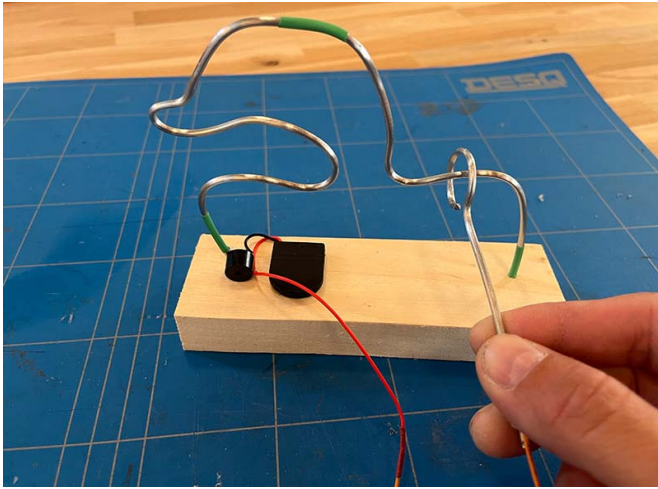


# Buzz wire game

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duration: 45 - 60 minutes  
age: from 9 years

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

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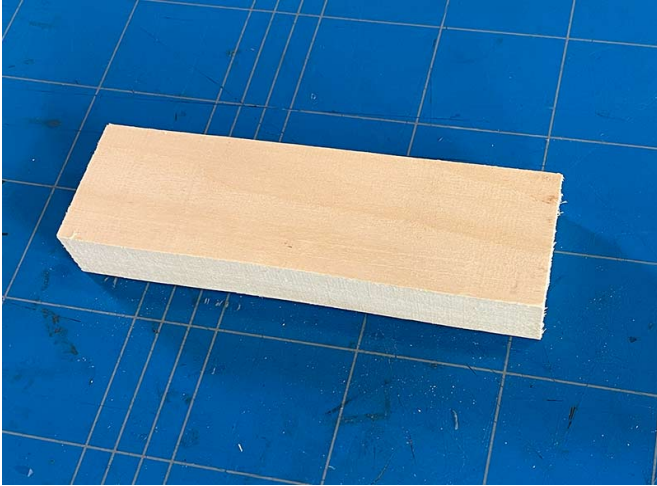
## undefined

### tools

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

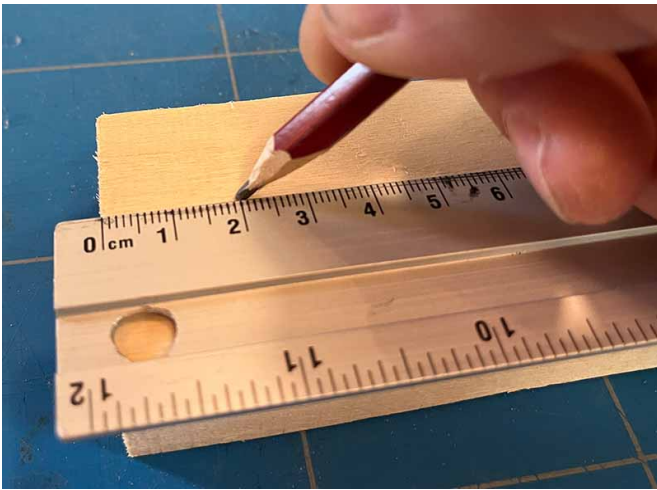
### materials

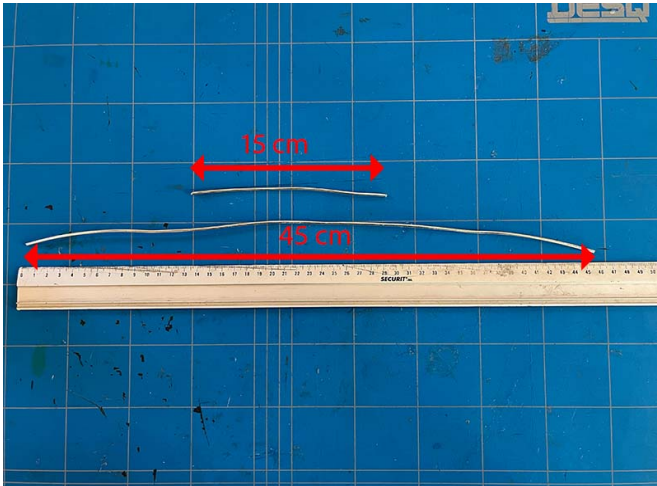
- ☐ Wooden board
  - ☐ Iron wire
  - ☐ Heat-shrink tubing
  - ☐ Buzzer
  - ☐ Battery holder
  - ☐ Batteries
  - ☐ Solder
-



## 1 Prepare the board

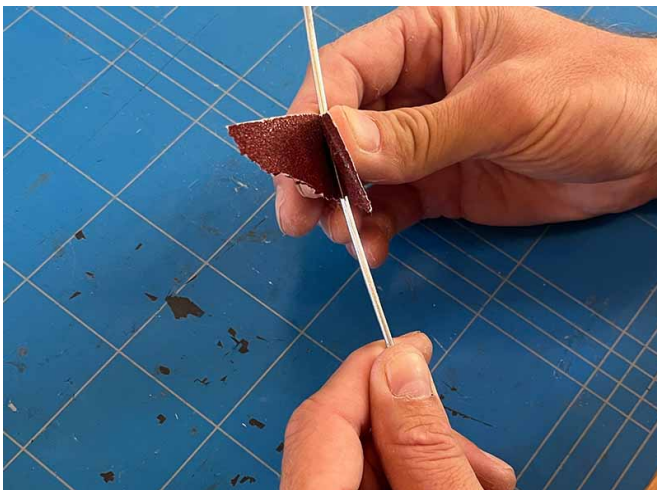
- Saw a wooden board to approximately 15 x 5 cm.
- Drill the holes for the spiral about 2 cm from the edge of the board.





## 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.

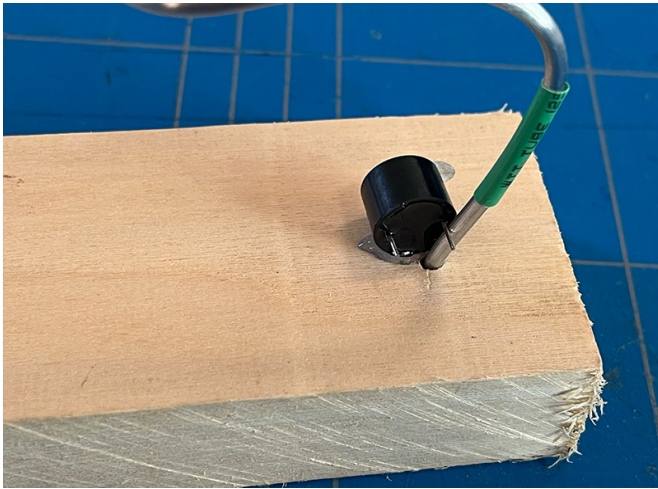
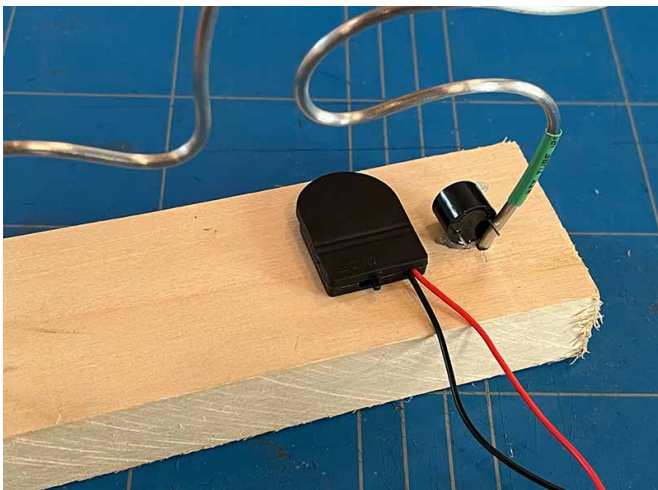




### 3 Build the spiral

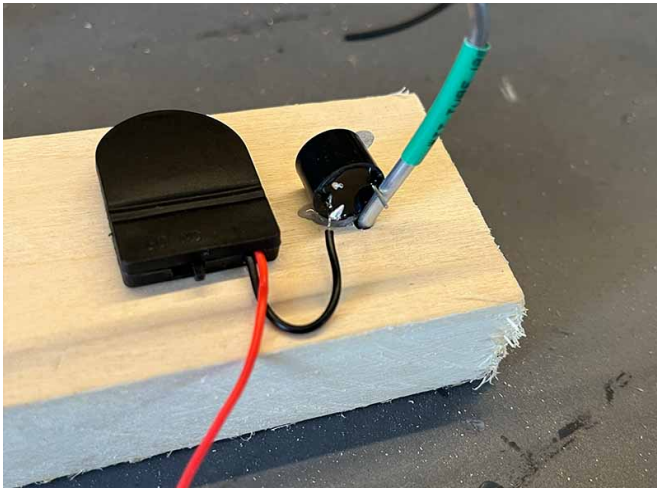
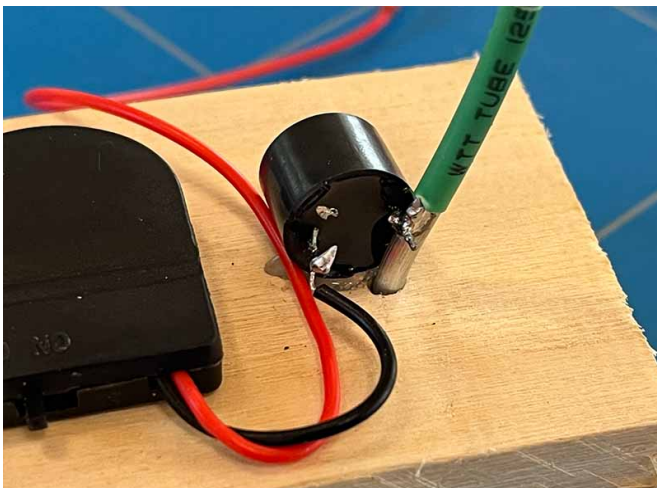
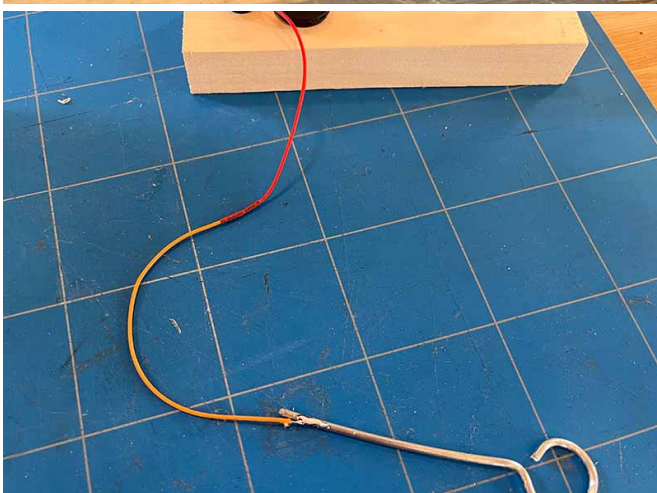
- Cut three 2 cm pieces of heat-shrink tubing.
- Slide one piece of heat-shrink tubing to the middle of the long piece of iron wire.
- Bend the iron wire into a spiral.
- Put the other two pieces of heat-shrink tubing around the start and end of the spiral. Do not shrink them yet.
- Place the ends of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





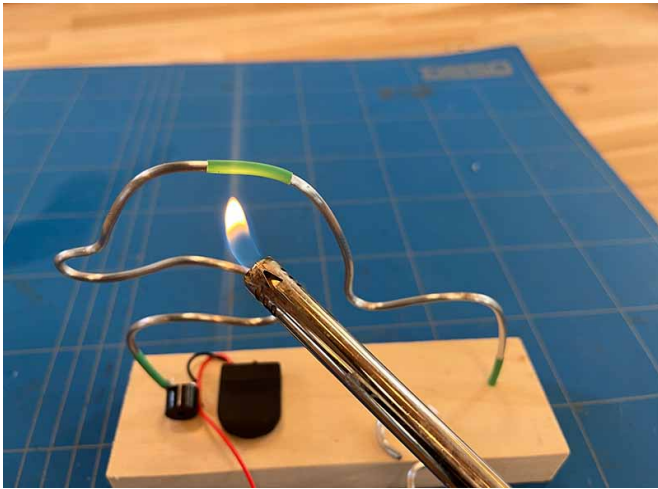
#### 4 Place the electronics

- 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.



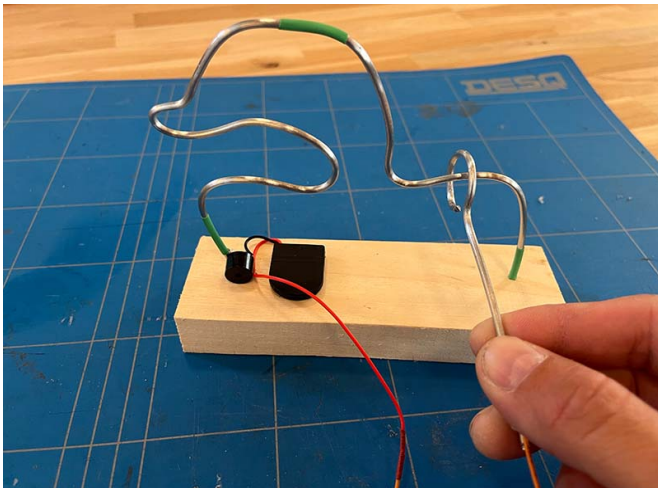
## 5 Soldering

- 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!