Hello everyone. My name is Valerie and I am the Outreach and Engagement Coordinator for Future Energy Systems. My job is to connect the community with the work that our researchers do. Prior to COVID-19, this meant lab tours, public lectures, classroom visits and more. Then everything changed as we could no longer connect with our audience in person.

What to do? Within two weeks, we launched our Learning Page, which hosts educational content for a wide audience from lab tours, mini research talks, energy themed story times to at-home experiments and much more.

The problem was prior to COVID, I had never made a video! It was a steep learning curve in those first few weeks and honestly still is. Below I want to share some tips that I have learned.

I use Adobe Premiere Pro to make my videos, however many of the tips are relevant for other programs.
1. **YouTube is your friend.**

When I started making videos, I had no previous experience or training and neither did the people on my team. So what could I do? YouTube! I mean this in two ways. First YouTube is a great place to watch other content, find what you like, what may work for your type of content and more. Second, for most video editing programs there are endless training videos on YouTube. Make use of the experiences of people who have done this before.

2. **Decide your video structure early on.**

It’s important to decide your video format early on, especially if you want all the videos to follow the same style. In videos for Future Energy Systems ([here’s an example](#)), I use the following format:

1. Intro with logo and music
2. Video
3. Outro that encourages viewers to watch our other videos
4. Logo accompanied by same music as beginning

This provides consistent branding for all of the videos and an anchor to link them all together.

3. **Know what media you can use.**

We all love music and images in videos; they’re what make a video interesting! However, it’s important to make sure that you’re allowed to use the content. There are many websites that have open access images that can be used, such as [Unsplash](https://unsplash.com) or [Pixabay](https://pixabay.com). You can also change the search criteria on Google Images to only find images open for use. Similarly with music, you can search the YouTube audio library for free music. Additionally, if you’re using images of other people or images taken by other people, make sure they sign a waiver.

4. **Watch where you’re filming.**

It matters where you film. First, consider the lighting of your filming location. Do you have a window behind you or on one side of you? This may cause you to be backlit or have a lot of shadows. I filmed all of my story times with a window behind me and had to turn on every light in my apartment to balance out the lighting so I would not be backlit. On the other hand,
do you have a window in front of you? This can provide great lighting, however it can be too bright or cause reflections (still a problem I have with my glasses).

Secondly, check what’s in the background. For one video I edited, I realized in the background there was a blackboard with phone numbers. It’s possible for someone skilled to edit it out, but in my case I had to ask a student to re-film. You may just not want people to see your personal belongings, so make sure you are comfortable with whatever is behind you. Everyone has a different opinion on how personal your background should be – that is entirely up to you.

Finally, on an audio note, make sure that you are filming in a quiet location. I live by a hospital and frequently have to stop filming until the sirens go away. Whenever I film, I make sure to shut all the windows, turn off the fans, make sure my phone is on silent. You can edit out the background audio, however it is best to produce a video that requires the least amount of editing, especially when you have no idea what you are doing!

5. Create visual variation.

One of the challenges of filming alone is that you have to set up the camera in a stationary position. There is nothing wrong with this, however if you want to add some visual variation, there are a few ways.

1. You can add layers on top of the video, as you see below where I added Renewable and Non-renewable to match what I was saying. It would pop up as I said the options. You can also place images on top of the video (either covering the entire screen or only part of the screen), as you can see in this video.
2. You can film the same video at two different angles (either with two cameras or just film twice) and splice them together for the final product.

A benefit of adding visual variation is that it can deal with filming issues. Once when I was filming an at home experiment, I didn’t realize one section of the footage was blurry. I could have tried to re-film but it would have been obvious that it was done at a different time. So I placed images over the video, images that made sense of course, but it meant instead of re-filming the entire video, I just had to find a couple relevant pictures.

6. Storyboarding is helpful.

A storyboard is a breakdown of the sequences in your video. For simple videos, such as our Ask An Energy Expert series, I didn’t need a storyboard as it tended to be one shot. However, for longer videos storyboarding has been helpful to determine when I need different camera angles or when I want to insert a picture or speed up a sequence. As you can see in this video about germination, I filmed over multiple days, multiple angles and had a variety of images that were placed over the video. Prior to filming, I laid out the story so that I knew when I was talking to the camera and when I was off camera (with images over the video). For the sections when I was off camera, I still filmed in the same location so that the audio didn’t sound different.

One of the benefits of storyboarding is that you can break your shoot into smaller bits. You don’t have to memorize a 10 minute speech, you can memorize small chunks at a time and put it all together after. With the germination video, it was filmed in at least 5 separate pieces and I knew in advance where I could stop and still create a smooth completed video.

7. Avoid changes in conditions.

If you’re filming over multiple days or multiple times a day, your final footage is going to show differences, especially if you are filming using natural light. One day, I filmed a video in the morning and had to re-film a small section in the afternoon. Between the two videos, the lighting and background audio varied. When I put the final video together, I was able to edit so that the differences were not as obvious. However this took a lot of time and was not perfect. One way to deal with this is to avoid using natural light, use lighting that you can control, and to have a soundproofed space. This may not always be possible (it’s not for me), so I try to film in shorter periods of time so that the conditions are relatively similar across the whole video. Finally, in some cases, you may just have to say that it’s okay. This is still a
learning process for all of us and you may not be able to fix everything. When I go back and look at the videos I created in April compared to now, I can see how much I’ve learned.

8. Get comfortable with the awkward.

To edit videos, you have to watch videos. Obvious, right? However, this was tough for me at the beginning when I was the person on camera as I hate watching myself on video. Unfortunately there is no way around this. You’re going to need to watch the videos multiple times to edit it properly. I promise, you do not look as awkward and uncomfortable as you think you do. Ask someone you trust to take a look at your video once you’re done too. It gets easier with time!

9. As Ms. Frizzle said, make mistakes!

No matter what program you are using for video editing, there are countless transitions, effects, graphics, etc. With the same footage, you could make multiple entirely different videos. Take advantage of that! Try different tools and see what you like. Some may end in disaster – I definitely once turned a speaker into a chipmunk by altering the audio speed. But you will learn new things that work, so try everything at least once.

10. Don’t move your footage.

This may seem like a minor issue, but for the program I use to edit my videos, the footage is not stored in the program. It remains housed wherever you placed it. This means that if I move the file or change the file name, the link is broken in the editing program. In some cases you can relink, but in some cases I haven’t been able to. Make sure that you follow a labelling format and storage system that works for you right from the beginning.

These are my top 10 tips for video production when you have no idea what you are doing! I hope these tips can help you on your video editing journey. Good luck!

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