



KELP Module 1

Topic: Sending Messages

ACTIVITY 10: California Geography **KEY**

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

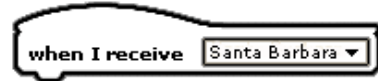
In this project, you will learn how to make **sprites** work together in a program by **broadcasting** and **receiving** messages.

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:

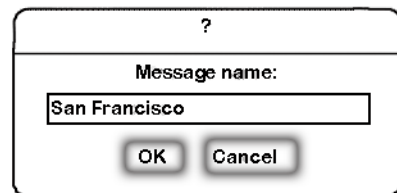


Notice that each of these blocks has a square that you can type in. This is where the **message** name goes.

- To add a new **message** name, click on the shaded box with the little triangle in it, click on “**new...**”



- A box will pop up. Type 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.



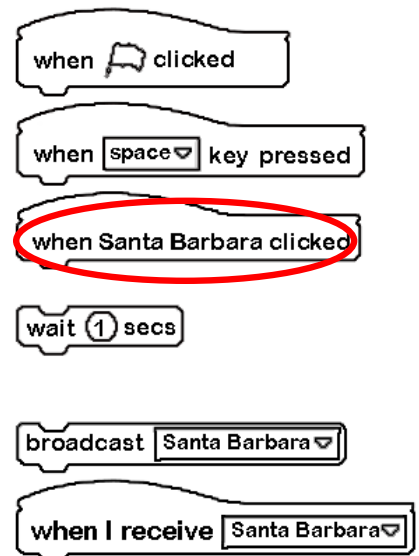
EXPLORE

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.



The car drives to the Santa Barbara Mission and then says "Santa Barbara".

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.



- 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: Sacramento

Lake: Lake Tahoe

Golden Gate Bridge: San Francisco

Mission: Santa Barbara

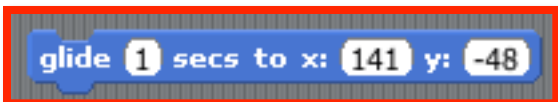
Ear of Corn: Fresno

Hollywood sign: Los Angeles

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.

There are other correct blocks also.



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? Try some out and describe what they do below.

The IMPROVE sections are designed to be open-ended for students and there are multiple correct responses that can be given.