

## Event

### Overview

<b>Concept</b>	<b>Event</b> ——An action that causes things to happen
<b>Explanation</b>	Example: When you press the button, the light is turned on.  Event: press the button    Result: the light is turned on
<b>Learning Objectives</b>	1. Understand the concept of Event; 2. Write programs that include multiple Event;
<b>Teaching Preparation</b>	1. One green flag and one red flag; 2. A whiteboard and a whiteboard marker(or you can use a blackboard and chalks); 3. One Codey and a Bluetooth dongle(or the USB cable)for each student but it's fine if 2 or 3 students share one set; 4. A computer with installed mBlock 5 for each student but it's fine if 2 or 3 students share a computer; 5. Hand out a self-review report and a project report for each student.
<b>Time</b>	30-60min

### Teaching Procedure

#### Step 1: Icebreaking Game - Self-introduction

Teachers and student give a self-introduction first.

Game rule: Have everyone repeat the names of all the people who have introduced themselves before. For instance, the first student said, "I'm Laven"; the second one said, "I'm Denial, the previous student is called Laven"; the third one introduced, "I'm Herry, and the previous two students are Laven and Denial"... And the last one said, "I'm Teddy, the previous students are Laven, Denial, Herry, Zoe, Melody, Lily and Nancy." Once again with the same rule in the opposite direction.

#### Step 2: Explain the Key Point - Event

Explain the concept of Event to students: Event refers to the action that triggers something to happen. Teachers can give an example here. For instance, when you press the button, the light will

be turned on. In this case, pressing the button is the Event and the result is that the light is turned on.

### **Brainstorming**

Ask students questions: Are there any Event in daily life? And what happens due to the Event? Give students time to think and teachers can drop some hints in the process. To name a few, the alarm goes off (Event) so you get up(what happens next); press the switch(Event) and the television is turned on (what happens next).

### **Step 3: Lead-in Game Red and Green Flag**

Teachers can design four events:

1. Raise the red flag with one single hand;
2. Raise the green flag with one single hand;
3. Raise the two flags with both hands and cross the arms over your chest;
4. Raise the two flags with both hands and spread the arms.



1

2

3

4

Have students stand up first.

### **The four events trigger the following actions accordingly:**

1. Raise the red flag with one single hand - Put both hands on the shoulder;
2. Raise the green flag with one single hand - Put both hands on the waist;
3. Raise the two flags with both hands and cross the arms over your chest -Put both hands on the knees;
4. Raise the two flags with both hands and spread the arms - Clench your fists over your chest.



1

2

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4

When students have no trouble performing the actions, it is time to have them make some sounds as well:

1. Raise the red flag with one single hand - Put both hands on the shoulder and shout out “Do”;
2. Raise the green flag with one single hand - Put both hands on the waist and shout out “Re”;
3. Raise the two flags with both hands and cross the arms over your chest -Put both hands on the knees and shout out “Mi”;
4. Raise the two flags with both hands and spread the arms - Clench your fists over your chest and shout out “Bingo”.

Teachers are the ones that wave the two flags, and students are the ones that make actions and sounds in response to the events.

**Tips:**

1. Teachers can personalize the actions and sounds to meet the different teaching purposes or the needs of students;
2. When students are skilled at following the commands, teachers can speed up a little bit and make it more rhythmic.

**Step 4: Student Activity**

**Task 1: Download the software and connect the device.**

Navigate students to download mBlock 5 for PC.

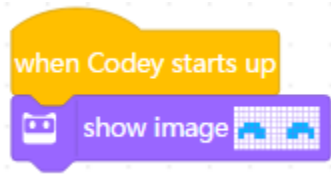
**Tips:**

1. Teachers can install mBlock 5 on the computer beforehand to save time for the class;
2. Before the class begins, the first thing is to test each of the computers. Make sure mBlock 5 can work well on each of the computer and codes can be uploaded to Codey Rocky;

3. Before the class begins, we should check each Codey Rocky to see whether it functions well or not.

**Task 2: Demonstrate**

Teachers operate and students follow. (reference case for teachers: *Start up and Smile*)



Program Story:

The yellow-headed block 【when Codey starts up】 is the Event: it means when Codey starts up;

You can edit on the blue block 【show image】 to change the image on the LED display: Codey smiles.

**Task 3: Practice**

Have students work in a pair to finish the task as the teacher did. Tell them to match different expressions or images to the three events respectively: when button A pressed; when button B pressed; when button C pressed.

**Tips:**

If students are quick learners, then it's OK to jump to task 4 directly.

**Task 4: Let students create**

Have students work in a pair to finish the task. Tell them to match different expressions or images to the three events respectively: when button A pressed; when button B pressed; when button C pressed. At the end of this session, teachers should direct students to share their works with the class. Students need to fill in the project report before they share the works and they need to display the works by following the questions from the report.

**Tips:**

1. If time allows, teachers can let students edit the images as they like;
2. If there are some students who fail to finish the task on time, invite them to share one thing that happened when they were writing programs. It could be something funny, a challenge they confront or a problem they have;

3. Students can display their works to the whole class or they can share the works with groups one by one;

4. Students might not be willing to spend much time filling in the project report so tell them to put down key points;

5. When students are showing their works, they need to give details about the work and elaborate on the project report;

6. Teachers can tailor the time limits in line with different teaching purposes and students characteristics. Recommended time: 10 min

Teachers can refer to the sample project: *Press Button to Change Expression*:



Program Story:

【When button A is pressed】 , then 【play sound switch】 and Codey open its eyes;

【When button B is pressed】 , then 【play sound switch】 and Codey smiles;

【When button C is pressed】 , then 【play sound switch】 and Codey becomes sad.

**Extension Task: Add LED lights**

1. Add a new action for each event – Different RGB light colors;

2. Challenge: Try to program with other events, like 【when Codey is shaking】 .

**Step 4: Wrap up**

Summarize what the topic is for today, Event and its concept. Teachers need to highlight one thing: The event serves as the starting point for a program. When we are writing programs, the first thing we should do is to select a proper triggering event.

### Self-review Report



Name:

Age:

- Answer the following questions and record your outcome:

Describe what you've learned with one or two sentences.

Describe what you like most and least about this class session briefly

What I like most

What I like least

Draw an event that happened to you today and an action caused by the event

Event	Action

Tell a short story to us (Describe how the codes work from top to bottom)

```
when button A is pressed
  show image [happy face]
  play sound laugh

when button B is pressed
  show image [neutral face]
  play sound hum

when button C is pressed
  show image [sad face]
  play sound angry
```

You can paint how you feel about this class session in the upper right corner of the self-review report.

### Project Report

**Name:**

**Group Name:**

- Follow these questions to show your work:

What events did you use? What's the image, sound or light for each event?

Event	Action

Do you like your design? What are you satisfied with? What are you unhappy with? Any improvements in the future?

<input type="radio"/> Love it <input type="radio"/> Like it <input type="radio"/> So-so <input type="radio"/> Don't like it <input type="radio"/> Hate it

What's the most amazing thing for you when you were creating the project?

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Did you come across any obstacles? How did you overcome?

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### **Instructor Assessment**

1. Cooperation (30%): Evaluate how the group performs in terms of labor division, collaboration and coordination.
2. Completeness (20%) : Evaluate whether the project is complete enough. Of course, the project must stick to the topic first.
3. Innovation (20%) : Evaluate how creative the project is.
4. Functionality (20%): Evaluate whether the work is functional enough?
5. Difficulty (10%) : Evaluate what is the difficulty level of the work?