



Comic Book Design: Exploring Science, Technology, and Literacy

Digital Design: Comic Book Experts Workshop

Last month, during Spring School's Out Week, we, Laycca Umer and Wren Thompson, had the opportunity to hold a three-day workshop here at NYSCI. Seventeen middle school students joined us in practicing science, technology and literacy skills while exploring the process of creating a comic book elevator pitch of their own design using an iPad app. They also got a sneak-peek of the in-development NYSCI comic book: *Transmissions*.

Transmissions is an interactive comic book supported by a National Institute of Health Science Education Partnership Award (NIH-SEPA) and produced by NYSCI. A casual museum outing turns into a science adventure when three neighborhood friends find a dead crow that died of a mysterious cause. Inspired by the 1999 West Nile Virus epidemic in New York City, *Transmissions* focuses on key scientific concepts, such as using evolutionary biology and homology as a means to understanding how all animals are related and share diseases. Aimed at middle school-aged students, the narrative engages readers in the scientific processes of collecting and analyzing evidence, forming hypotheses, and using scientific tests to confirm their theories.

Workshop Activities

At the beginning of the workshop, we discussed what makes up a good comic book story: characters, setting, problems and mysteries, the climax and a resolution. During the workshop, we explored chapters of *Transmissions* as a group, talking about the components of the story and how the characters were trying to figure out the mystery. In between chapters, students explored exhibits that were related to different plot points like discussing human and nonhuman animal cognition in our *Wild Minds: What Animals Really Think* exhibition, or searching for evidence in *Design Lab*. After each day's explorations of the developing *Transmissions* comic book and relevant science exhibits, students got to work on their own comic book elevator pitches.

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A Snapshot of the Workshop and What Students Created



Students work on their comic book elevator pitch.

On day 1, students explored the basic building blocks of a comic book: characters, setting, and mystery. Students read the first two chapters of *Transmissions* while taking note of the characters, their traits and their relationships. They also engaged with two exhibit areas on the NYSCI exhibit floor: *Charlie and Kiwi's Evolutionary Adventure* and *Design Lab*. In *Charlie and Kiwi*, the students explored Charlie's story, taking note of the characters that were featured and the mystery they were exploring. In *Design Lab*, students took on the role of investigators, collecting evidence to prove and/or disprove a claim that general museum visitors in *Design Lab* tend to build projects that could be found in or resemble nature. Taking these explorations back to the classroom, the students went to work on creating their first drafts of their comics' characters, setting and ultimate mystery or problem to be solved by their characters.

On day 2, students explored the next level of creating a comic book: the plot and plot twist. They read chapters three and four of *Transmissions* while discussing the risks the characters were facing, the characters' motivations for trying to solve the mystery, and possible plot twists that could have appeared. They explored *Wild Minds* and *Connected Worlds* in search of evidence for and against the claim that human and nonhuman animals could think about the world in the same ways, practicing the same level of scientific inquiry and exploration that the characters in *Transmissions* use to figure out the mystery illness' cause. After having thought

about collecting evidence and how it could play into the plot and intrigue of a comic book, the students returned to the classroom and worked on creating the climax for their own comic book pitches, and what could go wrong for their characters in the story.

On day 3, students explored how a comics' mystery could conclude by finishing the last chapter of the *Transmissions* comic book and discussing how the characters used evidence to prove their hypothesis. They then related this to how to conclude their comic book elevator pitches, choosing whether they should tell the ending of the story or to leave the audience with a cliffhanger. Finally, students presented their own comic book elevator pitches to NYSCI's Creative Producer.



Student presenting his comic book elevator pitch.

Deep Diving Into Students' Comic Book Elevator Pitches

Students spent three intense days working on their comic book elevator pitches. Some students used popular media characters as their inspiration or preloaded assets in the app they were working with to construct superhero stories and scenes, while other students used the museum as a starting point and integrated pictures of NYSCI into their comics. The themes of their finished products ranged from superheroes, to science mysteries, to themes about friendship, identity, and acceptance.

Comic book elements:

- All of the student comics involved at least one main character and multiple supporting characters.
- Most of the student comics also involved a villain as the force behind the problem the characters were facing.
- Three student groups instead focused on social pressure and internal conflict rather than an enemy/antagonist as the responsible party that the characters have to fight off.
- Writing a climax to their stories was challenging for many of the groups. Students instead often cut off their comic book elevator pitches at the climax, leaving their characters at the moment of highest drama so the audience would want to hear the conclusion.

Complex themes about identity and acceptance:

- One student group made a comic book elevator pitch about a superhero that had the ability to shapeshift. However, in the universe this hero was born into, he was the only known shapeshifter. This unique ability caused him to be ostracized by the other superheroes as they did not want to be friends with someone who was different. The students proposed that their comic series would follow this character's life.
- Another student group proposed a comic book about a group of cousins who were all born of half-human hybrids, such as half Pokémon, half chair or half wolf. Each of these characters hated the nonhuman portion of themselves, ranging from "hates Pokémon, prefers Digimon" to "He's half-chair, but he loves breaking stuff."

Pitching to developers:

- Many of the students wanted to leave on a cliffhanger rather than reveal the ending to entice the audience to buy their idea in order to discover the conclusion.
- Some students ended on a cliffhanger to try and gain the opportunity to pitch a series rather than a single comic.



This student's comic was about two cup-head brothers that go on an adventure in the woods while their grandfather is sleeping. On this page, the brothers return home unscathed and reflect on what they learned through their adventure.

Next Steps

The *Transmissions* comic book is still in development and slated for release in the Fall of 2018. Be on the lookout for more exciting programs and news about *Transmissions*!