

Frankenstein200 Online Game Experience

Audience: Ages 10 to 14

Subjects: Physical sciences; life sciences; engineering and technology; science and society; art, music, and literature

Time required: 100 minutes (10 minutes per episode)

Description

In the Frankenstein200 game, learners will be hired as science assistants by a company called L.I.F.E, The Frankenstein Laboratory for Innovation and Fantastic Exploration (L.I.F.E.). Founded and led by a distant descendant of Victor Frankenstein, Dr. Tori Frankenstein, L.I.F.E. is at the forefront of research on genetics and artificial intelligence (AI).

Learners will be asked to help the company solve science problems related to some mysterious incidents in the laboratory. The game encompasses ten unique episodes paired with relevant science issues. Each episode presents a science related ethical dilemma that students have to solve in order progress in the game. The Frankenstein200 game can be played on any internet-connected device (e.g., smartphone, tablet, computer).

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:

- The social and ethical consequences of scientific and technological exploration.
- How Mary Shelley's Frankenstein inspired scientists doing experiments.
- How technological advancements can help us better understand the world around us.
- How researchers can create modified and entirely new organisms.
- What DNA is and why it is important.
- How chatbots and artificial intelligence work and what attributes they have.

Procedure

After registering the game, players will have the opportunity to interact with Dr. Tori Frankenstein's two lab aides, Mya and Xavier, and help them solve a wide range of problems and puzzles. Players can earn various achievements and awards when they complete challenges.

The game has the following storyline:

Frankenstein200 game episode	Description
Episode 1	Players meet Mya, who welcomes them to L.I.F.E.

	and shares her current research on DNA testing. She confides that she had her own DNA checked. But what she finds is strange and disturbing; she hurriedly signs off, clearly shaken by whatever she discovered.
Episode 2	Players help the other researcher, Xavier, with his project on AI and chatbots. Xavier believes bots can take over lots of everyday tasks—soon they will be building things for us, driving our cars, and cooking our dinners.
Episode 3	Mya tells students about chimeras—organisms that have DNA from more than one source—and wonders if she might be one too. She’s not sure what to do next. Mya decides to run a more detailed DNA analysis, but she’s scared what she might find.
Episode 4	Xavier finally gets the chatbot working. He shows off some fun interactions with her, and then tells players he has hooked her up to the website so they can interact with her too.
Episode 5	Mya has the results of her extended DNA tests, and they show that her genome is riddled with strange entries that are not human. She breaks down, fearing that she doesn’t know anything about herself anymore.
Episode 6	The AI chatbot begins to behave weirdly, and Xavier is convinced that he’s responsible. Mya shares the DNA test results with him. Mya and Xavier enlist students’ help in searching for clues that might unravel the mystery, and they ask players to not tell Tori that they are helping them.
Episode 7	The AI chatbot has died and Xavier is heartbroken. He blames himself, and asks Mya to help discover why; she thinks it’s because the little life form was the only one of its kind and it needed more of its own kind in order to thrive and grow.
Episode 8	Mya and Xavier discover that, before the chatbot died, she left them a clue. With students’ help, they discover the key to unlocking the mystery of Mya’s strange DNA—proof that the person responsible was Tori. Mya wants to confront their boss, but Xavier insists that they shouldn’t.
Episode 9	Xavier apologizes to Mya, and together they confront Tori, demanding she fully reveal what is going on. Tori reveals the truth—Mya, herself, is

	<p>an experiment. When Mya's mother was pregnant, Tori gave her with a virus that altered Mya's DNA to combine with non-human additions. Tori lays out her grand plan: to eradicate all disease and illness through DNA manipulation. Mya is furious; she accuses Tori of being a mad scientist, just like her infamous ancestor.</p>
Episode 10	<p>Mya reaches out to players for help. She doesn't know what she should do—if she lets Tori continue experimenting on her, she could learn more about what she really is, but she doesn't trust Tori. If she runs away, she'll be leaving everything behind for an uncertain future, and Tori might try to pursue and recapture her. Students have the opportunity to choose how the game ends.</p>

Common Core Standards

This activity is aligned with the following Science and Technical Subjects:

- **Grade 6-8:** CCSS.ELA-LITERACY.RST.6-8.1, CCSS.ELA-LITERACY.RST.6-8.3, CCSS.ELA-LITERACY.RST.6-8.8
- **Grade 9-10:** CCSS.ELA-LITERACY.RST.9-10.1, CCSS.ELA-LITERACY.RST.9-10.3, CCSS.ELA-LITERACY.RST.9-10.8

Next Generation Science Standards

This activity is aligned with the following disciplinary core ideas'

- Life science (LS)
- Physical science (PS)
- Engineering, technology, and the application of science (ETS)
- Appendix J—Science, technology, society, and the environment
- Science and engineering practices