

Lesson 8: Sensing things I



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

- ✓ Use conditions to check if something has happened or not
- ✓ Use wait until and repeat until blocks to create delays until specific things happen
- ✓ Use comparator operator to compare values
- ✓ Create interactive stories where the user also participates in moving the story forward

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

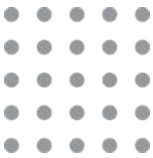
Note: Because students have typed the address in the last class, the browser will usually auto complete the address when they type the first few characters.

1. Debugging exercise (10 mins)

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

Let them debug any one of the two projects. The Cat project is about broadcasting, learnt in the previous lesson. The Kiran project is about setting rotation style of sprites. It's not introduced in previous lessons but is a useful technique.

- ✓ 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**
Students often struggle with the CAPTCHA
- ✓ **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 2). Ask students to explore any one of the two starter projects. Both projects are short, interactive projects that require the viewer to complete certain actions for the story to progress.

- ✓ 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.
- ✓ Nudge students to pay attention to the conditional blocks - the wait until and repeat until blocks, and the conditions in them.

A key concept to be introduced in this lesson is of [conditions](#) - checking if something is true or false and making decisions accordingly.

- ✓ 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 interactive stories (45 mins)

Ask students to go through the **Let's create interactive stories** section (page 3). A interactive story goes one step further from simple animated stories.

- ✓ In their projects, ask students to think about how they can make the viewer interact with the story.
 - ✎ What kind of actions can they get viewers to perform?
- ✓ Ask students to explore the blocks provided as suggestions. These conditional blocks are necessary to create make interaction happen in their projects.
- ✓ If they are confused, ask them to revisit one of the starter projects. Ask them to think on these questions:
 - ✎ What are the actions that viewers need to perform for the story to progress?
 - ✎ How do the sprites know that an action has been completed?
- ✓ It's important to select the appropriate condition for the project. Should the sprite touch a color? or should it touch another sprite? or should its x position be less than 100? Knowing this helps students select the correct blocks

Some students might finish their project sooner than their peers. Ask them to work on the **More things to explore** section.



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 5 & 6).

This section guides students on creating their own sprites by drawing and reshaping individual parts, and then assembling them together. Watch this video to learn more: [Create a Sprite with the Scratch Paint Editor | Tutorial](#)

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: Reflecting on their learning experience helps students notice things they might have otherwise missed. Listening to the reflections of their peers helps students see things differently and relate to their peers better.