





# Here we go! The creation of a mechanically controlled car

## Test your car

TEAM A1			
Pupils Belgium	Pupils Sweden		
- Astrid Noppe	- Mebel		
- Marthe Dermaut	- Rebecca		
	- Elsa-		

#### 1. ORIENTATION

#### 1.1. Research questions:

- What will be the average speed of the mechanically controlled car?
- Which changing of parameters has the best result (fastest speed)?

#### 1.2. Hypothesis

(here you only have to make a hypothesis about question 2)

Sweden: (no changes made)

Belgium: We think that the car with the highest weight will be ride farther.

#### 2. PREPARATION

On the other document (twinspace) you see the sketches and propulsion of the car.

#### 2.1. Parameter that will be changed:

(here you describe what you will change to the car)

**Sweden:** (no changes made)

Belgium: We change the weight of the car with nails.

#### 2.2. Method:

2.2.1. Let your car drive and measure the distance that is possible.

- 2.2.2. Now, for the experiment, choose a distance that is shorter then the maximum distance. Make a sign on the floor on that distance.
- 2.2.3. Let the car drive and measure the time.
- 2.2.4. Calculate the average speed.
- 2.2.5. Repeat this three times.
- 2.2.6. Now, change a parameter and repeat the whole experiment.

#### 3. DATA ANALYSIS and DISCUSSION

#### 3.1. Observations and Measurements:

	DISTANCE (m)	TIME (s)	AVERAGE SPEED
			(m/s)
1	0.80	0.66	1.22
2	0.80	0.72	1.11
3	0.80	0.69	1.16

Changing of a parameter: (describe what you change)

	DISTANCE (m)	TIME (s)	AVERAGE SPEED
			(m/s)
1	0.80	0.96	0.83
2	0.80	1.15	0.70
3	0.80	0.94	0.85

	DISTANCE (m)	TIME (s)	AVERAGE SPEED
			(m/s)
1	0.22	1	0.22
2	0.24	3	0.08
3	0.73	2	0.365

### 4. REFLECTION

**4.1.Conclusion**: (here you discuss when the car drives fastest with or without changing)

Belgium: the car with the most nails drives faster than the car without.

**4.2. Comparison** of the results of the different countries:

The car of the Belgians drives faster.