



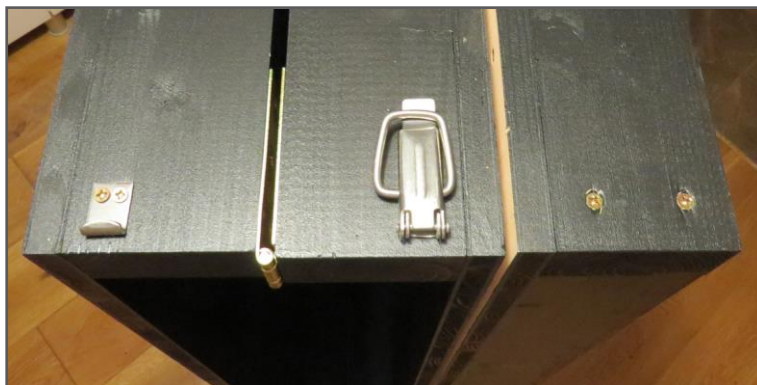
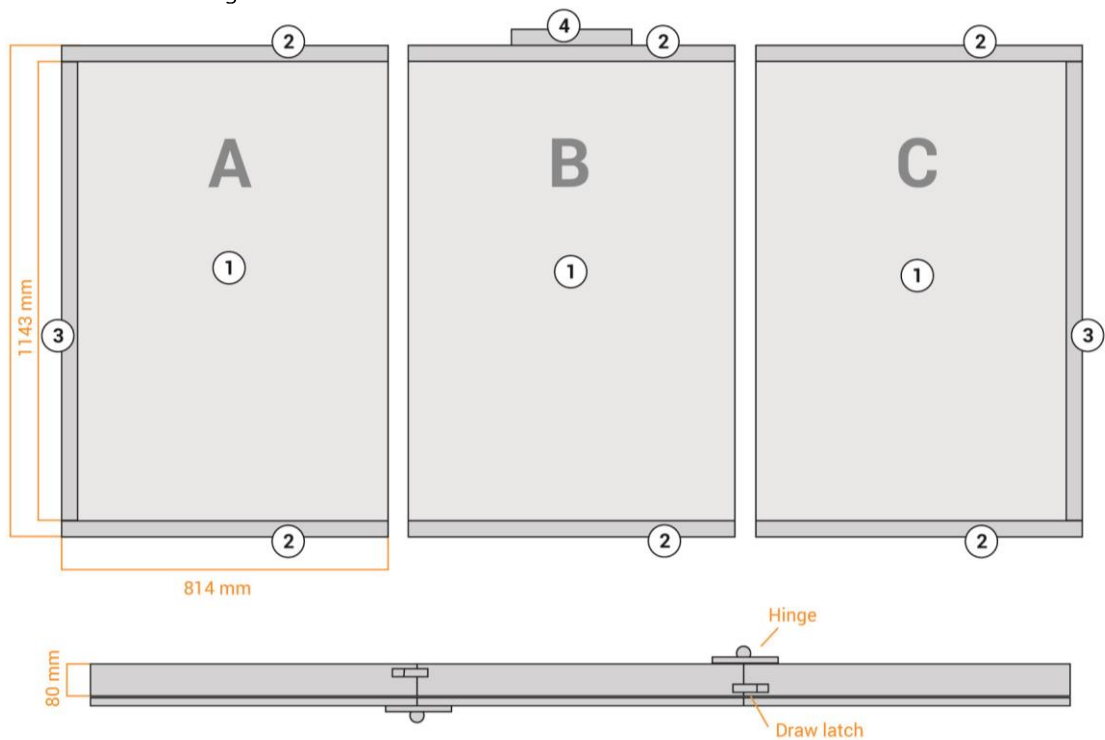
## BUILDING INSTRUCTION FOLDING TABLE

### FIRST® LEGO® LEAGUE CHALLENGE

The FIRST LEGO League Challenge folding table can be folded to save space, at the end it has the following dimensions: approx 122 × 81 × 32 cm.

For questions and suggestions please contact [info@hands-on-technology.org](mailto:info@hands-on-technology.org).

Fig. 1



## Material needed

The following materials and tools you needed. It is recommended to use laminated wood to build the table.

Hint: let all woods sawing at the hardware store – that saves time and nerves.

Material	Quantity	Cost
① Lumber-core plywood: 15 × 1223 × 814 mm	3	89,61 €
② Scantling (glued wood): 40 × 80 × 814 mm	6	28,47 € (a 9,49 €)
③ Scantling (glued wood): 40 × 80 × 1143 mm	2	
④ Dummy (glued wood): 40 × 80 × 300 mm	1	
Woodscrew: 4 × 60 m		7,39 € / 100 St.
Woodscrew: 3,5 × 40 mm		7,79 € / 100 St.
Draw latch: 75 × 30 mm	4	27,96 € (a 6,99 €)
180° Hinge: 180 × 40 mm	4	13,96 € (a 3,49 €)
Paint: 2 in 1, black/matt	750 ml	15,99 €
Paint roller	1	6,19 €
Paint tray	1	1,99 €
Painters tape	1	3,95 €
		<b>203,30 €</b>

A painter foil, protective gloves and sandpaper can be purchased if required.

## Tools needed

- Screwdriver with drill (3mm)
- 3 Clamps
- 4 folding trestle legs
- 4 wood stripes
- Sandpaper
- Protective foil
- Protective clothes and work clothes
- Plastic bag (for paint tray)

## Building Instruction



### Step 1

- Wood sawing at the hardware store (Hint: please use straight wood)
- Edit edges with sandpaper



### Step 2

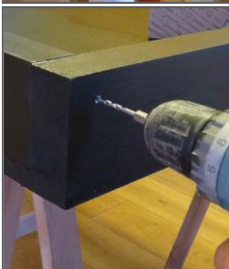
- Taping backs of boards (Hint: 750 ml paint are enough to paint everything twice if the backsides of the boards stay untreated)
- Paint boards, scantlings and dummy with black paint

Hint: use a paint roller for smooth surfaces, allow to dry paint well, during drying times, keep paint roller and paint tray in plastic bag – so both can be re-used.



### Step 3

- Fix scantlings with clamps on the boards
- Pre-drill boards and scantlings
- Fix the scantlings with 2 screws to the board (Hint: let at least 10 cm from the outer edge – this prevents bursting of the wood and there is enough space to mount the hinges)
- Secure board and scantlings with additional screws
- Fix scantlings with each other – 2 screws



### Step 4

- Fix the dummy border in the middle of board B (position see Fig. 1). It is there to simulate a second FLL table. *During the tournament there are two teams at a time competing at two FLL tables fronting each other. Often there are mission models being placed in the center of the top of the inner field borders.*



### Step 5

That the table can be folded, the hinges have to be placed at specific points. (Position see Fig. 1)

- Connecting part A and B – screw the hinges **under** the board
- Connecting part B and C – screw the hinges **on** the scantlings



### Step 6

- Attach draw latch on the outer sides of the scantlings over the joints, this stabilize the table in unfolded form.

Hint: Put this table on the long edges, bring the draw latch under tension – 1–2 mm, lay the wood strips on the floor while you attach the draw latches on the other side.

### Step 7

The field plate is now finished. We wish you lots of fun practicing and tinkering!