
How to make a good video

We will not require you to make an exhibitor video for the 2019 Summer Science Exhibition, however in case you wish to create digital content around your research, we've compiled some useful guidance below.

A good video will tell your story and make people excited about your science. This is a challenge in the competitive marketplace of YouTube which has around 100 hours of video uploaded every minute and where over 6 billion hours of video are watched every month. However, YouTube has more than 1 billion visitors each month, which makes it an ideal place to achieve views and reach a bigger public audience.

A good video about your science can appeal to popular science editors, raise awareness about your work in the mainstream and online media, and enhance engagement with the general public and early-career/next-generation scientists who have grown up as digital natives. But – you must tell a good story.

1. The brief: telling your story

Before you write a brief consider what makes a good story:

- Why is your science important to people?
- What would people find surprising, mysterious or awesome about your work?
- Is the content relatable to the lives of everyday people as well as to scientists?
- What is the emotional value or reward for watching your video?

Try to remember that 'why' often has more impact than 'who' or 'what' in your story. Focus on 'why' to highlight the big ideas behind the science, such as 'Why does it matter?', 'Why is it interesting?' and 'What don't we know about this and why?'

Your story needs to appeal to different audiences. This might sound tricky but try to remember that most people are drawn to the pleasure of finding things out.

Scientists are naturally curious people and curiosity is universally relatable and engaging whether the viewer is a Royal Society Fellow, fellow researcher, science-interested layperson or school pupil.

2. Format and length

Think about the format for your video story. Watching a talking head for five minutes is a lot to ask. In fact, watching any video for a full five minutes is a lot to ask of anyone on YouTube. Think about the average time it takes to watch a television advert and how the advertisers convey an overall concept in 30 seconds. The ideal length for a promotional video is three minutes. Remember, we might like to share these on Facebook where the average video may be viewed for only one minute!

Also, include action shots, attractive motion graphics and exciting research images with a voiceover in the video to make your story interesting to watch.

3. Producing your video

People have become accustomed to seeing premium video content on YouTube and the internet whether from school and college students or world-leading brands. Videos that are poorly produced and edited don't invite confidence in the message being conveyed. You could commission a professional videographer to film, produce and edit your video, but if you are making it yourself then remember these things:

- **Camera:** Buy, borrow or rent a camera that can record 1080p HD with unlimited recording time; other useful features include a remote control and a mic in socket. Use a tripod to ensure the camera is steady, the subject is in focus, and any movement is intentional and smooth. Keep camera movements (panning and zooming) to a minimum.
- **Audio:** If your video is difficult to hear then the viewer will give up. All speech should be clearly audible. Reduce background noise and interference as much as possible. Audio should be free from a hum or buzz – make sure you place the microphone close to the speaker.
- **Lighting:** Videos should be properly lit, make sure that your subject isn't in shadow or overexposed. Avoid light sources behind the subject, such as a large window or sunlit backgrounds. If you can't use additional lighting and your subject is too dark, change the shot.
- **Environment:** Try to film interviews in clean and not distracting locations, avoiding ugly/cluttered walls or shelves. Alternatively, throw the background out of focus by setting the interviewee several feet in front of it.
- **For interview-style videos, be mindful of the following advice:**
 - The composition of the shot is important. The subject should be in the left or right-hand third of the frame, looking across the frame to the farthest edge.
 - Your interviewee should face slightly away from the camera (but not so much as to distract the viewer), speaking to the interviewer who should be sitting immediately beside the camera.
 - The speaker should always address the interviewer rather than the camera.
 - Prepare the questions that will be asked in advance. Make sure 'open' questions are asked and not 'closed' ones which require only a yes-no response. Direct your interviewee to answer questions with complete thoughts, so "how long have you worked in the lab?" is answered with "I have worked in the lab for four years" rather than "four years".
 - Don't be afraid to use close-ups. Filling the frame with the speaker can often look more energetic and interesting than wide-angle shots where the speaker is only a small part of the composition. Be sensitive to the movements of your subject however; if they move around a lot and go out of shot, a close-up may not be appropriate.

- Both interviewer and interviewee should talk conversationally and avoid jargon – “make everything as simple as possible, but no simpler”. People relate better to conversational language that is easy to understand.
- **Editing:** Do invest in professional video editing software such as Final Cut Pro or Adobe Premiere. Films shouldn't be longer than they need to be, ideally just a few minutes long. Don't forget that presentation is important: use a title card to introduce the video and credits card to close the video, and include subtitles when relevant to introduce interviewees or a location.

4. Promoting your video

A high-quality thumbnail image for your video is vital to its success. The thumbnail image is a huge signal to the potential viewer about the content and value of the video, try to use compelling images from your research combined with some text.

After your video has been uploaded to YouTube, spread the word on social media (Twitter, Facebook, Google+, LinkedIn etc). Ask family, friends and colleagues (including your institution) to do the same.

5. Useful examples of popular science videos

These YouTube channels are among the most popularly watched science videos online.

TED-ed https://www.youtube.com/channel/UCsooa4yRKGN_zEE8iknqhZA

In a Nutshell <https://www.youtube.com/user/Kurzgesagt>

Vsauce <https://www.youtube.com/channel/UC6nSFpj9HTCZ5t-N3Rm3-HA>

Veritasium <https://www.youtube.com/channel/UCHnyfMqiRRG1u-2MsSQLbXA>

Numberphile <https://www.youtube.com/channel/UCoxcjg-8xIDTYp3uz647V5A>

Scott Manley <https://www.youtube.com/channel/UCxzC4EnglsMrPmbm6Nxvb-A>

Backyard Scientist <https://www.youtube.com/user/TheBackyardScientist>

ASAPScience https://www.youtube.com/channel/UCC552Sd-3nyi_tk2BudLUzA

Oxford Sparks <https://www.youtube.com/user/OxfordSparks>

Minute Physics <https://www.youtube.com/channel/UCUHW94eEFW7hkUMVaZz4eDg>

Periodic Videos <https://www.youtube.com/user/periodicvideos>