



Conditional Schedule

Educator's Guide

Overview

CS Hands-On is a 501(c)(3) nonprofit teaching computational thinking skills through technology-free lessons and activities. This curriculum is built to teach fundamental computer science concepts in an engaging, hands-on way. In this mission, students use if-then statements to create a daily schedule.

- **Prerequisite Knowledge**

There are no prerequisites to this lesson.

- **Lesson Details**

At Evaluatus, students will learn to evaluate judgements with Ellis. Students will learn the structure and syntax of an if-then statement. Following this, they will create a conditional schedule to write if-statements for decisions they make during certain times of the day.

This lesson was developed for students ages 8 to 13, and can be modified for students of all skills and ages. This lesson takes roughly 30 minutes.

Learning Objectives

- **Key Question**

How do we use if-then statements in our daily life?

- **Key Terms**

If-then statement: A conditional statement used in computer science to trigger a set of instructions when a certain condition is true

- **Curriculum Standards**

Students should be able to...

- Explain how for if-then statements are created and used (Evaluation)
- Read, write, and interpret for if-then statements (Literacy)
- Draw and write a conditional schedule using if-then statements (Creative Arts)

[View standards addressed here](#)



Lesson Plan

• Materials

- Conditional Schedule worksheet (per student)
- Coloring tools (Markers, crayons, colored pencils)

• Setup

- Hand out a Conditional Schedule worksheet to each student
- Set up your classroom to form students in groups

ANSWER KEY & LESSON ANNOTATIONS

Evaluatus
Mission 1

Name: _____ Date: _____

Conditional Schedule

A Day in the Life

At Evaluatus, Ellis's daily schedule depends on many factors: the weather, what day of the week it is, etc. Let's find out how Ellis makes decisions during different times of the day!

What are If-then Statements?

If-then statements are a type of conditional statement used in computer science to trigger a set of instructions when a certain condition is true. Programming languages represent if-then statements using the format: **if** a condition is reached, **then** perform an action.

Follow Ellis around Evaluatus to learn how she uses if-then statements in her daily life!

8:00 AM



If Ellis is hungry,
then Ellis will eat a poppyseed bagel.

11:00 AM



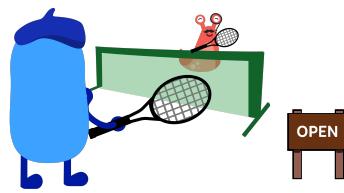
If it's sunny outside,
then Ellis will wear sunglasses.

Reflect

Why are if-then statements useful? If-then statements help us to make decisions that depend on a specific condition. For instance, if it's Sunday afternoon, then I will water my plants. This condition reasoning allows us to do an action if some condition is true.



2:00 PM



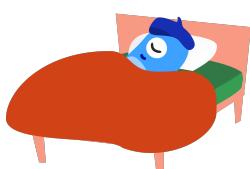
If the Evaluatus park is open,
then Ellis will play tennis with Pancho.

7:00 PM



If Ellis has finished her schoolwork,
then Ellis will read a book.

9:00 PM



If Ellis is sleepy,
then Ellis will go to bed.

Reflect

Apart from these everyday examples, students may be wondering how computers use if-statements.

Computers use if-statements everywhere! For instance, if I press the letter 'a' on my keyboard, then it will write the letter 'a' on my screen. Additionally, if I press the power off button, then the computer will shut down.



Your turn!

Now that you're more familiar with if-then statements, you will be creating your version of a conditional schedule! Gather a set of colored pencils to draw and fill in the if-statements below.

8:00 AM

If _____,

then _____

10:00 AM

If _____,

then _____

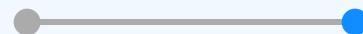
12:00 PM

If _____,

then _____

Extension

Before beginning the activity, it may be helpful to over some if-then statements with the class as a whole. Brainstorm a few if-then statements that you use every day!



3:00 PM

If _____,
then _____

6:00 PM

If _____,
then _____

8:00 PM

If _____,
then _____



Wrap up & reflect

Group students into pairs and have them discuss the following reflection questions. Afterwards, have students share their ideas as a class.

- What's one big idea you learned from today's activity?

Ex.

- If-then statements help us make decisions in our everyday lives
- If-then statements use one condition and one/multiple actions
- I use many if-then statements in my daily routine!

- Why are if-then statements useful?

Ex.

- If-then statements help us make decisions in our everyday lives
- If-then statements help us predict events that may happen in the future