Podcasting 101
How to get started

Karuna Meda

Science Writer

Why is science communication important?
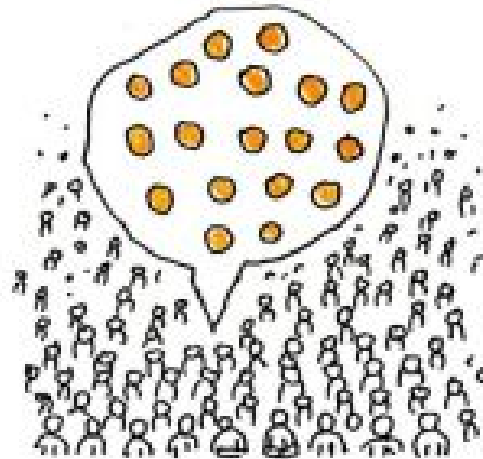
Engage

Educate

Break
stereotypes

Collaborate

Why tell a science or research story with a podcast?

- Make science stories come to life

- More creative and powerful storytelling

- Bring out human side of science and research

- Accessibility – you can listen to it wherever you are!

What we'll cover today

- The Process

  - What you'll need to record and transcribe

  - How to build a good story and script

  - How to produce an episode

  - Where to find free music

The Process

1. Identify a subject
2. Develop questions
3. Interview & Transcribe
4. Build a story & script
5. Record narration
6. Produce
7. Package & Distribute

Step 1: Identify a subject

Ask yourself:

- What am I genuinely interested in?

- Who is my target audience?

Try…

- Writing a mission statement

- Taking advantage of your local network

- Listening to other podcasts, TEDx talks

- Sending many, many, many emails

Step 2: Develop questions

- Do some research

- Think about the story

- Be flexible

Step 2: Develop questions

- Could you state your name, title, and institution?

- Summarize what you do in one or two sentences.

- Describe the central concept/finding/discovery/invention/etc.

- Where did the idea come from?

- What are some applications of your work?

- What do you find most exciting about it, and why?

- How did you get to where you are now? What inspired you to become a scientist?

- What would you be doing if you weren't a scientist?

What you'll need to record

Smart phone apps:
- Voice Memo (iOS)
- Rev (iOS, Android)


Field Recorders:
- Sony PCM-M10

Step 3: The interview

- Hold the recording device close

- Open with a throw-away question – "How is your day going?" or "What did you eat for breakfast?"

- React silently, but enthusiastically

- Don't just read your question list (it's a conversation!)

- Record until you've totally left the area

- Ask them to walk you through the lab. Keep the recorder on!

Step 3: Practice Interviewing

For Today:

- Could you state your name, title, and where you work?

- Summarize what you do in 1-2 sentences.

- How did you get interested in your research?

Step 3: Transcribe your interview
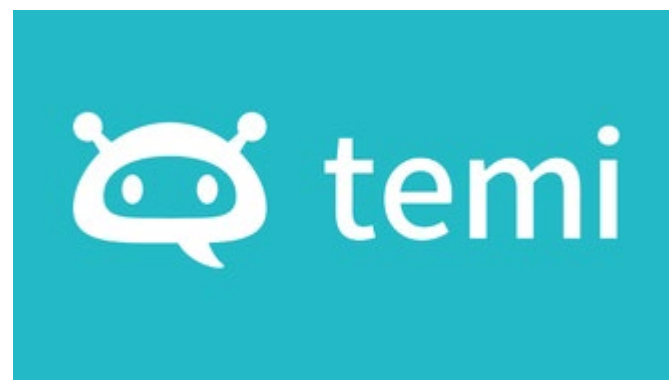
Step 3: What the transcript looks like…

interview
Quality: High ⓘ
← Dashboard

Last saved 4 minutes ago   […]   **Share**

00:00 ⏱ Offset   **48:31**   59:05

▶ Play   ↺ Back 5s   1x Speed   🔊 Volume

NOTES
Write your notes here

online modules and all these inservice true, all these training, but you know, there to be trained about what words to use to be trained about how to approach and stand up and be an ally. Cause I think sometimes you think it's intuitive, but it's not intuitive. Rectangular Snip

Speaker 1 ▸ 48:25

Yeah. Yeah. And is that something that is happening at the level of trainees that kind of like how are medical students, do you think medical students now are more equipped to deal with those kinds of situations?

Speaker 2 ▸ 48:38

You know, I do think like there's this, you know, this tolerance and people put things out on social media and they're speaking up and they just had an intercession. And that's what I talked about with Jeff on implicit bias, unconscious bias, implicit bias. So I think there's more discussion of it and training of it. Um, so they may recognize it, they may speak up, but ultimately the same power structures and hierarchies in place. Like that's not, that hasn't been broken down.

THIS IS YOUR "TAPE"

Step 3: Practice transcribing....

For today: Create an account or download the app

Step 4: Build a Story and Script

What is a story?

Step 4: Building a story

A STORY: Something happens. Something else happens. Another thing might also happen. We reflect on it.

NOT A STORY: Here is a thing that is known to happen. Isn't that interesting?

Step 4: Building a story

A STORY: Lisa poured some cells into a dish. Under a laser, the cells glowed green. Her experiment worked and she was overjoyed.

NOT A STORY: Fluorescent proteins can be used to mark cells. Here are ten uses for fluorescent marker proteins.

action/
conflict

A STORY: <u>Lisa poured some cells into a dish</u>. Under a laser, the cells glowed green. Her experiment worked and she was overjoyed.

resolution

A STORY: Lisa poured some cells into a dish. <u>Under a laser, the cells glowed green.</u> Her experiment worked and she was overjoyed.

A STORY: Lisa poured some cells into a dish. Under a laser, the cells glowed green. <u>Her experiment worked and she was overjoyed.</u>
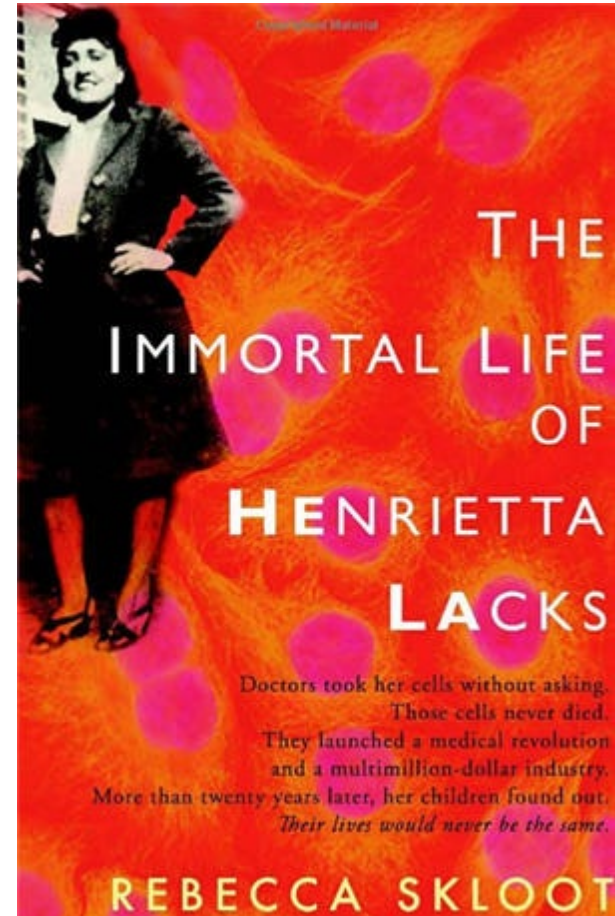
reflection

GOOD
Building a story

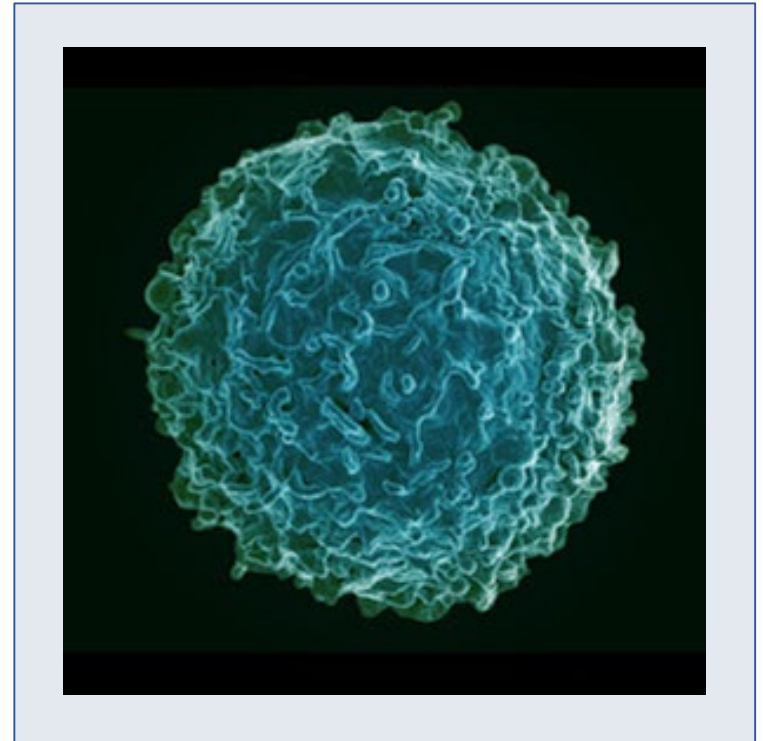Interesting stories have...

Setting
Characters
Action
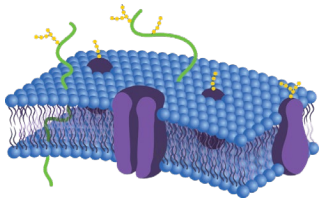Surprise

...a plot

Step 4: Building a story

GOOD

SCIENCE

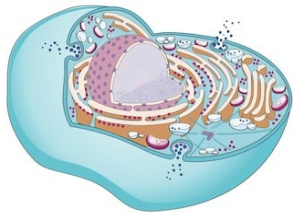But what about when there aren't "characters"?

ANALOGIES ARE YOUR FRIEND
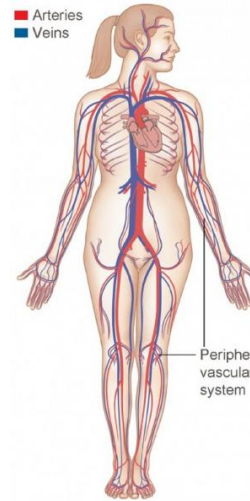
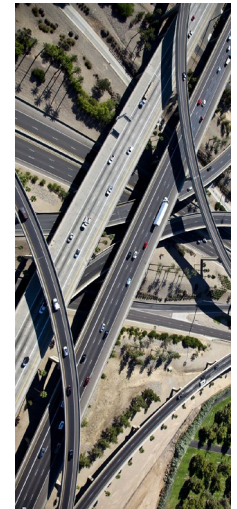# Simplifying your message: Use Analogies and Imagery

is like

is like

are like

Simplify your message: decode jargon

Terms that have different meanings for scientists and the public		
Scientific term	**Public meaning**	**Better choice**
enhance	improve	intensify, increase
aerosol	spray can	tiny atmospheric particle
positive trend	good trend	upward trend
positive feedback	good response, praise	vicious cycle, self-reinforcing cycle
theory	hunch, speculation	scientific understanding
uncertainty	ignorance	range
error	mistake, wrong, incorrect	difference from exact true number
bias	distortion, political motive	offset from an observation
sign	indication, astrological sign	plus or minus sign
values	ethics, monetary value	numbers, quantity
manipulation	illicit tampering	scientific data processing
scheme	devious plot	systematic plan
anomaly	abnormal occurrence	change from long-term average

Source: Physics Today, October 2011, Resource: Zimmer's Index of banned words
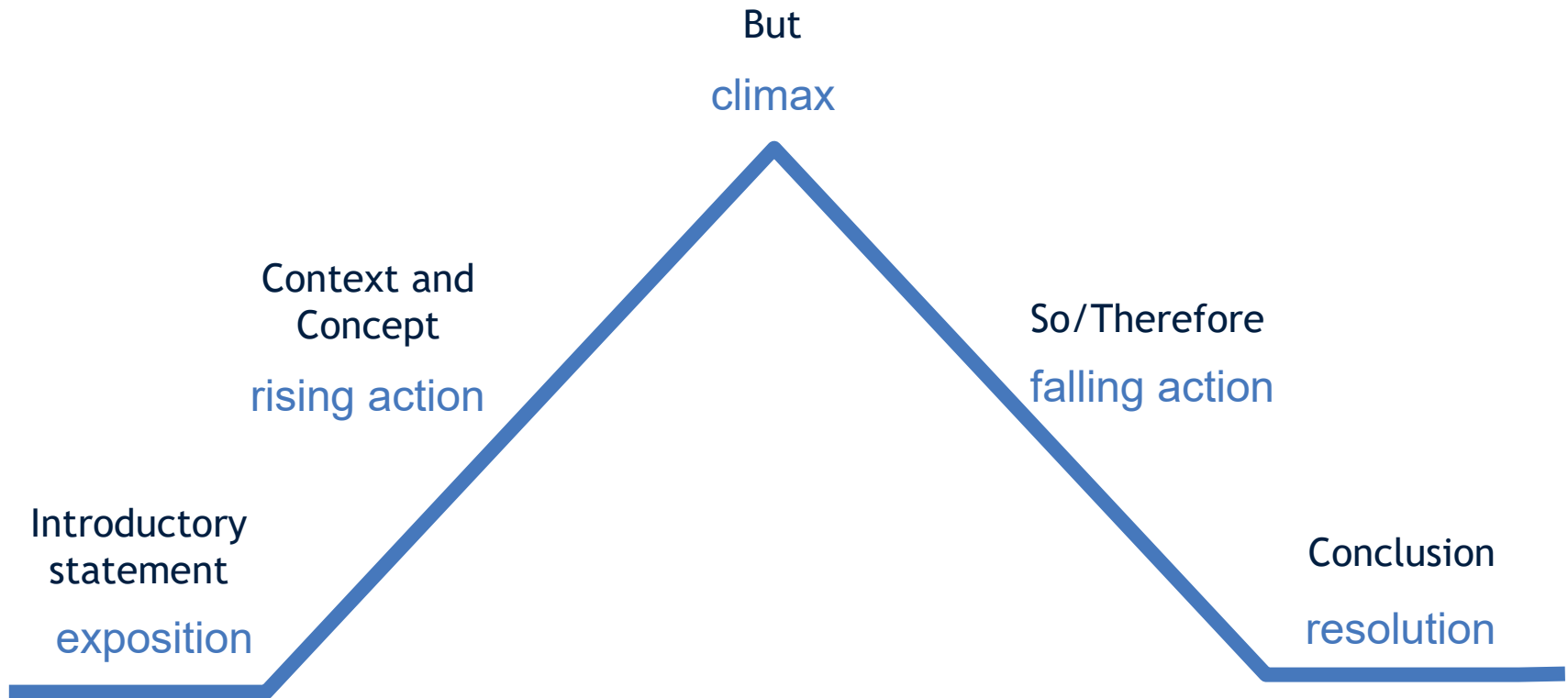
Simplifying your message: use shorter words

TABLE 3. *Examples of using shorter, more common words*

Long word	Short word(s)	Long word	Short word(s)
approximately	about	necessary	needed
attempt	try	numerous	many
complicated	complex	opportunity	chance
concerning	about	optimal	best
consequently	thus	perform	do
construct	build	possess	have; own
currently	now	previously	before
demonstrate	show	primarily	mainly

The story arc

But

climax

Context and
Concept

rising action

So/Therefore

falling action

Introductory
statement

exposition

Conclusion

resolution

Step 4: Putting your script together....

1. Go through transcript

2. Highlight interesting quotes

3. Outline your story arc

    ➢ Set context, introduce suspense, resolve it,

       reflect

4. Assemble a rough draft of the script and narration

What a rough script looks like…

[fade in music]

Narrator: *In our brain…thousands of brain cells, called neurons, are talking to each other all the time…this communication is essential for everything we do…from walking, to talking, to perceiving emotions…remembering things…everything. How exactly do neurons communicate with each other?*

TAPE: 1:49 to 2:10 [fade out] (electrical to chemical)

Narrator: *In this episode, we talk to ▮▮▮▮▮▮▮▮▮, Assistant Professor in the Psychiatry Department here at ▮▮▮▮▮▮▮▮▮s lab studies the complex machinery that underlies communication in the brain…*

TAPE: 2:20 to 2:40 [fade out, fade in music] (description of synaptic transmission)

These brain chemicals or neurotransmitters that ▮▮▮▮ is talking about come in a variety of flavors…each neurotransmitter has a specific function…and there is a complex machinery that regulates when and how these neurotransmitters are released into the synapse…

TAPE: 2:41 to 3:35 (description of vesicles, recycling of neurotransmitters).

Narrator: *OK, let's do a quick recap* [sound effect]

Step 4: Build a Story and Script

For today, based on your short interview:

- Identify jargon that you may need to decode

- Write a two sentence introduction

- Swap it with your neighbor/interviewee

Step 5: Record narration

- Familiarize yourself with the script

- Record in a room with good insulation

- Loosen up a little bit

- Sit up straight

- Try to avoid uptalk

- Imagine you're chatting with a friend

- Don't be afraid to pause or ad lib

- You may not sound as expressive as you think you do!
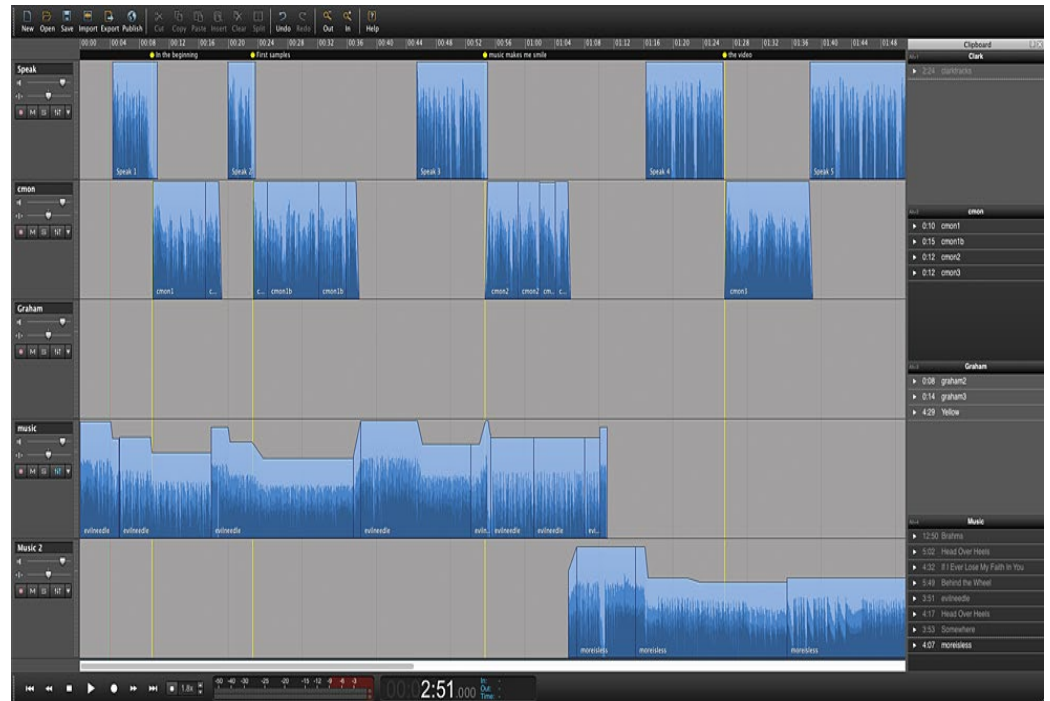
Step 6: Produce

Hindenburg https://hindenburg.com/products/hindenburg-trial
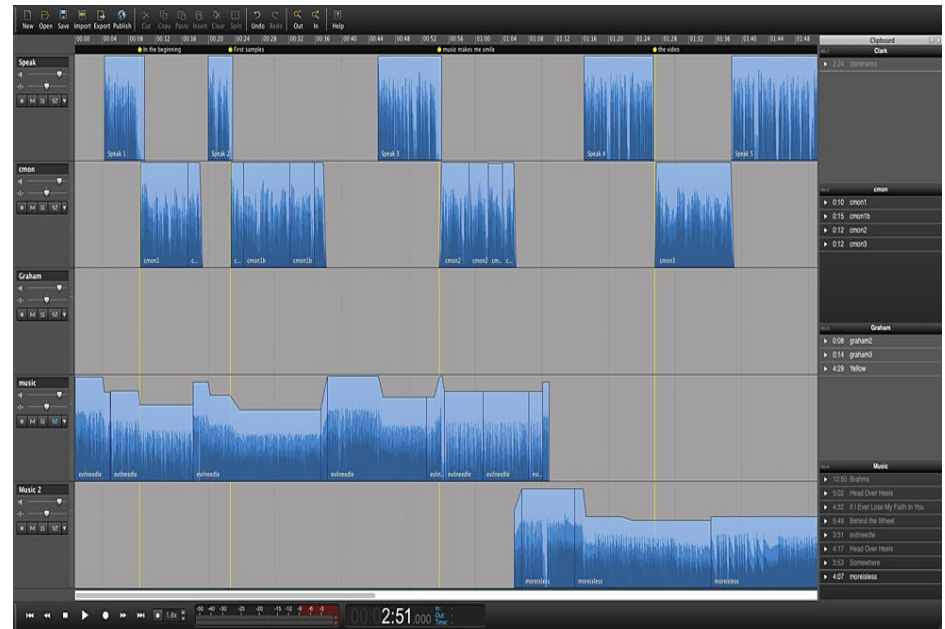
Step 6: Produce

- Open .wav in Hindenburg

- Make sure you have all of your "Tape" clips, "Narration" clips and "Music" clips saved as .wavs.

- Drag and drop everything into the Hindenburg "Clipboard" in order, keeping the voices in separate tracks

- Start editing!

Step 6: Produce – Hindenburg Basics

- Main functions:
  - Click and drag left and right to change length of the clip
  - Up and down to change volume
  - Grab the top corners to make it fade in or out

Step 6: Produce

Learn More:

- Video tutorials: https://hindenburg.com/support/tutorials

- Online forum for technical issues:

  https://hindenburg.com/support/

Step 6: Produce - Music and sound effects

- Only use music that has already been cleared for public use

- You can find public music at:

www.freemusicarchive.com likely has the largest collection
https://www.youtube.com/audiolibrary/music
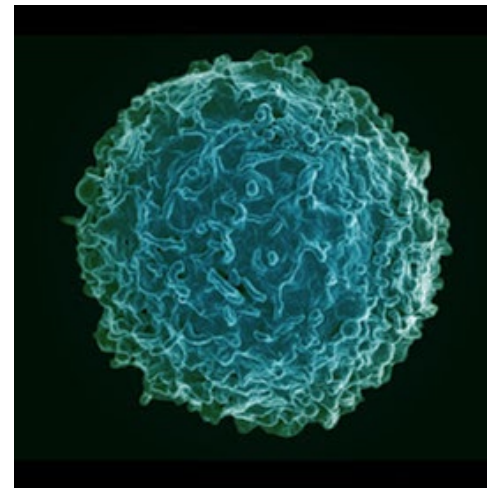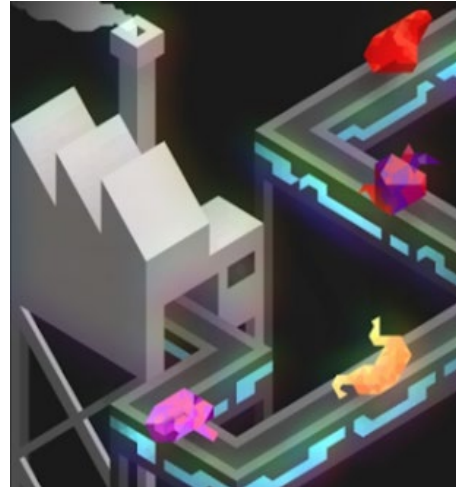https://musopen.org/ for public domain **classical music**

- There should be some indication of "**public domain**" or "creative commons license 0" (**CC0**) _IF_ there is no attribution necessary.

- Sounds effects: https://freesound.org/

Step 7: Package & Distribute

It still needs...

- A title

- A brief description

- Cover art

- Don't forget to record credits!

Step 6: Package & Distribute

- SoundCloud

  - https://soundcloud.com/
    https://soundcloud.com/for/podcasting

- Podomatic

  - https://www.podomatic.com/

Your final product!

The Process

1. Identify a subject

2. Develop questions

3. Interview & Transcribe

4. Build a story & script

5. Record narration

6. Produce

7. Package & Distribute

ANY QUESTIONS?