

Guess the Day of Chanukah

Teacher Workbook



Your students will make:

A game on Scratch using variables (place holders) and repeat blocks

Equipment you will need:

- Laptops/Computers
- Logins for Scratch

Time needed:

1 - 2 lessons

Your students will learn:

In this lesson, your students will learn how to code a game in Scratch using **events** to start the code, **loops** to repeat the code a certain number of times as well as **conditionals** and **variables** to set the number of days.

Students will also learn about Chanukah and why we celebrate the holiday for eight day.

Coding concepts and computational thinking:

Events: An event tells the program how it is going to start. This could be by clicking the green flag, tapping on a specific key on the keyboard or clicking on a sprite.

Loop: A loop repeats a certain action or section of code for a specific amount of time

Conditionals: Using a conditional means that the code can only run under certain conditions. Such as **if the number is lower/higher than the variable** the Sprite will then say that it's too low/high and ask us to guess again. The part of the statement in bold is the conditional. The code of say it's too low/high and guess again, will only happen under those conditions.

Variable: A variable is a placeholder for information which has the ability to change. In this lesson the variable is **a number** which would be set as the number of

Algorithm: A list of steps to follow in order to complete a task

Debug: Finding and fixing problems in the algorithm

Lesson:

Introduction:

Start by showing your students the example project available [here](#). Do not show the code in the project as they will be coding the game themselves.

We celebrate Chanukah for eight days and the chanukiah is lit after sunset each night. The chanukiah is placed by a window in the house. In this game, the children will code a game to see what night of Chanukah it is.

By the end of this unit, students should be able to use logical reasoning to explain how their algorithm (code) works. They should also be able to (with help for grades 3-4) debug any issues within their code.

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Part One:

Students should be in pairs to follow the **student workbook** to create their Chanukah games. This should take 1 - 2 lessons to complete depending on the coding level of the students.

Students should be able to work through this independently and the teacher should be available for support and guidance.

Part Two:

Following on from the coding activity, a more in-depth discussion can take place with the students regarding the miracles of Chanukah and the reasons why we celebrate for eight days.