Introduction:
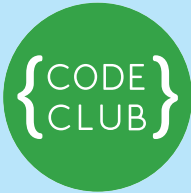
This project is like the game **Whack-a-Mole**. You get points for hitting the witches that appear on the screen. The aim is to get as many points as possible in 30 seconds!

✅ **Activity Checklist** – Follow these **INSTRUCTIONS** one by one

🚩 **Test Your Project** – Click on the green flag to **TEST** your code

🔺 **Save Your Project** – Click on this to **SAVE** your work 💾

STEP 1: Create a flying witch

✅ Activity Checklist

1. **Start a new scratch project.**

2. **Remove the cat sprite** and replace the background with the **nature/woods** background.

3. Use the `new sprite from file` button to add a new witch sprite to the project (use the **fantasy/witch1** costume).

Now we want to make our witch move

4. Add a `Variable` for this sprite only called `speed`.
On the **Stage**, the stage monitor for this variable should say "**Sprite1 speed**".
If it just says "speed", delete the variable and create it again, for this sprite only.
Uncheck the box next to the speed block in the **Variables palette** so it does not show on the Stage.

The speed variable will control how fast the witch moves. We use a variable so that we can change how fast the witch moves as the game progresses.

5. We want the witch to start moving when the game starts, **so make a script like this:**

```
when [green flag] clicked
set speed to 5
forever
    move speed steps
```
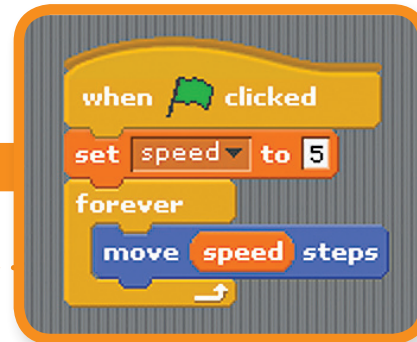
🚩 Test Your Project

Click the green flag and see what your witch does. Why does she get stuck on the edge of the screen?

6. To stop the witch getting stuck we need to make her go back the other way when she touches the edge of the screen. Below your **move speed steps** block add an **if on edge, bounce** block.

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7. To stop the witch flipping upside down, click on the **only face left-right** button in the Sprite Summary area:

☐

🚩 **Test Your Project**

Click the green flag.

☐

Does the witch move from side to side across the screen?

⏏ **SAVE YOUR PROJECT** 💾

☐

Things to try

- **Try changing the value of the speed variable to make her fly faster or slower.**

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- **How would you make the witch get faster the longer she flies?**
  (This is a tricky one, so don't worry if you can't see how to do it. You'll get more clues as you work through the project.)
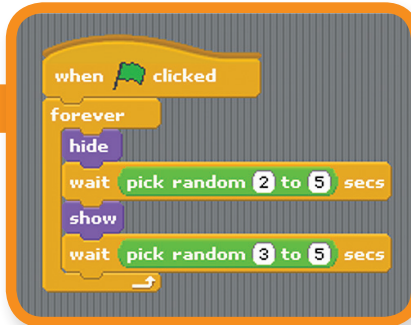
☐

STEP 2: Make the witch appear & vanish randomly

✓ Activity Checklist

To make the game more fun, we want the witch to appear and vanish randomly. We'll do that with another script that runs at the same time as the one that moves the witch. This new script needs to hide the witch for a random time, then show her for a random time, and repeat that forever (or until the game finishes).

Create this script for the witch:

```
when [green flag] clicked
forever
    hide
    wait (pick random 2 to 5) secs
    show
    wait (pick random 3 to 5) secs
```

🚩 Test Your Project

Click the green flag.

Does the witch move from side to side across the screen and vanish and appear again randomly?

▲ **SAVE YOUR PROJECT** 💾

Things to try

- **Try changing the range of the random numbers. What happens if you pick very big numbers or very small numbers?**

  (Does this give you any more clues for how to make the witch speed up the longer the game is played?)

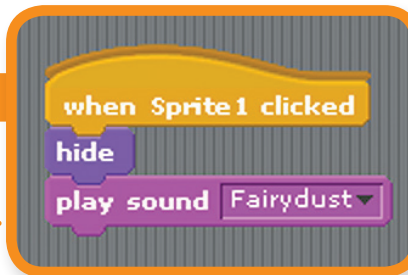## STEP 3: Make the witch disappear when she's clicked

Keep track of your progess by ticking off the boxes below:

✓ Activity Checklist

To turn this into a game, we need to give the player something to do. They need to click on the witch to make her disappear. When the witch is clicked, we want her to disappear and play a sound.

1. In the **Sounds** tab, import the sound **electronic/fairydust**.

2. **Add this script to the witch:**

```
when Sprite1 clicked
hide
play sound Fairydust ▾
```

🏁 Test Your Project

Click the green flag.

Does the witch disappear and play the sound when you click it?

⏏ SAVE YOUR PROJECT 💾

Things to try

• **Ask your volunteer if you can record your own sound to play.**

STEP 4: Add a score and timer

✔ Activity Checklist

We've got a witch, but now we want to make a game! We want to score points every time we click on the witch but we also want to have a time limit on the game. We can use a variable for the score and the timer.

1. Create a new **Variable** for all sprites called **score**, and alter the script for the witch to increase this variable by one when she is clicked.

   ```
   when Sprite1 clicked
   hide
   play sound  Fairydust▾
   change  score▾  by  1
   ```

2. Switch to the **Stage** and create a **new variable** (this time just for the stage) called **timer**. Add a new script that occurs when the green flag is clicked to set **timer** to **30** and reset the score to **0**. Then use a **repeat until** block to wait a second and then reduce **timer** by one. This should repeat until timer is 0, at which point use **stop all** to stop the game.

   ```
   when  🏳  clicked
   set  timer▾  to  30
   set  score▾  to  0
   repeat until  < timer = 0 >
       wait  1  secs
       change  timer▾  by  -1
   stop all ⬣
   ```

🏳 Test Your Project

⚠ SAVE YOUR PROJECT 💾

Things to try

• **How might you make the witch speed up as the game goes on?**

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Well done you've finished the basic game. There are more things you can do to your game though. Have a go at this challenge!

Challenge: Add more witches

If one witch is good, more must be better! **Let's have three witches flying around.**

- Duplicate the witch by **right-clicking** it in the sprite list.

- For each witch **adjust the size of the sprite** so the witches are different sizes.

- For each witch change the **speed variable** so that they fly at different speeds.

- Move the witches around the canvas so that they are not all together.

⚑ Test Your Project

Click the green flag.

Do you have three witches that move from side to side across the screen, randomly appear and disappear, and disappear when you click on them?
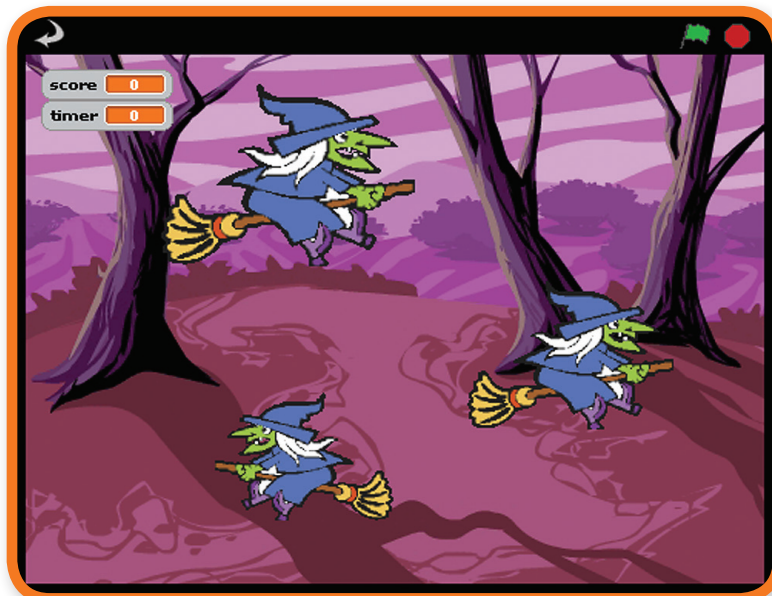
SAVE YOUR PROJECT

Things to try

- **How many witches is a good number for the game?** ☐

- **Can you make the witches look different? You could either edit their costumes, or use some blocks from the Looks palette to change them.** ☐

- **Can you make the witches be worth different points? How about making the fastest (and smallest) witch worth 10 points?** ☐

Well done you've finished, now you can enjoy the game!

Don't forget you can share your game with all your friends and family by clicking on **Share** on the menu bar!