**Olympic Rescue**

[Switch to original table view](http://webs.wichita.edu/?u=mindstorms&p=/challenge/2012/2012_formula/) **Description**

**Quantity**

**Availability**

**Price/Unit**

**Estimated
Cost**

• ¾” x 4’ x 8’ Mahogany Veneercore (Lauan Plywood)

1

Kropf Lumber

$34.99

$34.99

\*ALTERNATE: ¼” x 4’ x 8’ Lauan Plywood

1

Menard's

$9.97

$9.97

2” x 6” x 8’ Dimensional Lumber #2

1

Kropf Lumber

$3.51

$3.51

Convenience Concepts White Panel Nails

1 package

Menard's

$1.93

$1.93

5.2mm (3/16”) x 2’ x 4’ Lauan Plywood

1

Lowe's

$6.42

$6.42

3/4" black electrical tape

1

Menard's

$1.99

$1.99

Rust-Oleum Painters Touch Ultra Cover Spray Gloss Flat White

1

Menard's

$3.77

$3.77

Touch-N-Tone Gloss Black Spray

1

Menard's

$0.96

$0.96

Rust-Oleum Painers Touch Ultra Cover Spray Gloss Real Orange

1

Menard's

$3.77

$3.77

Titebond Original Wood Glue 8 oz

1

Menard's

$2.77

$2.77

#8 x 2 1/2" coarse drywall screws - 95 pcs per box

1

Menard's

$4.19

$4.19

Royal Ceiling White Paint (1 quart)

1

Menard's

$7.49

$7.49

1 LEGO minifig

1

Total

$71.79
or $46.77

**Build Instructions:**

1. Gather all materials
2. Cut (2) 2x4 boards down the middle to create (4) boards 1.5” x 1.75” x 96”. 
3. From (2) of the 1.5” x 1.75” x 96” boards cut (3) boards at 45”. Creating (3) boards 1.5” x 1.75” x 45”
4. Cut (1) of the 1.5” x 1.75” x 96” boards in half. Creating (2) boards 1.5” x 1.75” x 48”
5. Cut the 4’ x 8’ sheet of luan in half. Creating (2) sheets 48” x 48”.
6. Assemble the support structure for the course as show on Sheet A of the Drawing.
	1. Note: We used screws and glue for this task. We also had to pre-drill the holes so we didn’t split the boards

  

1. Apply the skin to the support structure as shown on Sheet B of the Drawing. We used glue and nails for this step.

  

1. Cut the 1” x 6” board for the sides of the Ski Slope as shown on Sheet C of the Drawing.
2. From the remaining luan material cut the ramp and top portions of the Ski Slope. This is shown on Sheet C of the Drawing, but measure to cut your pieces to fit your side pieces. The ramp is 12” wide.

 

1. From the remaining 1” x 6” board, cut (2) 2.5” x 9” fence panels and one support wedge as shown on Sheet D of the Drawing.
2. Assemble the snow fence (1 panel and the wedge) as shown on Sheet D of the Drawing.

 

1. From the remaining 1.5” x 1.75” boards, cut (4) Slalom Poles 1.5” x 1.75” x 4”
2. From the ¼” Dowel, cut (8) 6” sticks
3. Install the Dowel sticks on the course as shown on Sheet F of the Drawing. We just glued these in place.
4. Paint the course, ski slope, fences, slalom poles, and rescue area. Dimensions for the course colors can be found on Sheet F of the Drawing.
	1. Note: The injured Skier pick-up area was marked by drawing around a nickel with a Sharpie.
	2. Note: The tape used to mask the paint areas peels more cleanly if removed before the paint has fully dried.



1. Install the ski slope, fences, and slalom poles using Velcro as shown on Sheet E of the Drawing.

