Activity 1: Create an avatar

Using the resources, use your imagination to create an avatar!

DESIGN TIPS:

- Think about characters or avatars from games you know already: What do they look like? How can you draw inspiration from characters you know?
- After you have an idea, sketch it on scratch paper and squint at it. If you can't see details when you squint at the avatar, they won't work well on the grid. For example:
  - If you want to focus on a facial expression, consider creating a face and not a whole body.
  - If you want to create a full body, don't worry about the facial expression — it will probably be too small to be seen.
  - If you want to include a small element for your avatar, make it bigger in the drawing. Character designers often make things much bigger or smaller than they are in the real world.
- Once you have a design you like, draw your avatar lightly on the grid to see how the lines and shapes fit into the grid squares.
- After you've fit your avatar onto the grid, color in each pixel. Each square is a pixel, so you have to color in the whole square.
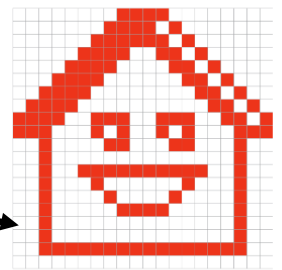
ONCE YOU'VE DESIGNED YOUR AVATAR, NAME YOUR CHARACTER AND WRITE A SHORT DESCRIPTION ABOUT THEM.

Avatar Name	
Avatar Details A short blurb about your avatar's personality, background, family, friends, etc.	

Draw an avatar for your game by filling in squares that represent pixels.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					
18																					
19																					
20																					

Activity 2: Learn how to use arrays to create images

The definition of an array is an ordered series or arrangement or to display something in a particular way. Computer arrays usually look something like this:
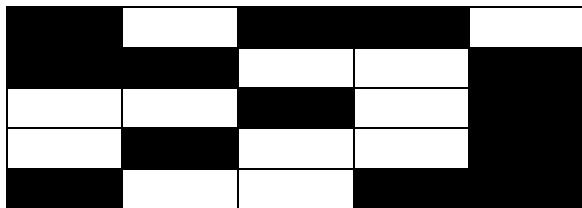
imageSize = [20,20];

This means that you have a grid that has 20 rows and 20 columns, exactly like the one you drew your avatar in!

In computer coding, arrays such as images are created with the binary number system (1's and 0's only!).

If you see an array that says:

myArray = [

1 0 1 1 0

1 1 0 0 1

0 0 1 0 1

0 1 00 1

1 0 0 1 1]

Then it will look like this when the code is finished:

Using your avatar, create an array code for it! Start with myArray = [

Then put each row into it's own line! You should have 20 lines with 20 numbers in each line when you are done!

Activity 3: Write an array to create an icon

Now try doing it the other way around. Try creating an image with an array and draw the image when you are done with it!

Arrays are how all of the images in digital games are created!

Activity 4: Develop a game scenario

Now that you know about the elements of a game and game mechanics, it's time to design a game scenario! A **game scenario** is the details of a situation, including the settings and sequences of events for a game, scene, or plot. It's part of the set-up in many types of games.

For this role-playing game, you'll create a game scenario for players, including what players need to do to win and what they get as a reward for winning. In order to win the game, someone has to collect 'attributes' from each of four categories.

The four skill categories are: Go-getter, Innovator, Risk-Taker, and Leader.

What's the Scenario?

A Role-Playing Game for Good

Game designers set up the challenges that players face in order to win. You are designing Games for Good, so the characters in your games will win by making a positive difference in the world.

Set-Up & Game Mechanics

In this game, players take on challenges in the form of scenarios where their avatars must decide on the best course of action in a tricky situation.

How to Play:

- For each turn, one player is the "Game Maker." The "Game Maker" presents a scenario and the "Reward for Winning" for the round.

- The other players have thirty seconds to write down what they think their character (from Step One) would do to solve that problem.

- Then, each player should share her answer with the "Game Maker" and other players.

- After all players have shared their responses, the "Game Maker" decides which response they think is the best. This might be the most logical answer, or maybe it's the funniest! The "Game Maker" then awards the "Reward for Winning" to the winning player.

- The players must collect attributes from each of the four categories in G.I.R.L. By winning a round, the girl gains the attribute associated with that problem.

- The next round, another player becomes the "Game Maker."

- A player wins by collecting all four types of attribute.

Skill Categories :

These traits define girls of courage, confidence, and character, who make the world a better place. These qualities and abilities are keys to success -- use your own interpretation of each as it would apply to your scenario or avatar. The definitions below show a few ways each skill might be used

GO-GETTER

She's bold, honest, and determined to succeed. In her mind failure is no reason not to get back up and try again, and again, and again.

INNOVATOR

Thinking outside the box is her specialty, so she's always looking for a creative way to take action.

RISK-TAKER

Courageous and strong, she's keen to try new things and embrace the unfamiliar.

LEADER

She's confident, responsible, and committed to changing the world.

Sample Game Scenarios

To get started, read through the sample scenarios below. Each scenario includes:

- **A Scenario Description:** Scenarios are designed to be situations that require a variety of actions to win. Players will have to think through what kinds of skills would help them navigate the challenges presented in the scenarios.
- **A Reward for Winning:** In addition to creating the best solution for the scenario, game makers must decide on the "Reward for Winning." This is an attribute that best characterizes the skills needed to solve the game. It should be one of the four categories in G.I.R.L.: Go-getter, Innovator, Risk-Taker, or Leader.

Scenario 1:

- **Description:** New Girl at School: There's a new student at school. She doesn't know anyone, and she seems shy. How can you help her make friends?
- **Reward for Winning:** Leader

Scenario 2:

- **Description:** Clean Up the Ocean: You've been learning about the trash-filled oceans and how garbage is hurting sea life. How can you educate your friends and neighbors on what is happening and ways to keep it from getting worse?
- **Reward for Winning:** Innovator

Scenario 3:

- **Description: Helping a Friend:** You notice a girl in several of your classes is being teased regularly. It used to seem harmless, but it's getting worse and no one wants to get involved. Can you help?
- **Reward for Winning:** Risk Taker

For Step Four of the Digital Game Design Badge, create your own game scenario.

Now that you understand how the game works, create your own scenario by thinking through a real-life situation or problem. What challenges exist in the situation?

1. Give your scenario a title and write a couple of specific challenges that are part of the scenario.

2. Then, choose which of the four categories, G.I.R.L, would be the **"Reward for Winning"** if players are successful.

Name Your Scenario:

Description of Scenario with 2-3 Challenges:

Reward for Winning: Check one!

☐ Go-getter

☐ Innovator

☐ Risk-taker

☐ Leader

Activity 5: Play your game

Once you've finished and perfected your game, play it with your family!

Congratulations! You've completed the Cadette Coding for Good 2: Digital Game Design Badge! Click here to purchase it from our store!