ACTIVITY 10: California Geography

WIRED-UP

VOCABULARY

Broadcast: A block that sends a message (usually to another sprite)
Receive: A block that does something in response to a message (which probably came from another sprite)
Code: Writing a computer program (like building scripts with blocks). Scripts and sprites that make up the program.
Wait: Block that makes a script pause so that actions happen when you want them to.

ACTIVITY GOAL

In this project, you will learn how to make **sprites** work together in a program by **broadcasting** and **receiving** messages.

BACKGROUND

Sometimes if something happens to one **sprite** you want another sprite to do something in response. To do this, you will need to **broadcast** and **receive** messages between **sprites**.

To make **sprites** respond to each other you use the **broadcast** and **receive** blocks together.

- One sprite **broadcasts** a message:

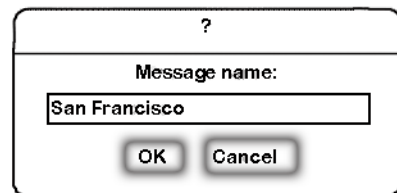- The other sprite **receives** a message:
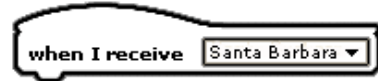
Notice that each of these blocks has a square that you can type in. This is where the **message** name goes.

- To add a new **message** name, <u>click</u> on the shaded box with the little triangle in it, <u>click</u> on "**new…**"

- A box will pop up. <u>Type</u> the name of the city sprite you want the car to drive to.

- *The **message** names must match* for the **sprites** to do what you want.

EXPLORE

1. Open the project. You will see a map of California and different **sprites** that represent cities.

2. Click on the **green flag.**

3. Click on the mission located in **Santa Barbara**. Describe what happens below.
   Hint: If you want to see it again, click the green flag and then the mission again.

_____

_____

_____

_____
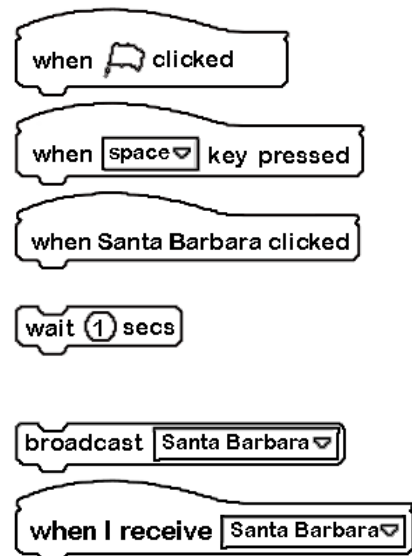
4. Click on the **Control** category and look at the **blocks** available.

5. What **blocks** do you think were used to make the **sprite** for the Santa Barbara mission send a **message** to the **sprite** for the car? Circle the correct **blocks** on the right.

6. What **block** do you think was used to make the car respond to the Santa Barbara mission's **message**? Circle the correct **block** on the right.

Quick Tip: Remember, you can copy scripts that you may want to use more than once. Right-click on the top block then hit "duplicate".

PROGRAMMING CHALLENGE: California Geography

Your goal is to send and receive **messages** so that when you click on a city's **sprite**, the car says the name of that city and drives to it.

PLAN

> **Step 1: Plan how to send messages between each city sprite and the car.**
> In the EXPLORE section you figured out which **blocks** to use to send and receive **messages** between **sprites**. You will need a new set of **blocks** for each **sprite**.

> **Step 2: Plan how to make the car sprite say each city's name.**
> What **block** do you think you could use to make the car *say a city's name* when you click on the city's **sprite**? Circle the **block** below.

when [space ▼] key pressed   point in direction (90▼)   glide (50) steps

broadcast [Santa Barbara ▼]   say [Hello!] for (2) secs   when 🏴 clicked

> o   Write what the **car** will say when you click on all of the city's **sprites**.
> *Hint: Each city's name is on the map in the EXPLORE section.*

Capitol Building: _____

Lake: _____

Golden Gate Bridge: _____

Mission: _____

Ear of Corn: _____

Hollywood sign: _____

> **Step 3: Plan how to make the car move towards a city.**
> What **block** do you think you need to use to make the car drive to a city when you click its **sprite**? Write your choice below.

_____

CREATE

Now it is time to create your project. Make sure to add **scripts** to all of the city **sprites** and the car sprite (Santa Barbara is already completed).

Double-check: Did you remember everything?
1) Did you **broadcast** and **receive** messages between the car **sprite** and all of the city **sprites**?
2) Does your car **sprite** drive to each city **sprite** and say the city's name?

IMPROVE

Think about what you could do to make your project even better. Notice that in **Looks** category, there are **blocks** that you didn't use in this activity.

1. Could you use any of these **blocks** to make your project more interesting? <u>Try</u> some out and <u>describe</u> what they do below.