Culturally Responsive Pedagogy in Computer Science Instructional Planning

Instructions: Fill in the CRP in CS lesson plan using the template below.

Submitted by: Lily Stice

Title: **Let's Talk Code**

Grade Level: **8th Graders**

Content Area/s: Creative Coding

Length: 5 days (August 29th - September 6th, 2024)

Which CS Standards are addressed?

CSTA K-12 Standards

Creative Coding Strands and Standards (utah.gov) (there was a section about apps vs games, but it has changed; however, we will still cover what an app is).

Are other standards included?

New Mexico Content Standards

Arizona Content Standards

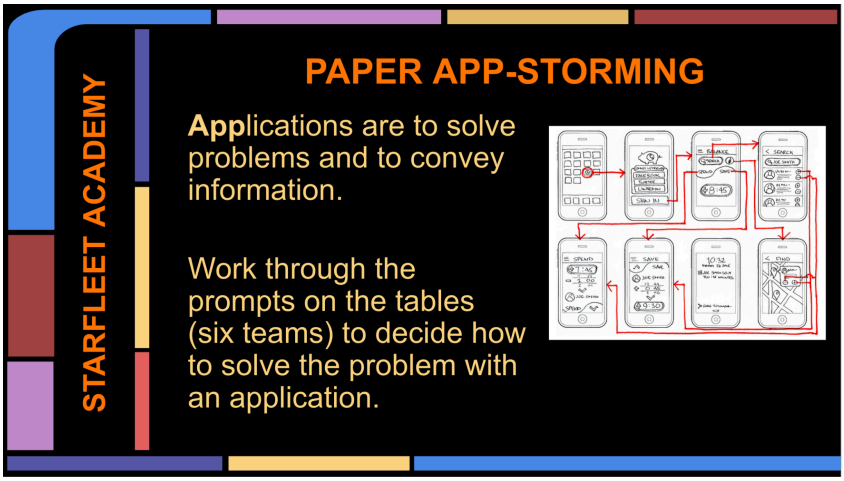
Common Core Literacy Standards

ISTE Standards for Students

Learning Objective(s): What is the purpose of your lesson? An understanding, attitude, appreciation? A concept? A skill? Ability? State specifically what you intend to have your students achieve, present, or demonstrate.	**The students will gain an understanding of different apps and how they differ from games. In addition, students will gain appreciation for Native American cultures and their own heritage.**

Instructional Process(es):
 	
What teaching method(s) will most likely bring about the desired understanding, concept, skill(s), abilities, etc.
 	
Lesson is clearly sequenced and with appropriate transitions.
	1. Let's Talk Code (Apps)
	
	The class will start with the lecture as students will understand what an App is. Then they will have a moment to realize that apps are all around them. Students will have a chance to create their own wireframing prototypes on paper. To finish, students will learn the basics of Code.org and how to create an app in that software as they finish with their own application project based on Native American culture/their own heritage.
	
	● What is an app?
	  ○ Main Components
	  ○ Input and Outputs
	  ○ App User-Interface
	  ○ Menus
	● Wireframing
	  ○ Paper App-storming Activity
	● Coding Basics in Code.org
	● Mission Briefing: Application Project
	
	You will work on your own to create your own apps.
	App Lab | Code.org
	Your apps must:
	● Use at least 4-5 frames
	● Includes examples of images, audio, and text
	● A clear and easy to navigate user interface
	● Clearly communicate inform about your topic
	● Code is cleanly written and free of errors.
	Steps:
	● Design your app's user interface using the planning guide - it must be about your culture (heritage) or a Native American culture.
	● Design and program your app in App Lab
	● Collect feedback from your classmates and update your app

Classroom Learning Environment: How will you organize your classroom so that your students achieve your stipulated objective(s)? Whole class, small groups, individual, team learning, learning centers, individual centers, and group projects?	**Students will be working on their own to create their own app. This will be an individual project. However, students will also be given the chance to work in groups through their unplugged activity, app-storming, where they have prompts to engage with other classmates to solve a pain point prompt to make an app to solve the issues.** Prompts for UXD Challenges - Google Docs

	
Materials/Resources/Technology: What materials must students use to attain the objective(s)? What technological support is needed to implement the materials?	**Students all have access to their Chromebooks which is where they will do the majority of this assignment.**
Inclusion: Understands the development and use of inclusive educational practices; and addresses the needs of diverse learners.	**Inclusion will be met through having close captions while I am teaching. Furthermore, students will not be required to do their app on a Native American tribe, but they can also look at their heritage and do it on their own cultural histories if they feel uncomfortable with doing it on a Native American tribe. However, it will be encouraged to do it on a Native American tribe. Although, I understand how focusing on one's own heritage can be nice, but also traumatic since some do not know their own family histories.**

Culturally and linguistically responsive pedagogy How does your lesson/unit connect to CRP and the cultural, linguistic and/or home experiences of your students?	**Our school only has 3% Native American. Most of my students are actually Latinos. Therefore, I have worked to integrate responsive pedagogy by allowing the students to do their app on their own heritage (Mexican, Guatemalan, etc.)**
Assessment of Students' performance: What procedures, tools, and/or instruments will you use to determine if your students met the learning objective(s)? Different assessments are used: diagnostic, formative and summative. Keep in mind that objectives, assessment and instruction are aligned with each other.	**I have created a summative assignment that they must fill out that is split up into four levels based on Bloom's Taxonomy of Learning with level one as the foundation, knowledge base. Then for level two, students should reach a level of understanding. Three will start with applying some concepts and so forth.** **Students will be given a formative assessment during the lesson as they create a paper-app-storming project where they design their app before they do it on the computer. These will be based on UX prompts to engage the student, but their final project will be somewhat different.**