

Lesson 7: Get sprites to broadcast



By the end of the lesson, students will be able to

- ✓ Use the broadcast blocks to synchronize events in their project.

Things to do before the class

- ✓ Make sure all the computers that the students will use have decent internet connection.
- ✓ Make a list of usernames and passwords for each group's Scratch account. Some students might not remember their usernames or passwords.
- ✓ Read the student guide and engage with the given activities.
- ✓ Have a whiteboard and marker to write things down.
- ✓ Read the lesson plan and watch the videos linked inside. These videos are meant for teachers to help them learn Scratch as they run these lessons for their students.



0. Access the student guide (5 mins)

- ✓ Ask students to type this URL in the address bar: cd8.notion.site

Note: Because students have typed the address in the last class, the browser will usually auto complete the address when they type the first few characters.

1. Debugging exercise (10 mins)

Ask students to read till the **Let's start with debugging!** section (page 1 & 2).

Let them debug any one of the two projects.

- ✓ Provide hints if needed but avoid giving direct solutions.
- ✓ It's okay if students aren't able to debug their projects successfully. What matters is that they engage with the bugs and try to understand the code.
- ✓ Some students will debug their projects sooner than their peers. Ask them to try debugging the other project too.



2. Getting ready for the lesson (5 mins)

Ask students to read the **Getting ready for the lesson** section (page 2). They should

- ✓ Sign in to student accounts
- ✓ Change color mode to high contrast
High contrast blocks are much easier to read
- ✓ Explore the backpack
Students use backpack to get sprites from other projects

3. Exploring starter projects (15 mins)

Ask students to go through the **Let's explore some examples** section (page 3 & 4). Ask students to explore any one of the two starter projects. Both projects highlight the use of broadcast blocks.

- ✓ Students might face difficulty in understanding the instructions written on the project page. Explain briefly if necessary.
- ✓ Ask students to "see inside" the project, play with the code, change it and create something slightly different.
- ✓ The diagram on page 4 illustrates how broadcast blocks work.

A key concept to be introduced in this lesson is of **broadcasting** - sending a message or signal to all the sprites and backdrops, including itself. That message is a signal to do something.

- ✓ Some students might finish working on their starter project before the given time. Ask them to work on the other project.



4. Let's create some stories (40 mins)

Ask students to go through the **Let's create some stories** section (page 5). Three prompts are given to help students get ideas. Let them work on a different idea if they wish to.

- ✓ Ask students to make use of broadcasting. In the previous lessons they used wait blocks to create delays and synchronize sprites. Broadcast blocks will let them do the same thing more easily.
- ✓ If they are confused, ask them to revisit one of the starter projects. Ask them to think on these questions:
 - ✎ What are the major events in your story?
 - ✎ In what sequence do these events take place?
- ✓ Some students might finish their project sooner than their peers. Ask them to work on the **More things to explore** section.

Note: It's important that the names of messages received and sent match. Give some easy to identify names to the messages such as apple, walk etc.



5. More things to explore (Optional)

This section helps you differentiate learning in your class. Ask students, who completed their project to go through the **More things to explore** section (page 6). Ask them to edit sprites to create walk cycles, or to create facial expressions following emojis.

This section is also useful if you need to repeat this lesson for some reason. The students who have already learnt the concepts from this lesson can work on animating names, or on the other starter project, or debugging activity.

6. Reflection (10 mins)

Ask students to go through the **Let's Reflect** section (page 6). Ask students to think on the questions and discuss with their group member. If you can, provide them with pen and paper to note their reflections.

- ✓ Before students leave, ask them to exchange their reflections with two students other than their group member.

Note: It's important for students to take time to reflect on these questions. It's also important that they listen to the reflections of their peers.