Name(s)_____ Period _____ Date _____

Project Guide - Interactive Art

Overview

Traditional artwork might involve drawing a picture, creating a sculpture, fashion or clothing design, or using a variety of materials to build something. Some artists combine these mediums with electronics to create interactive artwork. For example, the artist Jie Qi used watercolors to paint dandelion flowers and when you blow on them, the petals light up and blow away in the wind. Even some greeting cards take advantage of electronics and interaction, such as when you "blow out the candles" on a card and it plays a happy birthday song.

In this project, you will create your own interactive artwork. You can choose the medium you would like to use, such as drawing a two-dimensional picture or creating a three-dimensional sculpture. You must also decide how to use the circuit playground to make the artwork interactive. You should use at least one sensor to have the user interact, and then have at least one output from the circuit playground (like lights or sounds) that adds to the experience.

This project will not use an app - the user will only interact with your artwork and your circuit playground. However, you can use the screen for debugging and keeping track of sensor values to help fine-tune your artwork.

Artwork Brainstorm

We need to brainstorm two things: the type of artwork you would like to create, and how you will use the circuit playground.

You can take inspiration from drawings or paintings or papercrafts like origami, or use materials from around your house for three-dimensional sculptures (like tissue boxes or empty cardboard boxes).

Write a 3-4 sentence description of the artwork you would like to create. You should include the medium you will use (like paper and pencil, or cardboard and glue) and any materials you may need.

Once you have an idea of the artwork you would like to create, we need to decide how the circuit playground will interact with it. You should use at least one sensor to interact with the user, such as using the accelerometer to detect a tilt, or using the light sensor to detect changes in light. You should also use at least one output from the circuit playground, such as the LEDs or the buzzer.

Write a 2-3 sentence description of how you will use your circuit playground with your artwork. Include which sensor you will use, and which output you will use.

Sensors

Make a list of the sensors you plan to use with your app and what it is designed to do with your artwork

Sensor	**How it is used in your artwork**

Outputs

What outputs from your circuit playground will your artwork use? You can use either the LEDs or the buzzer to play music

Output Type	**How it is used in your artwork**

Design Your Artwork

Take some time to create your artwork. Be sure to consider how you will insert and remove your circuit playground from your artwork, and remember to leave room for the plug!

Code Your Artwork

Log into Code Studio and write the code for your artwork. Even though you are not using the screen for this project, you can still use labels to keep track of your sensors and debug your code.

Test Your Artwork

Test your artwork and see how it works! Make sure it doesn't fall apart as you insert or remove your circuit playground!

Reflect

What part of your project are you most proud of? _____

Why? _____

_____

If you had more time, what improvement would you make to your innovation?

_____

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