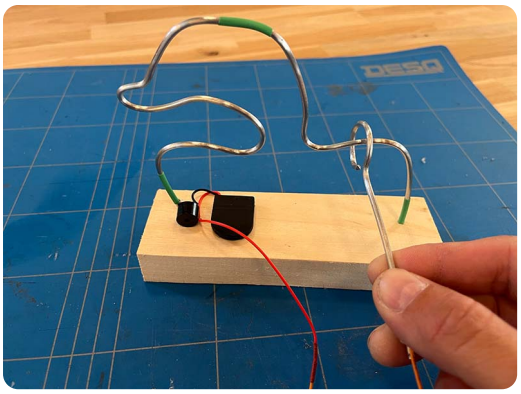


Buzz wire game

Make a game where you guide a loop along a wire spiral without touching it.

AGE
9+ yrs

TIME
45–60 min

electronics wood

Scan for the online version

What do you need?

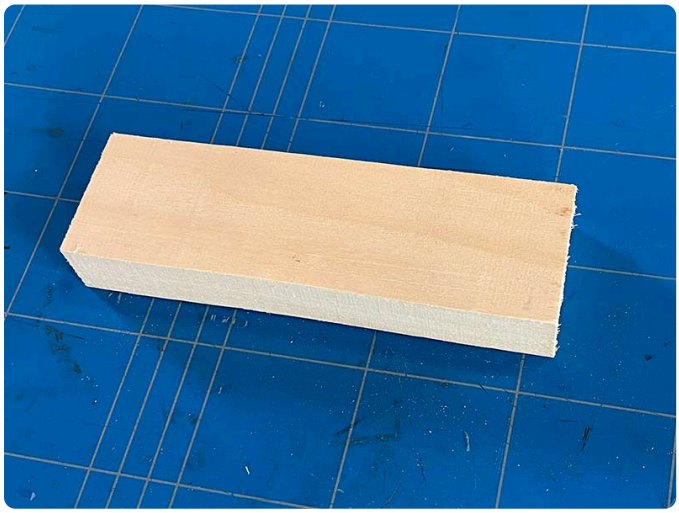
MATERIALS

- [ ] Wooden board
- [ ] Iron wire
- [ ] Heat-shrink tubing
- [ ] Buzzer
- [ ] Battery holder
- [ ] Batteries
- [ ] Solder

TOOLS

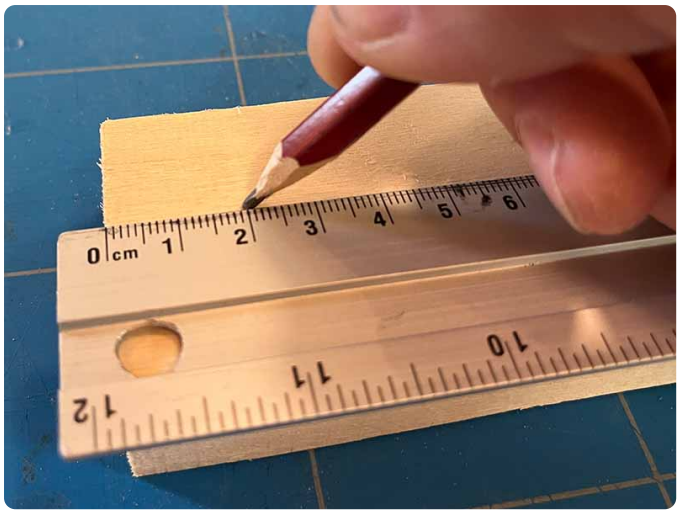
- [ ] Saw
- [ ] Drill
- [ ] Wire cutters
- [ ] Sandpaper
- [ ] Pliers
- [ ] Soldering iron
- [ ] Glue gun
- [ ] Lighter

Steps



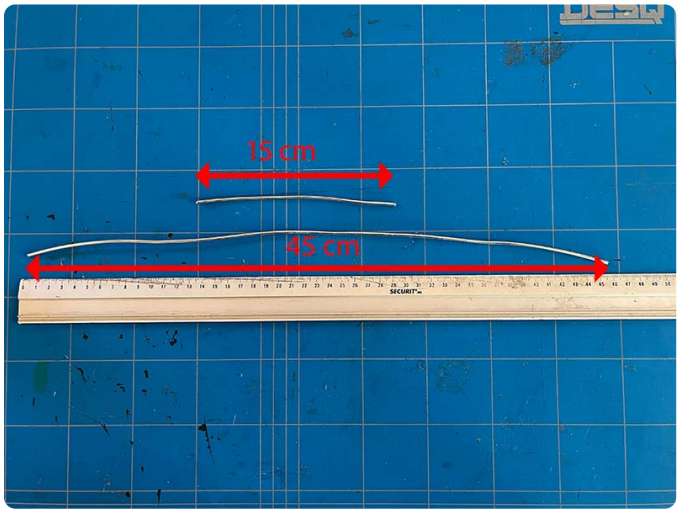
1 Prepare the board

- Saw a wooden board to approximately 15 x 5 cm.
- Drill the holes for the spiral about 2 cm from the edge of the board.





1 Prepare the board — *continued*



2 Prepare the wires

- Cut 30 cm of iron wire for the spiral and 12 cm of iron wire for the handle.
- Sand the iron wire so it makes good electrical contact.
- Bend a loop at the end of the handle.



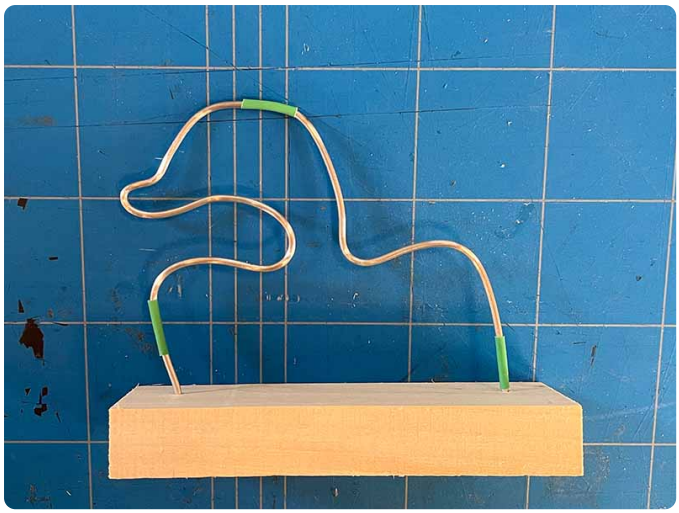


2 Prepare the wires — *continued*

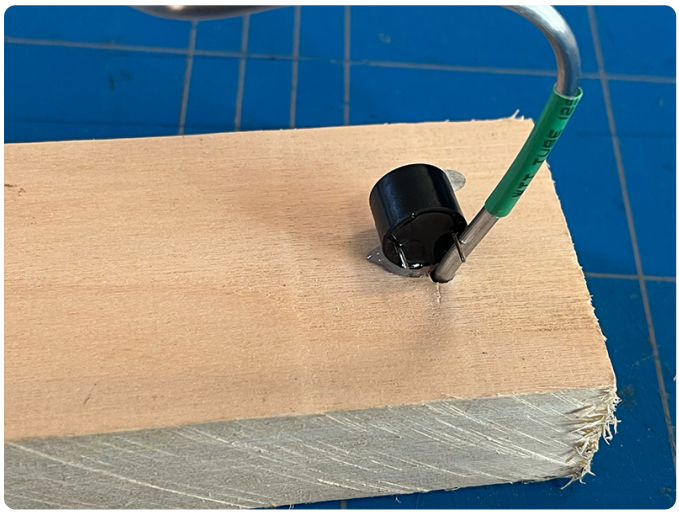


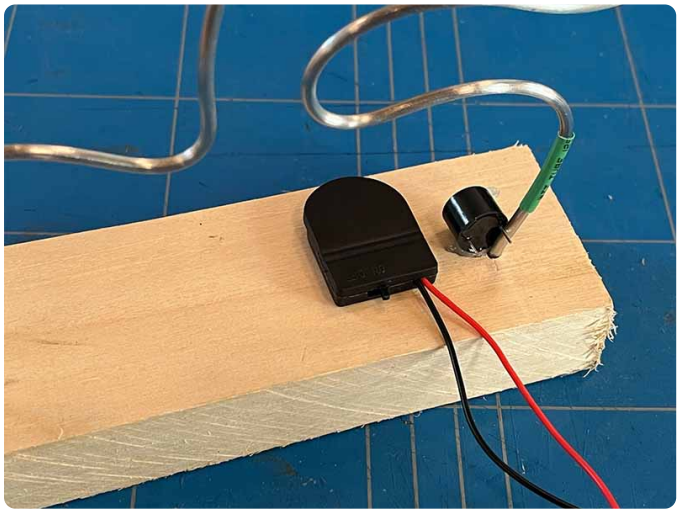
3 Build the spiral

- Cut three 2 cm pieces of heat-shrink tubing.
- Slide one piece of heat-shrink tubing to the middle of the long piece of iron wire.
- Bend the iron wire into a spiral.
- Put the other two pieces of heat-shrink tubing around the start and end of the spiral. Do not shrink them yet.
- Place the ends of the spiral in the wooden board.



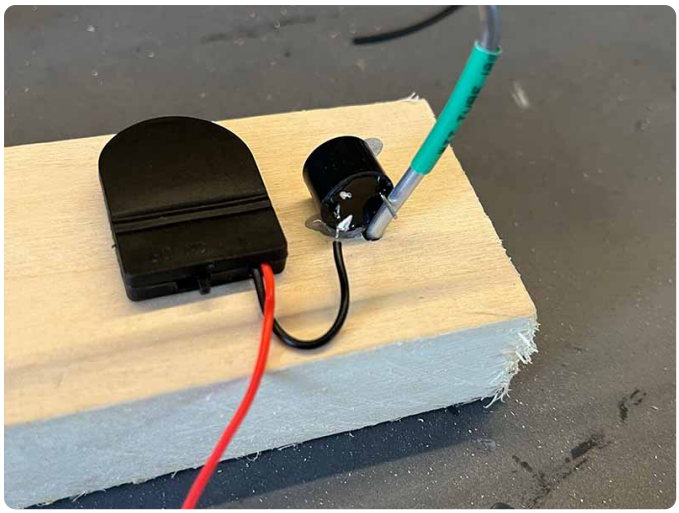
3 Build the spiral — *continued*

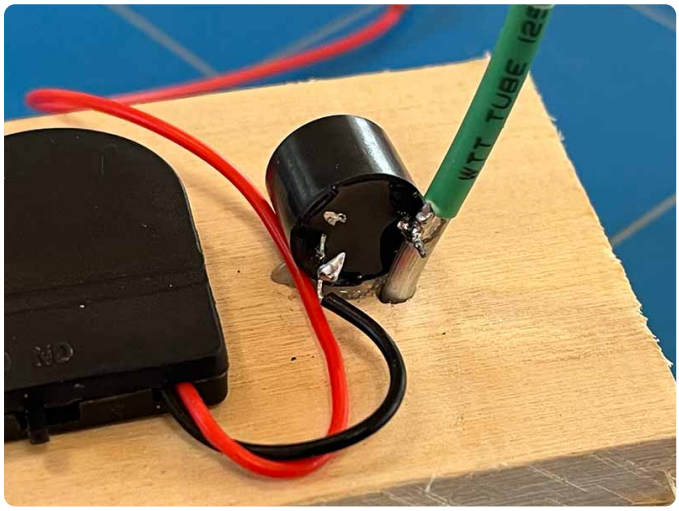


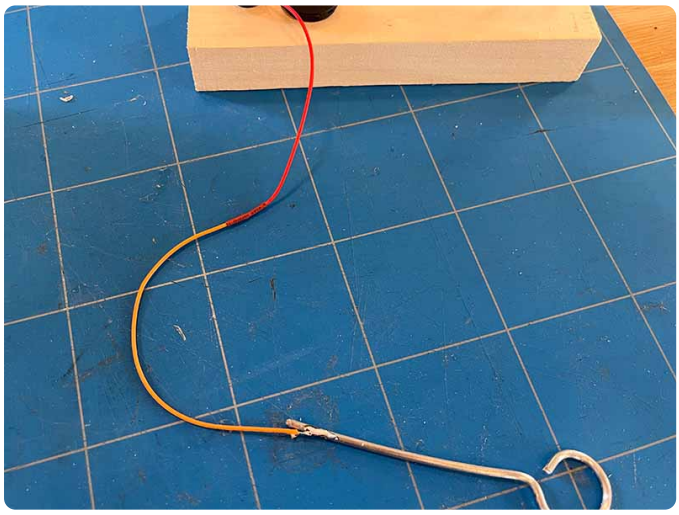


4 Place the electronics

- Use a small amount of glue from the glue gun to attach the buzzer. Its long leg should touch the spiral.
- Glue the battery holder next to the buzzer. Make sure it can still be opened.

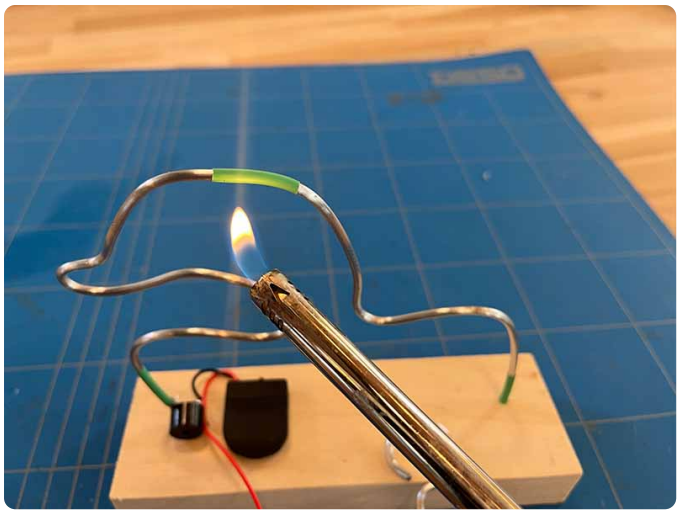






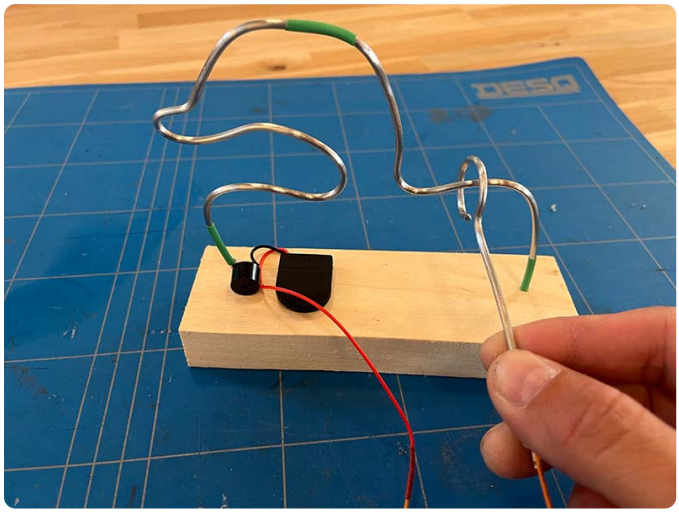
5 Soldering

- Cut the black wire from the battery holder to length and solder it to the short leg of the buzzer.
- Solder the long leg to the spiral.
- If necessary, extend the red wire from the battery holder and solder it to the handle.



6 Shrink the tubing

- Slide the heat-shrink tubing into the correct positions and shrink it with a lighter or the side of the soldering iron.



7 Test it

- Put a battery in the holder.
- Guide the handle through the spiral without touching it. If the handle touches the spiral, the buzzer should sound.
- You're all done!