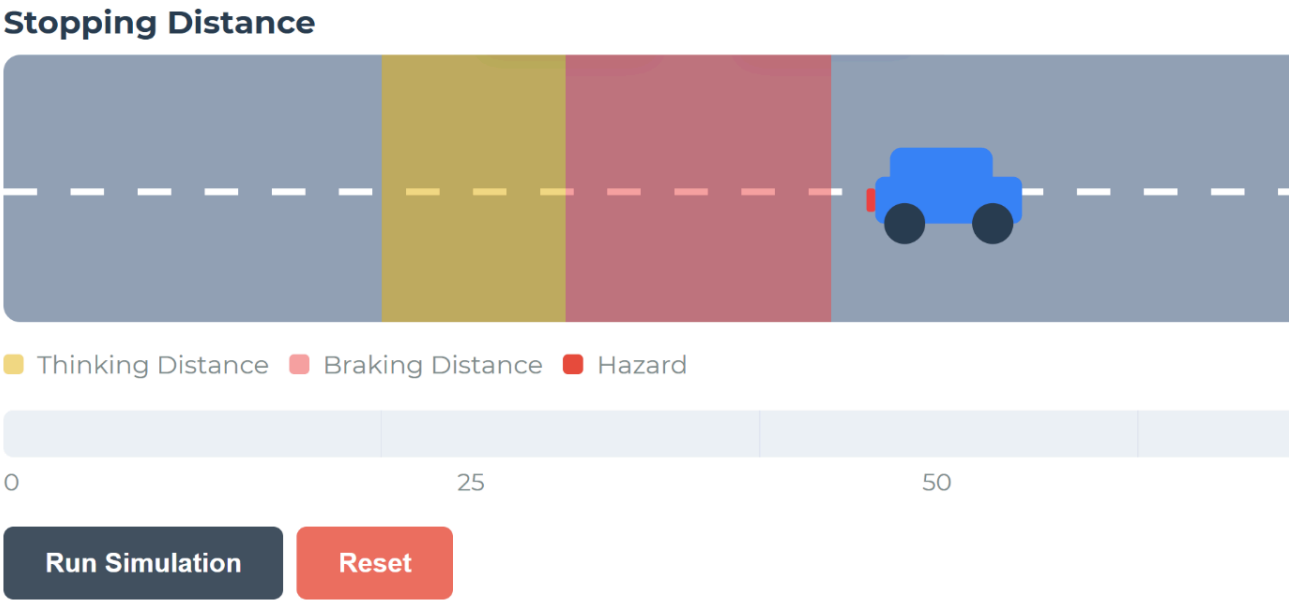
Stopping Distances

Aim: To investigate the factors that affect Stopping Distances



Method:

Part 1: Reaction Time

1. Check your reaction time using the Reaction Test
2. Test yourself 3 times to get an average
3. You can set this as the reaction time in the simulation controls, or use another value

Part 2: Stopping Distance

1. Set a speed for your test - leave all other values unchanged
2. Run the simulation and record Thinking Distance, Braking Distance and Overall Stopping Distance in your results table
3. Change the speed and run the simulation again
4. Make sure that at least 5 different speeds have been recorded

Prediction:

What effect will changing the speed have on the Thinking Distance, Braking Distance and overall stopping distance?

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Results:

Your average reaction time:_____

Speed (km/h)	Thinking Distance (m)	Braking Distance (m)	Stopping Distance (m)

Analysis:

Plot a bar graph to show your results. Plot the **Speed (km/h)** on the horizontal axis and the **Stopping Distance (m)** on the vertical axis. Make the **Stopping Distance** bar out of two parts, the **Thinking** and **Braking Distance**

What happened to **Thinking Distance** as the **Speed** increased?

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What happened to **Braking Distance** as the **Speed** increased?

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Extension:

How would changing the **Road Condition** affect the **Stopping Distance**?