

FRANKENSTEIN²⁰⁰

Museum Partner Workshop

October 19, 2017

Workshop goals

1. Introduce Frankenstein200 project elements
2. Review museum partner requirements and optional activities
3. Discuss the plotline and important themes of Mary Shelley's Frankenstein
4. Develop confidence to facilitate Frankenstein200 kit activities
5. Develop confidence to train museum staff and volunteers
6. Discuss ideas for integrating Frankenstein200 activities into museum programming
7. Discuss strategies for adapting the activities for different audiences

Agenda

- 9:00am Welcome and introduction
- 10:00am Frankenstein200 kit
- 12:00pm Lunch and discussion
- 1:00pm Planning and implementation
- 1:45pm Wrap up
- 2:00pm Adjourn



MARY SHELLEY'S FRANKENSTEIN

Welcome!

- Introductions
- Icebreaker
- Main events in the Frankenstein story





FRANKENSTEIN200

Frankenstein200 project

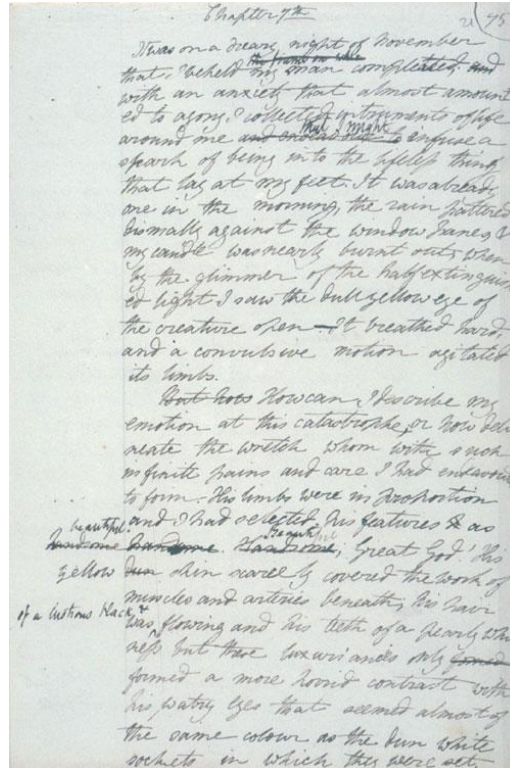
Celebrating the 200th anniversary of Mary Shelley's *Frankenstein!*

Over 50 museums, libraries, and other organizations across the United States are participating.

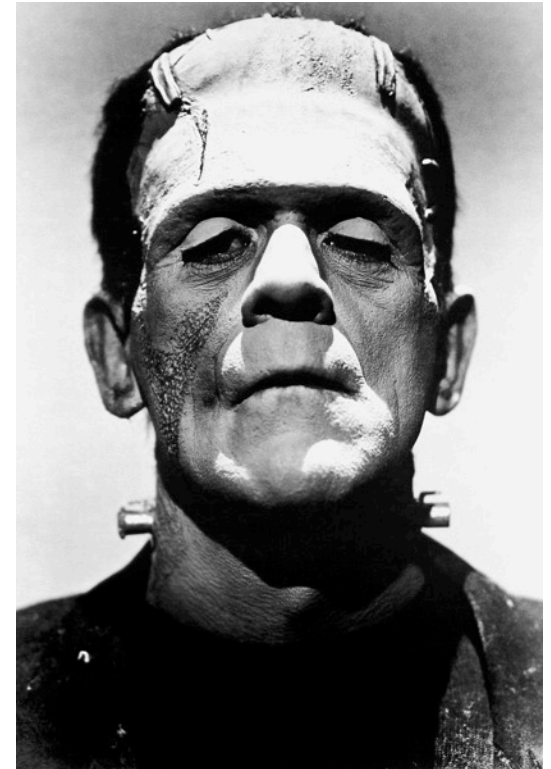
Mary Shelley's *Frankenstein*



Mary Shelley



Draft of *Frankenstein*



Boris Karloff as
Frankenstein's creature

Opportunities for learning

Practice 21st century skills such as creativity and collaboration

Explore emerging technologies such as artificial intelligence, robotics, synthetic biology, and human enhancement

Reflect on responsible innovation through questions that are easy to understand but hard to answer

Key questions

What is life?

Why do we create?

What are our responsibilities as creators, scientists, and engineers?

Transmedia project



Studying learning across:

- Hands-on activities
- Alternate reality game
- DIY activities and contests

Museum programming



L.I.F.E.



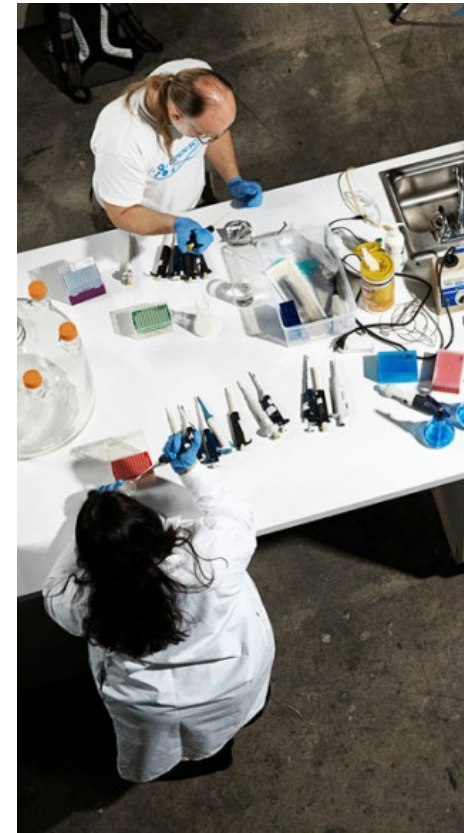
A portal from real world museums to the the fictional world of *Frankenstein*



DIY activities

Instructables contest

Transmedia connections





ACTIVITY KIT

Frankenstein200 kits

Hands-on activities

- Automata
- Battery Stack
- Dough Creature
- Frankentoy
- Monster Mask
- Scribble Bot
- Spark of Life

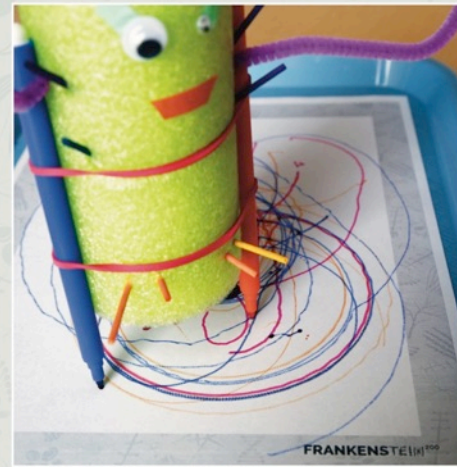


Creativity and responsible innovation

Automata



Scribble Bot

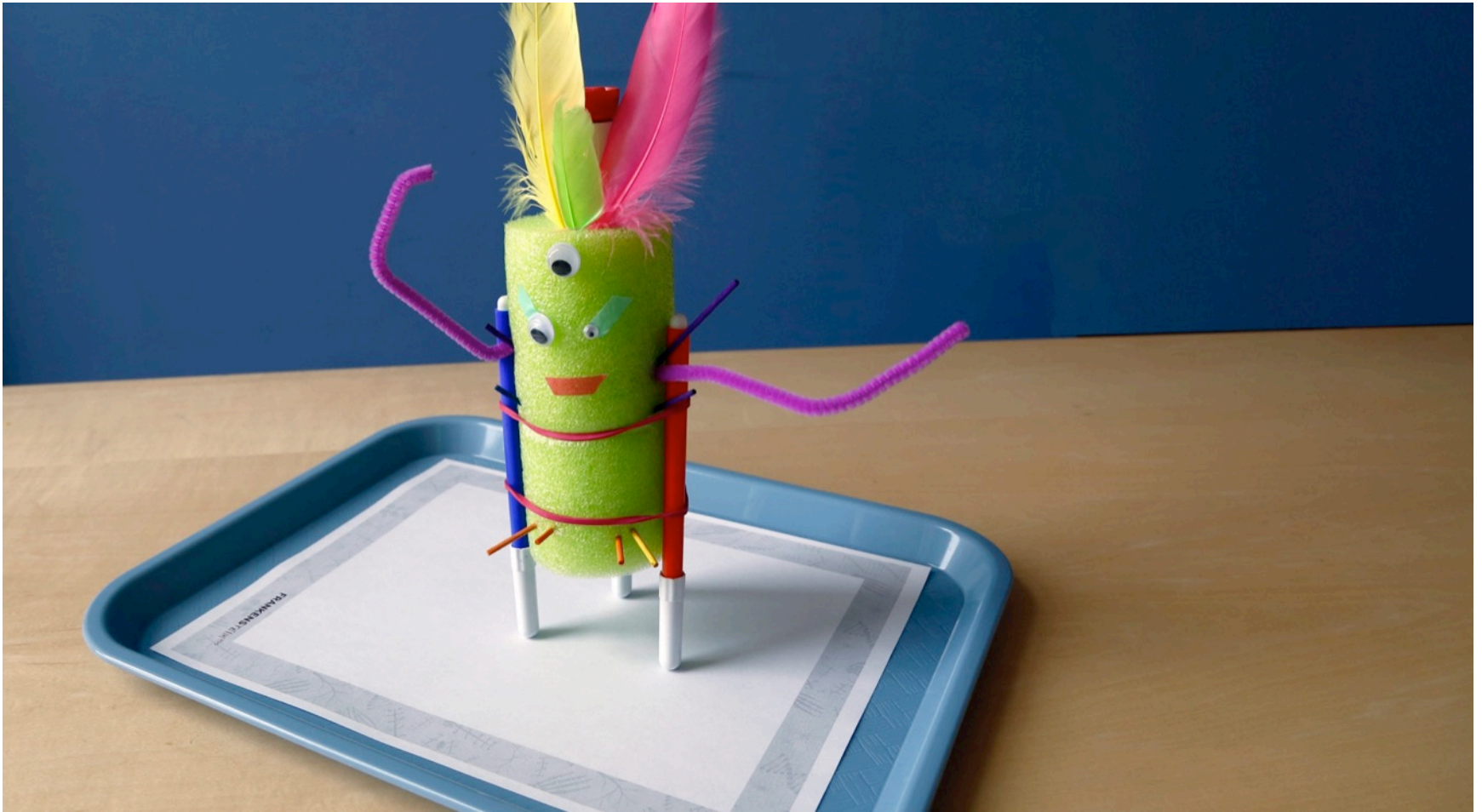


Artificial intelligence and robotics

Automata



Scribble Bot



Creativity and responsible innovation

Dough Creature



Frankentoy



Monster Mask



Genetic engineering and synthetic biology

Dough Creature



Frankentoy

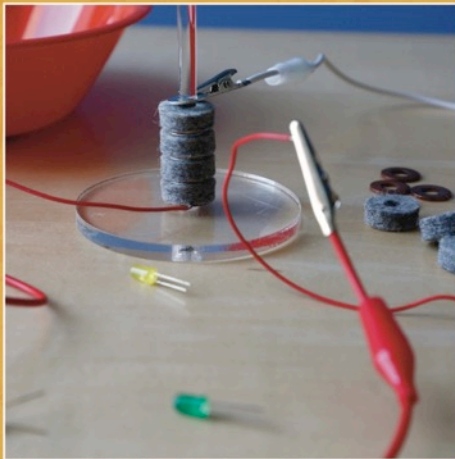


Monster Mask

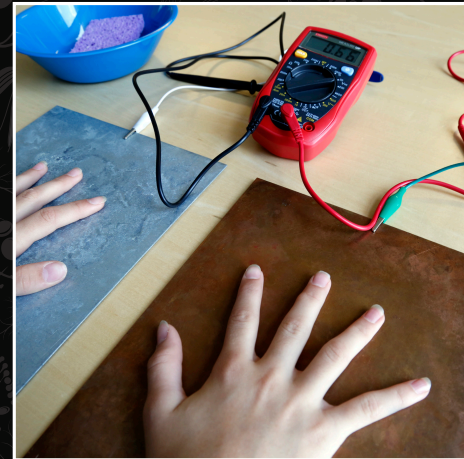


Scientific exploration and responsible innovation

Battery Stack

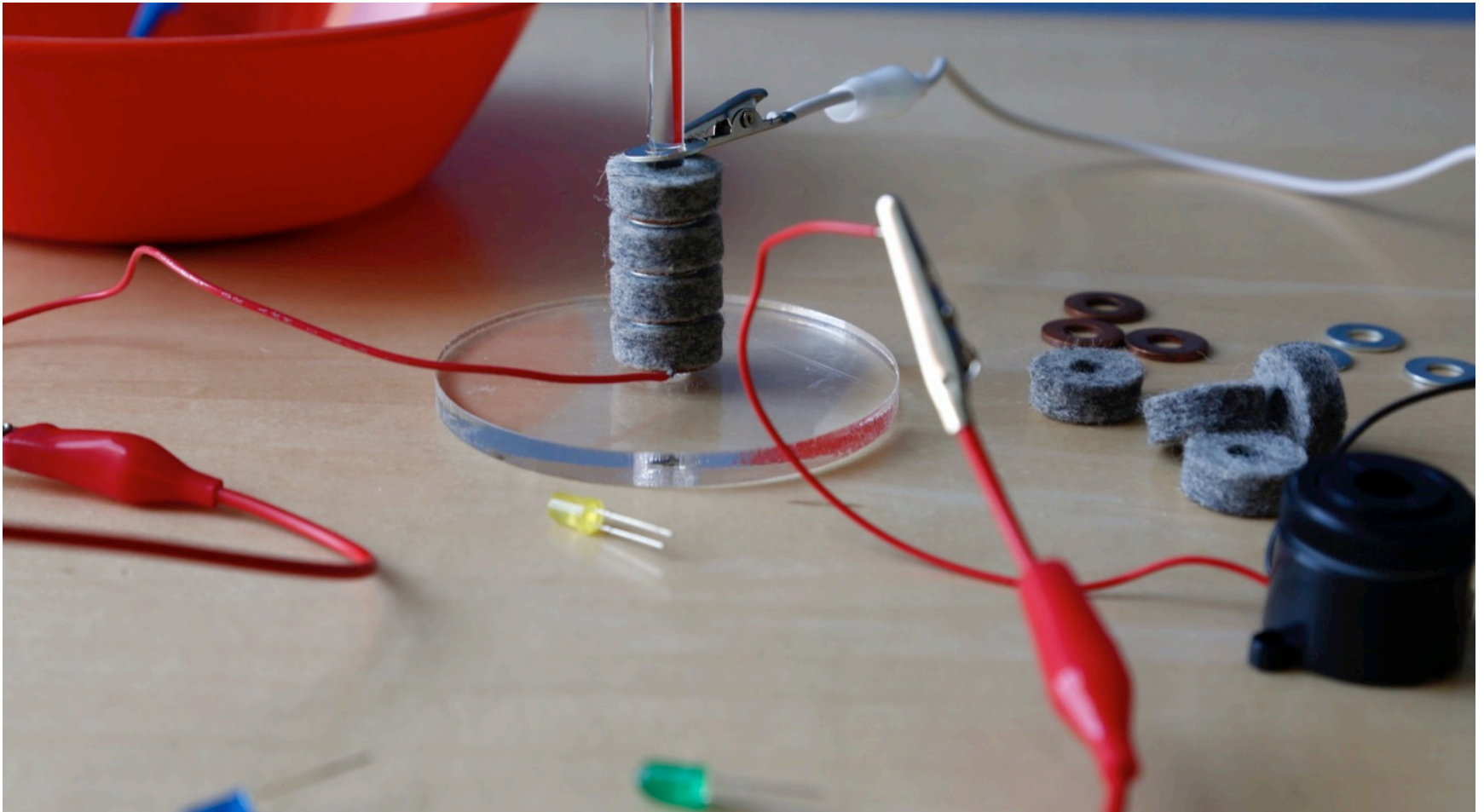


Spark of Life

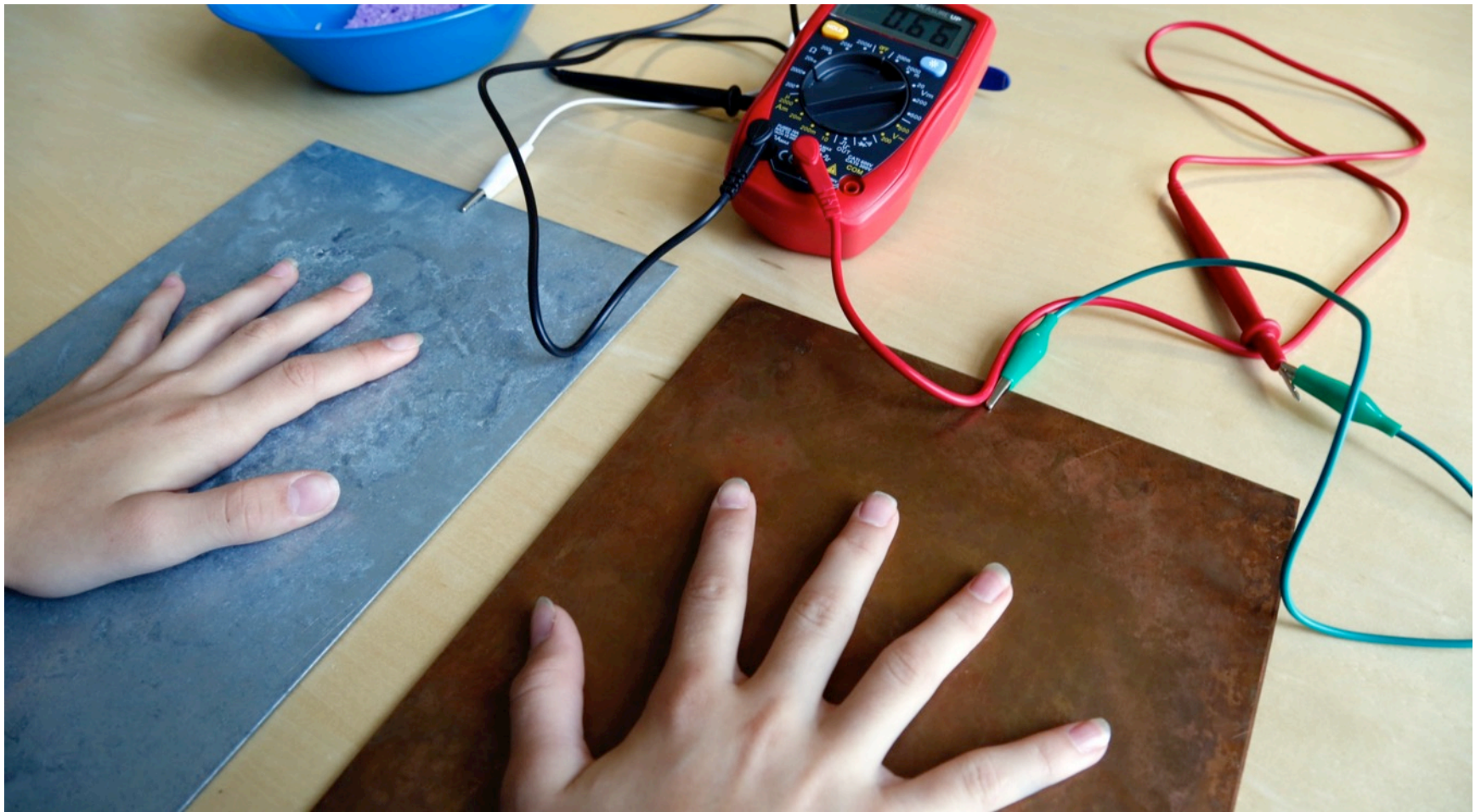


Science of Mary Shelley's time

Battery Stack



Spark of Life



Hands-on activities

Facilitating the activities:

- How to encourage creativity and exploration
- How to relate the activities to themes in the novel
- How to relate the activities to current STEM research and questions of responsible innovation
- How to adapt the activities for different formats and audiences

Try the activities

10:15am Activity group 1

Automata
Scribble Bot
Dough Creature
Frankentoy

11:00am Break

11:15am Activity group 2

Monster Mask
Battery Stack
Spark of Life

12:00pm Lunch

Lunch

Discussion:

- Integrating activities into different programming formats
- Adapting activities for different audiences

12:45pm Each table reports two ideas



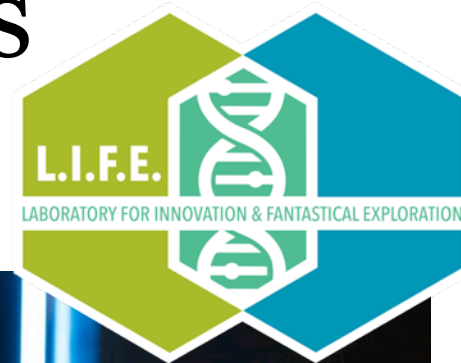
ALTERNATE REALITY GAME

L.I.F.E.



The Laboratory for Innovation and Fantastical Exploration (L.I.F.E.)
was founded by Dr. Victoria "Tori" Frankenstein.

Research assistants



Mya
Genetics +
Biochemistry



Xavier
Machine learning +
Artificial intelligence

FRANKENSTEIN²⁰⁰



L.I.F.E. scouts are searching for new research assistants!

Frankenstein200.org

FRANKENSTEIN²⁰⁰[PARENT GUIDE](#) [FAQ](#) [SHOWCASE](#) [BLOG](#) [PARTNERS](#)



The video player displays a central image of a Frankenstein-like figure with a mechanical body, overlaid with a DNA double helix. The figure is set against a golden, textured background within a circular frame. A large play button is centered over the image. The video player interface includes a progress bar at the bottom of the video frame showing 0:18 / 7:03, and standard playback controls like play/pause, stop, and volume. The ASU logo is visible in the bottom left corner of the video frame, and the NSF logo is in the bottom right corner.

Frankenstein200 puts children in the middle of the action in a story where the classic tale collides with modern science. Perform experiments, explore hidden areas of science, and assist a pair of young scientists as they unravel a mystery in a cutting edge digital experience.

PLAY NOW!

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Walk through L.I.F.E.

1. Create an account
2. Take a personality test and get placed in a lab
3. Every three days:
 - Receive an invitation to explore
 - Watch a video from Mya or Xavier
 - Search L.I.F.E.'s research archives
 - Play interactive content
 - Do making activities at home
 - Collaborate on knowledge building
 - Earn achievements

The full experience is 10 episodes that take place over 30 days.



Sample episode

Episode 4

- Player gets an email inviting them back to the lab
- Once player logs in, they find a video from Xavier discussing human enhancement
- Player searches the archives for relevant content
- Xavier has created a chatbot and he needs you to help it learn
- Player and Xavier chat in real time chat about whether or not a machine could ever become sophisticated enough to be creative
- Player gets clues about the unfolding narrative
- Player earns achievements based on level of completion



WORKSHOP & INSTRUCTABLES

DIY activities

30 additional activities

e.g. Handmade Hand

4 activities connect to the ARG
and generate an achievement code

Instructables contest

Frankenstein

Tentatively scheduled for May, 2018



TRAINING MATERIALS

Program planning materials

Event Planning and Promotion Guide



FRANKENSTEIN²⁰⁰

frankenstein200.org

Press Photos

We have provided a selection of press photos that you can use to promote your Frankenstein200 events. These photos are free for use under a Creative Commons Attribution-NonCommercial-ShareAlike license. creativecommons.org/licenses/by-nc-sa/3.0/us/. All press photographs credit: Science Museum of Minnesota.



Frankenstein200_Photo 1



Frankenstein200_Photo 2



Frankenstein200_Photo 3



Frankenstein200_Photo 4



Frankenstein200_Photo 5



Frankenstein200_Photo 6



Frankenstein200_Photo 7



Frankenstein200_Photo 8



Frankenstein200_Photo 9

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Event Planning Guide



FRANKENSTEIN²⁰⁰
**LIFE.
CREATIVITY.
RESPONSIBILITY.**

frankenstein200.org

ASU Arizona State University NISE network

Training materials

FRANKENSTEIN²⁰⁰

Overview

AUTOMATA

What happens when your creation comes to life?



FRANKENSTEIN²⁰⁰

FRANKENSTEIN²⁰⁰

FACILITATOR GUIDE TO AUTOMATA

DESCRIPTION

In this activity, learners make an automata, a moving mechanical device that imitates the movement of a human, animal, or other living thing. The activity is designed to prompt conversation and reflection about responsible innovation, inspired by themes raised in Mary Shelley's novel *Frankenstein*.

AUDIENCES

This activity is best suited for ages 10 and up. Younger children can participate successfully with support from an educator or caregiver.

LEARNING OBJECTIVES

The primary objective of this activity is to encourage creativity and reflection about responsible innovation. In addition, learners will explore the following concepts:

- People are creative! We're always learning more about the world and inventing new things.
- It's important to think ahead as we study science and make new technologies.
- Researchers who study artificial intelligence make machines that can reason and learn over time.

MATERIALS

- Plastic deli containers, 16 oz. size (1 per person)
- Bamboo skewers (2 per person)
- Small piece of drinking straw, about 1" long (1 per person)
- Foam circles, around 1.5" in diameter (at least 2 per person)
- Craft materials for decoration (such as craft foam, feathers, chenille stems, artificial flowers, googly eyes, and colored paper)
- Tape
- Safety scissors
- Activity booklet

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FACILITATOR GUIDE & CONVERSATION TIPS

Greet participants

Say "hello," make eye contact, and smile. Simply looking like you're available and friendly will invite learners to interact with you.

Let participants do the activity

As much as possible, let participants do the hands-on and creative parts of the activity, and let them discover what happens. Your job is to introduce the activity, provide questions for guidance and reflection, and help as needed.

Ask open-ended questions

Use the suggested questions to help learners reflect on the connections between science, engineering, and society. Phrase your questions so that there is more than one possible answer. For the purpose of this learning experience, there are no right and wrong answers.

Offer positive and encouraging responses

When learners have trouble articulating their thoughts, you might say, "That's an interesting idea. Why do you think that?" or "Have you thought about...?" Offer them an opportunity to reflect further.

Be a good listener

Be interested in what participants tell you, and let their curiosity and responses move the conversation forward. Let them form their own ideas and opinions.

Share accurate information

You can provide additional information or a different perspective for learners to consider. If you aren't sure about something, it's ok to say, "I don't know. That's a great question!" Suggest looking for more information at the library or online.

Remain positive throughout the interaction

Keep things upbeat and positive. Remember that nonverbal communication is important, too. Maintain an inviting face and body language.

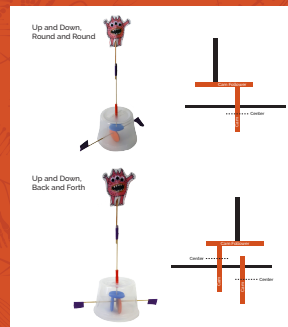
Wrap up gracefully

Follow their cues, and recognize when they're ready to move on. Thank them for participating, and suggest other activities they might enjoy. Even a brief interaction can have a big impact!

HAVE FUN!

AUTOMATA

Try different variations to see
how your automata moves.



FRANKENSTEIN²⁰⁰

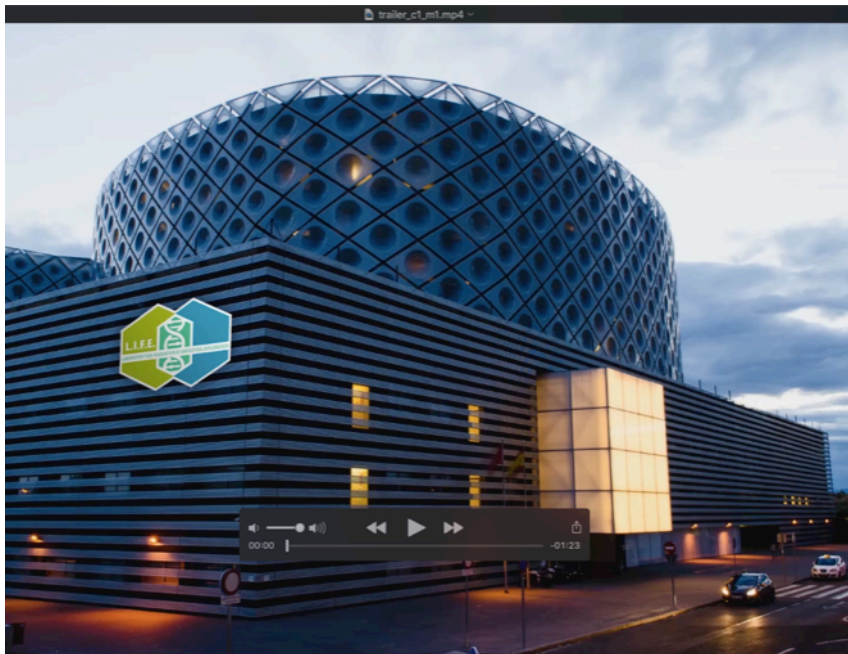
FRANKENSTEIN²⁰⁰

Presents

AUTOMATA

Training Video

ARG promo materials



FRANKENSTEIN 200

WHAT IF:

- A robot was creative?
- A woolly mammoth was brought back from extinction?
- You were hired to be a research assistant in Dr. Frankenstein's Lab?

Learn more and download our materials for free at frankenstein.asu.edu

Frankenstein200 is a project from Arizona State University, NISE Net, and the National Science Foundation that uses the 200th anniversary of Mary Shelley's *Frankenstein* as an occasion to explore emerging technologies such as artificial intelligence, synthetic biology, and human enhancement. Through seven hands-on making activities and an online alternate reality game, young people and their families are encouraged to build, play, and reflect on some of humanity's most challenging and enduring questions:

- What is life?
- What does it mean to be human?
- Why do we create?

ASU **NISE** **NET**

This material is based upon work supported by the National Science Foundation under grant number 1316664.



MUSEUM PARTNER ACTIVITIES

Requirements

Celebrate the 200th anniversary of *Frankenstein*

- Host at least one dedicated event featuring Frankenstein200 activities with public audiences in January 2018. This programming should be specifically focused on *Frankenstein*, but you have a lot of flexibility in what you do.

Utilize materials in seasonal programming

- Use Frankenstein200 materials in on-site or off-site public programming in October 2018. You can incorporate kit activities into “spooky science” or other programming your organization already offers.

Reach underserved audiences

- Partner with a local library or community organization to reach underserved audiences. This requirement can be met as part of the October programming, and it can involve a new or existing partnership.

Requirements

Report on your activities

- Submit an online report by March 1, 2018 describing your January program.
- Participate in a brief phone interview with a member of the ASU team in November 2018 to discuss your October programming.

Timeline

Required activities

- January 2018: Host required public event in conjunction with 200th anniversary of the publication of *Frankenstein*
- March 1, 2018: Reports due online (template will be available for review in early 2018)
- October 2018: Integrate kit activities into seasonal programming
- November 2018: Participate in telephone interview with ASU team about incorporating kit activities into October programming

Optional opportunities

Attend professional development workshop

- Thank you!

Promote and/or use the other project elements

- Alternate reality game live in January, 2018 @ Frankenstein200.org
- Workshop online in January, 2018 @ Frankenstein200.org
- Instructables contest tentatively scheduled for May, 2018

Participate in research and evaluation

- We will be in touch in early 2018 about the option to collect data at your organization

Transmedia learning

Investigating the interactions between the individual elements in the transmedia learning environment

Studying how the transmedia experience leads to increased efficacy and engagement in science-in-society issues



QUESTIONS?

Thank you



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