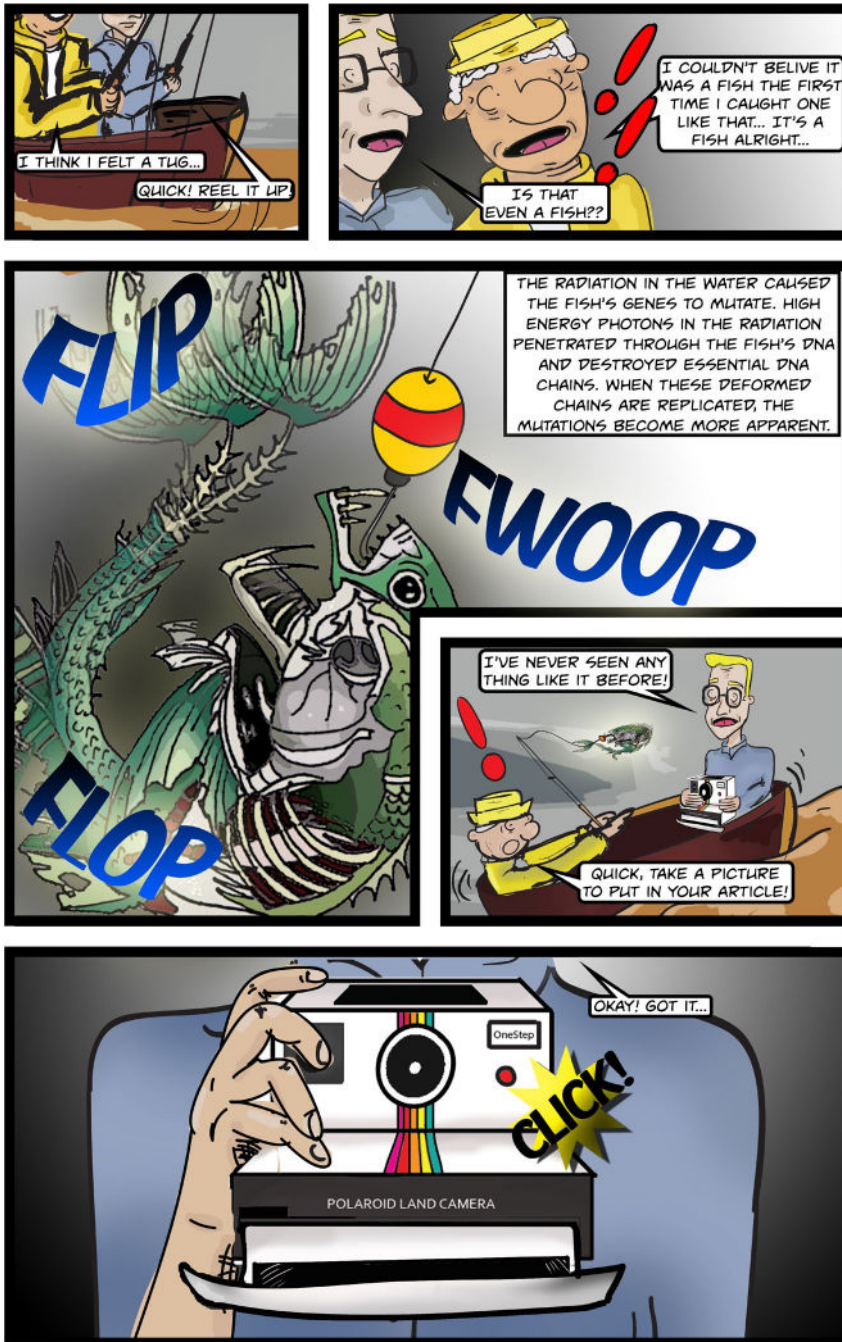## Subatomic Black Hole Soup:
A Graphic Novel Project

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For this project, seniors explored the task of teaching a complex physics concept in a compelling way through the medium of a graphic novel. Students began by investigating various modern physics topics ranging from time dilation to black holes while simultaneously studying storytelling and the graphic novel. Students read nonlinear texts like Vonnegut's Slaughterhouse Five and then studied various graphic novels like Moore's V for Vendetta. We also partnered with a local comic book studio and had a comic book artist mentor students throughout the process. Our team ultimately created four graphic novels that taught difficult physics concepts in an accessible and engaging manner.

Teacher Reflection
A unique aspect of this project was the grouping. Students were in larger 'graphic novel' groups of twelve where they had to develop a story based upon their physics concept. The exchange of ideas during this phase was amazing to watch. Students then paired up within those larger groups and were responsible for creating one of the graphic novel chapters, which forced them to communicate, critique, and have a sense of responsibility to the larger group. We liked how this mimicked working collaboratively in the real world and allowed for student voice and choice. Getting hands-on with the big concepts in modern physics is a challenge, and we wanted to create an authentic project based around them. By becoming experts on their topic and creating their novel, students were able to demonstrate knowledge and teach others through the work they created.

Student Reflection
This project allowed us to produce an enthralling scientific graphic novel. We learned the fundamentals of comic book writing and how to draw action packed scenes using a variety of shots. Overall, students had to work alongside their neighboring chapters to create an engaging, cohesive story.   —Delilah Nichols

To learn more about this project and others, visit https://sites.google.com/a/hightechhigh.org/test-site-17/home/projects