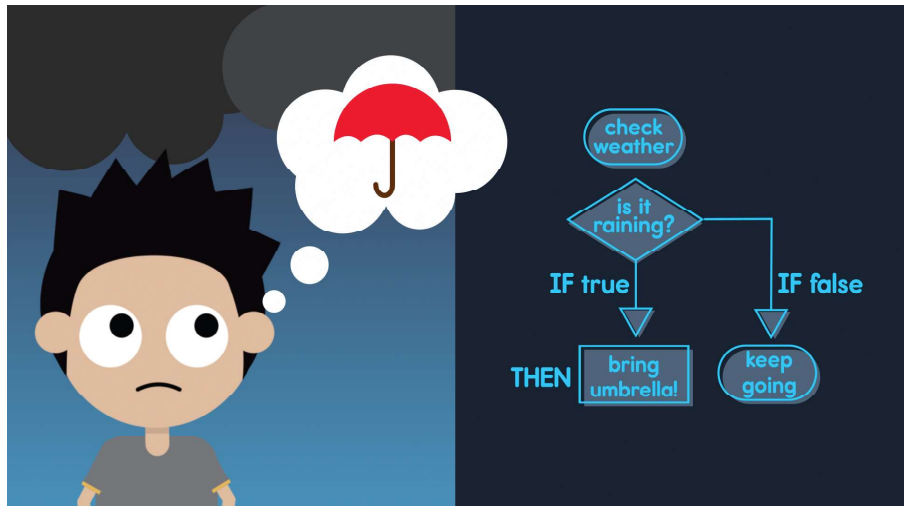# Conditions

## Info Sheet

### WHAT ARE CONDITIONS?

Conditions in coding are things that decide! Conditions (also called 'conditionals') are pieces of code that check for something to be true before they continue on to something else. They always have an 'if' and a 'then' within them. So 'if' something specific happens, 'then' something else will happen. A common real life example of a condition is this: IF you eat your dinner THEN you can have dessert!

### THE CONDITIONS VIDEO

The conditions video introduces the concept of condition, first through real life examples, then through a block coding exercise in a basketball video game.



(0:40) We use conditions in our life every day! For example, let's think about the weather: IF it is raining THEN you should bring an umbrella!

### TAKE AWAYS:

- Conditions are ways to set up a computer program to make decisions.
- Conditions are often set up to check if something is true or equal to something else.
- Conditions have an 'IF' part and a 'THEN' part (and sometimes an 'ELSE' part).

## Activities

### IF-THEN Simon Says

This activity will explore examples where conditions can show up in real life. Tell learners that they are going to play a game, one they have probably played before. Simon Says! If learners have not played before, take some time now to explain the rules. Explain that the game uses conditions to tell the players what to do! For example, "IF I jump up and down, THEN you jump up and down."

Remind learners that conditions check for something to be true before doing something else. Ask learners 'how can we know when Simon is being truthful?' Guide them to understand that, 'IF' Simon says "Simon says" before an action, 'THEN' we would copy that action. 'IF' Simone does not say "Simone says" before an action, we know that our condition is not true so we don't do anything!

After learners have played a few rounds, ask them to brainstorm ideas about other examples they may know that use conditions.

### Simon Says Extention

You may also increase the difficulty of the game to help learners understand different uses of conditions! You can add in a rule that players should now do a different action than Simon; for example IF I jump up and down, THEN you clap your hands. This will help learners understand not all conditions just mimic the original instructions. If you wish, have learners write down possible conditions they could use for the game. If possible, share as a group. It can be written as follows: IF I ____ (fill in the blank), THEN you _____ (fill in the blank).

You've just created a loop! Have learners compare how they originally wrote the actions down in comparison to the loop they created and ask them why they think loops might help them save time. Mention the example in the video of the robot walking up the stairs.

## Song Lyrics

**Conditions conditions**
**We use conditions all the time!**
**But what are conditions?**
**They are things that decide!**

Conditions in coding, well you use them when
You need to make a decsion
Usually they have an IF and a THEN
And you can use them again and again!

You use conditions in your life every day!
When you think about choices when you work and you play
You use IF's and THEN's in your life every day!
Listen up and I'll throw some examples your way:

IF you are hungry THEN you should eat
IF you are smelly THEN you should wash your feet
IF you finish your homework THEN you can watch TV
And IF you want to learn THEN listen to me!

**Chorus**

Imagine you are coding a simple game
To shoot a ball into a hoop is the aim
2 points for each ball that goes in
But now this brings up a good question...
How is the computer gonna know when
To add 2 points when the ball goes in?
I think it's time to use a condition
And of course it's gonna have an IF and a THEN
Let's go! So... Points are stored in a variable called 'theScore'
theScore starts at zero but there's gonna be more!
Next, hmmm... what are we gonna do?
Set up a true-false variable is what we'll do!
We'll call this new variable 'isItIn'
false when you start the game
But it will change to true if the ball goes in
Now we'll set up a condition
That will check the value of IsItIn
And if it is true, you know what we're gonna do?
Then theScore will go up by 2!
Aww ya. Yo doin it. Just remember, a condition:
Uses an IF and THEN to plan the path of a decision!
Ya a condition: Uses an IF and THEN to plan the path of a decision! (repeat)

**Chorus**