Activity Algorithms: Introduction to Visual Programming using Twine

Algorithms can be linear, that is, they can follow a strict sequence of instructions, or they can be nonlinear by incorporating logic operators or conditions that create different outcomes or multiple paths.

With that foundation, students begin to explore how to design algorithms using a visual programming language called Twine. Twine is a tool for creating interactive, nonlinear stories. You can download the software onto a computer or laptop, or use it online on a computer, laptop, or tablet. For more information, please visit the Twine website at http://twinery.org/ and the Twine 2 Guide at http://twinery.org/wiki/twine2:guide.

Note to the teacher: If using the downloadable version of Twine, ensure to plan ahead so that Twine can be downloaded and installed on each computer or laptop before starting this activity. If using the online version of Twine, students do not need to create accounts. Twine projects are saved automatically to the computer. If students use Twine over multiple sessions, they must use the same computer with the same browser, such as Google Chrome, as well as not clear any browsing data to avoid losing work. Twine recommends that users archive their projects to save an extra copy to their computers. For more information, please see the Twine 2 Guide:
http://twinery.org/wiki/twine2:where_your_stories_are_saved.

Activity Overview
Estimated Time: 1h

Materials for the teacher:

- Computer, Laptop or Tablet
- Projector and Screen
- Internet Access
- Speakers (Optional)

Materials for each student:

- Computer, Laptop, or Tablet
- Internet Access (Optional)
- Self-Assessment Student Sheet (Optional)
- Pencil (Optional)

Preparation:

- Set up the equipment, including the computer or laptop, projector, and screen, to show the Introduction to Twine video, and for demonstrations.
- Ensure that students will have devices for the activity.
- If using the online version of Twine, visit the Twine website, http://twinery.org/, click/tap on "Use it online", and ensure that the website loads.
- If using the downloadable version of Twine, ensure that Twine is downloaded and installed on each device, and open the program to make sure that it runs.
- Print out 1 Self-Assessment Student Sheet per student. (Optional)

Warm-up: Introduction to Twine (15 minutes)

Introduce Twine as a tool for creating interactive, nonlinear stories, meaning that a person reading one of these stories can follow links, like on a web page, to choose different paths in the story. So one person reading the story can have a completely different experience from someone else reading the same story. Using the projector, show an introductory video, such as An Introduction to Twine 2.0: https://youtu.be/5yCZaQLb_Kw.

Activity: Create Your First Story (30 minutes)

Using the projector, help students open the Twine editor by demonstrating one of the following options:

Option 1: Students are online.	Option 2: Students are offline.
Navigate to the Twine website at http://twinery.org/.	Open the Twine program on their computers or laptops.
Click/Tap on "Use it online".	Click "Skip" to go to the "Stories" page.
Click/Tap "Skip" to go to the "Stories" page.	Click "+Story" to create a new story.
Click/Tap "+Story" to create a new story.	Enter a name for the story.
Enter a name for the story.	Click "+Add".
Click/Tap "+Add".	

Allow students to explore fearlessly. Encourage students to work together, ask each other questions, and share what they discover.

Optionally, students who have online access may follow the Twine 2 Guide to create their first story: http://twinery.org/wiki/twine2:how_to_create_your_first_story

Reflections: Share Your Discoveries (15 minutes)

Ask for a few volunteers to share with the class one thing that they discovered. Afterwards, ask students to reflect individually using the following prompts:

- What did you figure out?
- What would you like to know more about?
- What would you like to create?

Assessment

Criteria	Approaching	Meeting	Exceeding
Student connected and engaged with others to explore the Twine interface by sharing discoveries and asking questions.			
Student created a Twine project with at least one passage with multiple branches.			
Student shared his or her discoveries and/or what he or she would like to learn or create next either individually or in the group discussion.			

Extensions

Offer several challenges

Provide challenges while students are exploring. Examples:

- Can you figure out how to **bold**, *italicize*, and <u>underline</u> text?
- Can you figure out how to change the story format?
- Can you figure out how to add an image, movie, or sound?
- Can you figure out how to archive or save your stories to a file?

Self-Assessment Student Sheet

Give an example or provide evidence of how you demonstrated or accomplished each of the following statements during this activity. Examples and evidence can include sketches, written descriptions, and references to photos or videos.

Statement	Example or Evidence
I worked with other students to learn about Twine by sharing my discoveries and/or asking questions.	
At the end of the activity, I thought about what I had discovered, and what I would like to learn or create next.	