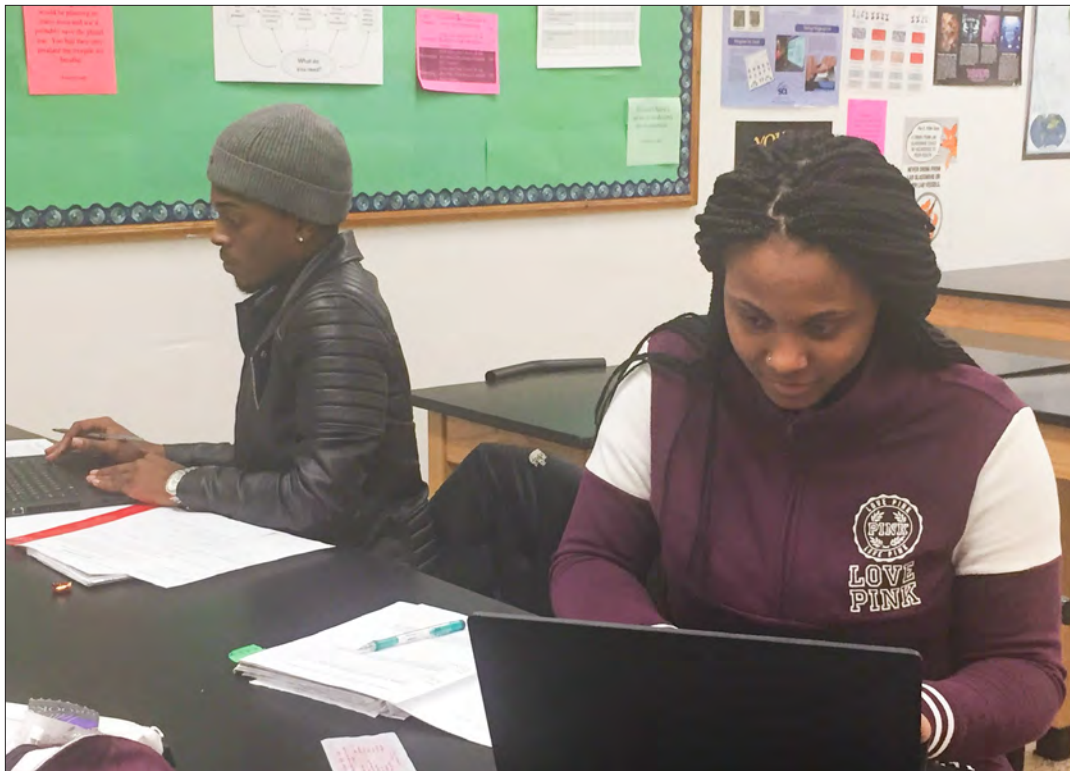


Conservation Animation

Creating animated videos with high school students to encourage local conservation



Photographs: Sarah Compton

By **Sarah Compton**

WITH THEIR NOSES pressed to the glass, a group of curious high school students stood watching baby turtles with large white numbers painted on their shells swimming in a crowded kiddie pool. They hurled question after question to the unsuspecting worker tending to the hatchlings. “How old are they?” “How old will they be before they get released?” “Where do you let them go?” “Do they all go to the same place?” The students were getting a chance to witness conservation in action in their city after weeks of discussing biodiversity and extinction in the classroom. Making connections to classroom learning is essential if a project and content are going to have a lasting impact after a field trip. The tiny turtles and their conservation, which captivated my students, was the connection that helped to draw my students into creating a conservation plan and an animated video about another local endangered species.

If teachers at urban schools are going to implement Next Generation Science Standards (NGSS) and help students demonstrate a true understanding of the Earth, its ecosystems, and the importance of conservation, the curriculum needs to be relevant to the students’ lives. Conservation education tends to focus on global not local issues and thus

loses relevance for many young people.¹ Students living in Chicago for example, have difficulty understanding the importance of the Amazon rainforest when some have never stepped foot into a forest of any kind. To make these issues relevant and meaningful, students need to make connections to the environment around them.² Watching the adorable turtles swim in the pool and asking questions of those responsible for the turtles was the beginning of that connection for my students.

High school students in my Environmental Science class explored the topic of extinction at the end of a biodiversity unit, after they had examined biodiversity in their neighborhood, created local food webs and analyzed the roles of different species. Students learned of Earth’s five previous mass extinctions as well as the sixth that is currently happening, and the role that humans have played. Students discussed the need to save endangered species and learned of successful examples such as the efforts to protect the bald eagle. Observing the Blanding’s turtle (*Emydoidea blandingii*) conservation project³ and learning of its success provided the local connection that had been a central theme in our learning throughout the semester.

Since the average teen spends the same number of hours per day interacting with technology as they do sleeping, teachers need to embrace new project options in the classroom.⁴ Creating an animated video is an engaging new way

for students to connect with extinction and conservation from inside the classroom. Have students create an animated video about a local endangered species for example as a culminating project to a biodiversity unit. Combined with a field trip like the one described at the top of the article, the relevance of protecting endangered species and witnessing local conservation efforts in action will inspire students and encourage them to find their voice and share their ideas. Have students begin by researching a local endangered species, examine the current conservation plan and actions for the species, develop a new conservation plan or a new way to contribute to already existing efforts, and create an animated video that shares their ideas. This project provides a sense of ownership and will push them to share their voice and ideas from the moment they choose their endangered species to the moment their classmates hit “Play” on their completed video. Students will read, write, research, examine relationships, problem solve, construct explanations and effective arguments, and build their technology skills as they move through the lessons.

Project Duration

This project requires ten, 60-minute class periods to complete. However, this can be easily modified. Students can complete research and other components at home to reduce class time used. Due to the high number of my students that do not have computers or access to internet at home, for us the entire project was completed in class.

Project Description

Phase 1: Making a Connection

Taking your students on a field trip that will show them firsthand the subject of their projects will help them to make the connection and inspire them to make a difference. A local nature museum with an active conservation project to help improve the Blanding’s turtle population did the trick for my students. While there, a journaling activity about the conservation project and its importance can get the students thinking. After journaling, discussing the connections that students make can add additional value to the experience. At this point, I had students examine the Illinois Department of Natural Resources threatened and endangered species list and pick a local species that interested them.⁵ Finding or creating a similar list for your community allows students to explore plants and animals to find the one that interests them.

Many students enjoyed examining our list because they were able to discover new species of plants and animals. However, some were annoyed by the extensive list of options, or when they found out that a classmate was going to use the same organism. To manage these annoyances, compiling a short list of species organized by the types of organism, and keeping an updated list of already chosen organisms for students to look at can eliminate duplicates or identify a possible partner that shares a similar interest.

Phase 2: Research

Once students find a species of interest, introducing the project (Appendix A), including the goals and objectives, timeline, how the final products will be shared, and showing an example video are logical next steps. Providing an organization chart to fill out can help students that struggle with

paraphrasing during their research. A research organizer can help make the copious amounts of available information more manageable.

Phase 3: Conservation Plan

After completing their research, have students meet in pairs and small groups to collaborate on conservation plan ideas. These collaboration groups can help students move beyond typical ideas such as holding a bake sale to raise money, as they share thoughts and think of uncommon solutions. My students discussed the example from the sample video we watched. To aid the conversation, provide students with a list of guiding questions for this session and an organizer to keep notes (find a sample at greenteacher.com/conservation-animation/). Give students time to reflect on their conversations and make their final conservation plan decision.

In my classroom, it became clear early on into the discussion sessions that students needed more examples because they were having trouble thinking outside of the box. I met with each group separately to provide additional support. In the future, I will use the student created project videos and collaboration logs from this original group of students to frontload the collaboration sessions.

Phase 4: Storyboarding

Have students watch the tutorial about creating an effective short video to gain helpful tips.⁶ Using these tips and a storyboard organizer, students begin the creative process. On each slide of the storyboard, they include what they want shown, what they will be saying in the voiceover, and estimate how long each portion of the video will take.

Many students want to jump right into the video making without storyboarding (find a template at greenteacher.com/conservation-animation/). I attempted to convince these students otherwise, but some went ahead anyway. However, they quickly realized a solid plan made the construction much easier. A solution to this could be making the storyboard organizer a required piece of the project.

Phase 5: Creating the animation and adding a voice over

Completing a short tutorial on how to use the free, online animation program provides students time to play with the program and understand how it works.⁷ Once they feel comfortable, creating the visual portion of their videos can begin. Adding a voiceover, after the animation is complete, can be done using a set of headphones with an attached microphone.

This phase was the ultimate source of frustration for every one of my students because the program was brand new and more complicated than other presentation programs they have used in the past. We went through the animation tutorial as a class along with additional examples of how to change the timing, text, and effects. As students caught on to the basics, they began experimenting more, trying more complicated effects, and helping struggling classmates. Pushing through the frustration and learning the program gave them a sense of satisfaction that was evident when the animation turned out the way that they wanted. I met with students individually for voiceover tutorials as they finished since they were completing their videos at different times.

Phase 6: Sharing and feedback

Critiquing a sample video as a class will let your students know what is appropriate feedback to share with their peers. Together, provide positive comments and helpful suggestions for improvement. We refer to this as glowing and growing feedback. Providing feedback to classmates and making final edits to their own videos are the last step before sharing them with everyone.

Providing peer feedback is an important step in the process and can help them to improve their projects, but it needs to be practiced for it to be valuable. We practice this regularly throughout the semester and by the time they reach this project they are offering more useful comments to their peers (find a review template at greenteacher.com/conservation-animation/).

Project accommodations and extensions

For students who are uncomfortable recording a voiceover, collaborate to find alternatives or reach a compromise. In one case, I had such a student change their mind and take a risk to add their own voice, another added music and a third found a classmate that was willing to record the voiceover for them.

Providing choice and flexibility will help keep the students engaged and willing to see the project through to completion.⁸

This project could be used for a variety of topics, beyond conservation of local endangered species. It could be used to create a public service announcement for another environmental issue or for other topics or subject areas. My students have requested to use it in other classes since creating the endangered species video.

Reflection

Before beginning the project, I was concerned about the considerable time required to complete the project and the potential difficulties that could arise from using unfamiliar technology. In the end, the time investment was worthwhile and the problems encountered with the program were great learning opportunities and confidence builders.

I saw large improvements in a variety of skills as well as engagement and ownership of student learning. Their ability to research, paraphrase, and cite sources improved greatly from the amount of research required. The collaboration groups helped to foster a positive learning community and modeled how helpful group conversations can be to the



Appendix A

Local Endangered Species Animated Video Project

You will be responsible for researching a local endangered species of your choice and creating a conservation plan. You will share this information with the class using an animated video presentation that you will create.

(It's okay if you have no idea how to do this is. We will learn how to use the program together.)

1. Choose a local endangered species from the list provided.
2. Write down the name of your species:

3. Research your species. The following information needs to be included:
 - Name (common and scientific)
 - Habitat information
 - Food source (what they eat and how they get it)
 - Any unique features of this species
 - Their endangered status
 - Threats to the species
 - Impacts the species has on the ecosystem
 - Any current conservation efforts
4. Create a plan to help conserve this species. The plan should include:
 - Ideas to improve knowledge about this species among the general public
 - Conservation actions that should be taken
 - Ways to improve the current conservation plan (if there is one)
5. Create a PowToon presentation. The presentation should:
 - include at least 4 pictures (1 of the species, 1 of the habitat, and 2 of your choice)
 - include proper citations
 - Be between 90 and 120 seconds
 - Music is OPTIONAL
 - voice over

creative process. The struggles with learning the program helped improve problem solving and perseverance. I made sure to point out how good it felt to work through an issue and get the video exactly how you want it.

I also saw engagement with this project unlike any other that I have done in the past. I had students staying after school, working through lunch, and working at home or the library to make their projects better. They constantly commented how cool and professional the videos were. According to one student the animated video, “is way more impressive than a poster board!” The students were equally excited to watch their classmates’ videos and many spent time outside of class doing so.

The projects turned out well, but I would stress the importance of keeping their video under two minutes and creating a storyboard before they start creating the video. Along with the tutorial on how to make an effective video, I would like to examine different conservation marketing campaigns to identify what makes each effective. Some students needed a considerable amount of help making the video more than an endangered species report and more examples may help minimize that mode of thinking.

After completing the videos, students requested more field trips to learn about local species or attempt to locate some of the species mentioned in their classmates’ videos. Providing an opportunity for students to be able to respond to an environmental crisis where they live in their own unique way helped to engage and increase their interest in

the topic that had not been well received in the past. They can explain their connection to their environment and can articulate specific activities they do or that happen in their neighborhood and how they impact the local environment.

Sarah Compton teaches high school science at an alternative high school in Chicago, Illinois. Her focus is on helping students make connections to local nature and incorporating technology wherever possible.

Notes

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