



**By:**

***Bader Alshammari  
Mohammad Alotaibi  
Mohammad Alsaïdi  
Shamlan Alshammari***

*Department: Engineering Department at NAU*

*Instructor: Dr. Sarah Oman*

*Sponsor: The Wonder Factory*

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## Bill of Materials

Table:1 Bill of Materials

Part Name	Part Number	Quantity
Board	1	1
Letters	2	26
Table	3	1
Catapult	4	1
Velcro	5	1
Ball	6	12

## 1 Introduction

This is the word project that has the English alphabets placed on a board and then shoot the alphabets using a catapult that is placed away from the board on a table then continue shooting the alphabets until you get the given word.

## 2 Assembly

This section will explain how to assemble word step by step.

### 2.1 Placing the Board

First set the Board in its appropriate place and push the brakes on the bottom of the board to fix it in place. Note : (The board is already assembled and there is no need to change or fix the wood plates)

### 2.2 Letters Assembly

#### 2.2.1 Place the Letters

Set the alphabets in order starting from top left on the Board and walk your way through to the bottom right. Fix them in place using the provided Velcro as shown in figure 1.

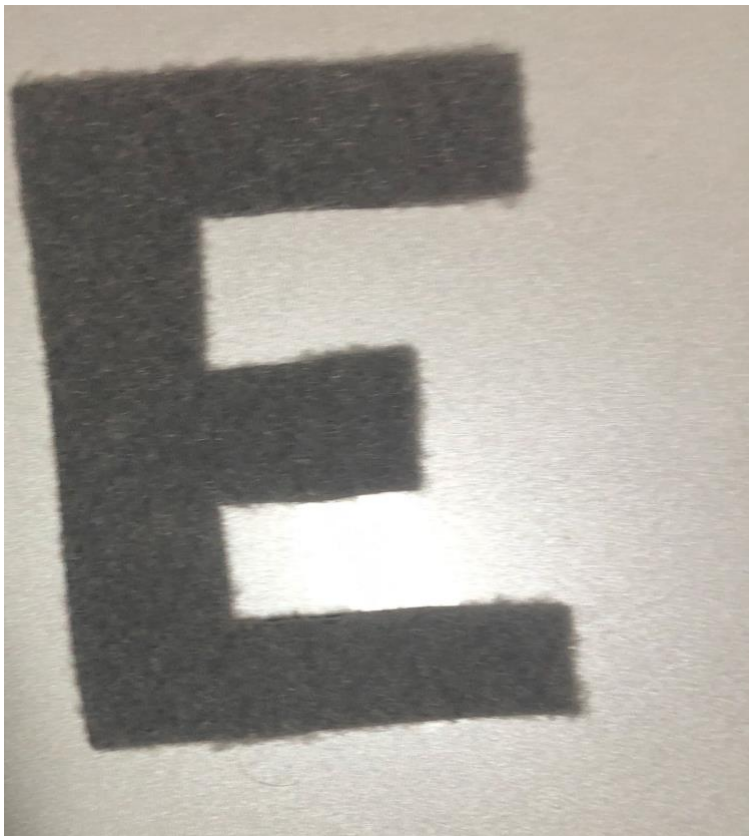


Figure 1: Velcro behind letter

## 2.2.2 Apply Velcro to the letters

Apply the provided Velcro to the Letters but do not apply too much you only need what is enough for the ball to stick in place after it hits the letter. See figure 2



Figure 2: Velcro on letter

## 2.3 Set the table

### 2.3.1 Place the table

Set the table 1 to 1.5 meters away from the Board as shown in figure 3 to give enough space to be able to shoot at any letter desired. Note :(The table is already built and there is no need to make changes on it)



Figure 3: table & board set

### 2.3.2 Place the Catapult

Place the catapult at the center of the table to allow it to have enough rotation space to be able to aim at any letter desired. See figure 4. NOTE: (you still can move the catapult to improve your aim)

## 3 Operation

The following steps are explaining how to operate the and use word

### 3.1 Pull the catapult lever

Pull the catapult lever all the way and fix it in place using the pin provided on the catapult

### 3.2 Place the ball

Place the ball in its appropriate place to shoot it later. See figure 4

### 3.3 Aim

Aim the catapult at the direction you want to prepare the catapult to shoot the letter.

### 3.4 Shoot and repeat

Pull the pin from the catapult and it will shoot the ball repeat the same operation process to shoot at as many letters as you want and good luck on hitting those letters.

4 Appendix  
Appendix A: Parts



Figure 4: Board



Figure 5: Letters



Figure 6: Table



Figure 7: Catapult





*Figure 8: Velcro [1]*



*Figure 9: Ball*

## References

[1] Sewing, O., Strength..., S. and Outdoor, D. (2018). Velcro Brand Strips 10 Sets 4"x1" Heavy Duty Industrial Strength Extreme Outdoor | eBay. [online] eBay. Available at: <https://www.ebay.com/itm/Velcro-Brand-Strips-10-Sets-4-x1-Heavy-Duty-Industrial-Strength-Extreme-Outdoor-/222536627294> [Accessed 3 Aug. 2018].