions...

- Added a whole extra dimension to the task
- Allowed other students to be doing something useful while the contraption was being built
- Required students to identify exactly where their contraption was doing the things we had requested, which meant they really had to think about it
Bringing creativity back into the MSc core syllabus

- A core MSc group assignment is to propose an education outreach project and pitch it in a video

- Assessment criteria focussed on formal justification, project planning, and contingencies

- In 2022, an MSc group proposed a series of light-hearted educational video shorts and filmed an superbly-written and filmed pilot

- The submission **failed** since it did not meet the assessment requirements 😞

- The assessment has now been completely re-worked to allow these kinds of submissions

- Everyone wins! 😊

Credit: A. Bennett, D. Crackett, Y. Huang, R. Müller, K. Wong (2022)
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