



# Magic Door Challenge – Task 1

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## Mission:

We're building a **magic door** that decides if you're close enough to open the door... all by itself!

But here's the twist... 🤖

We will use **the sensor we learned about today**.

💡 Can YOU guess what it is? (Hint: It can measure how far things are!)

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## What We're Doing

- If you are **closer than 50 cm** ➡ The gate says:  
"Oh, you are close! We are opening the gate "
- If you are **farther than 50 cm** ➡ The gate says:  
"You are far We ain't opening the gate yet!"

**Hint:** Remember the Serial Monitor 🖨️ (that's where the secret messages show up!)



**Hint:** The sensor used for this task is shown in today's slides along with how to connect it!

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## Task 2 – Air Safety Detector

## Mission:

Now we're protecting everyone **from dangerous air!**

We're going to detect if there are **toxins** in the air.

Which sensor from today's lesson can do that? 🤖

💡 Hint: Look at the **connection diagram** on the slide from class!

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## What We're Doing

- If the **sensor value is less than 400** ➡ Turn **ON a green LED** 🟢 to show the air is **safe**
- If the **sensor value is 400 or more** ➡ Turn **ON a red LED** 🔴 to show the air is **not safe** and the **water system** needs to work 🔧



**Hint:** The sensor used for this task is also shown in today's slides with its wiring instructions!