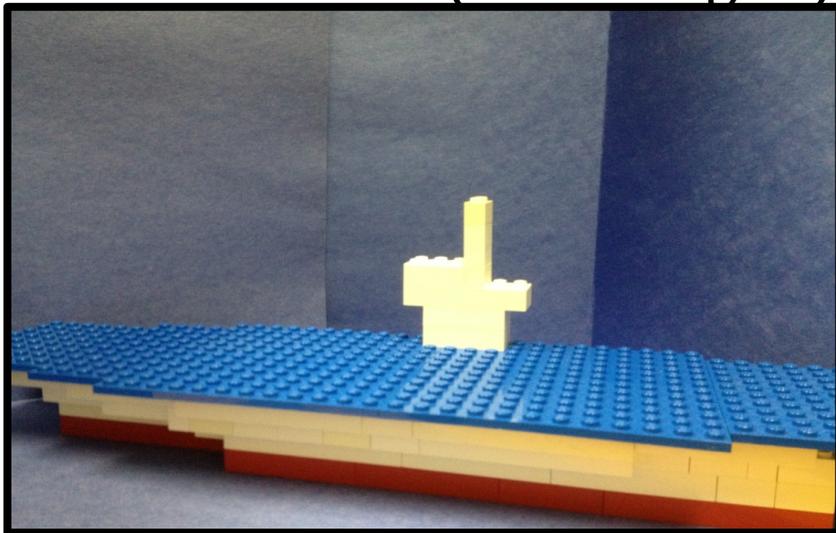
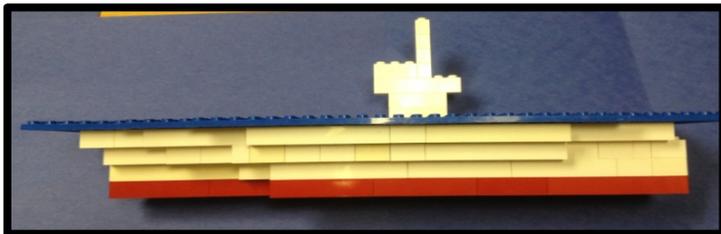


BRICK BY BRICK: LEGO SHIPBUILDING

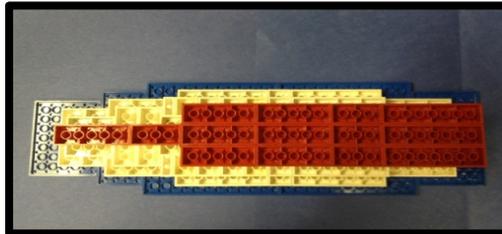
LEVEL: HARD (*USS Ranger*)



TOP



SIDE



BOTTOM

A Note on Dimension:

The instructions included for this ship model represent a new educational initiative by the Hampton Roads Naval Museum in order to promote STEM principles under the lens of naval history. When properly assembled, each graph (or Step) represents a layer of bricks built to resemble a design of a specific ship used in American naval history. Colors represent each specific layer of the vessel, from the keel to the top masts. Please note that the sizes and shapes represented in these instructions are squared. However, they are not to scale with LEGO brick sizes. They merely show the graphical placement locations of brick layers. For more information or questions, please email Matthew Eng at matthew.t.eng@navy.mil.

RED, WHITE, AND BLUE BRICKS ARE REQUIRED FOR THIS MODEL.

BRICK SUPPLY LIST

BRICKS	RED	WHITE	BLUE
1x2	0	4	0
1x6	0	1	0
1x8	0	3	0
2x3	0	5	0
2x4	4	9	0
2x6	7	22	0
2x8	3	12	0

TOTALS **14** **56** **0**

BRICKS	FLAT BRICKS		
6x8	0	0	1
4x10	0	0	1
6x12	0	0	4
6x10			1

TOTALS **0** **0** **7**

TOTAL BRICKS: 77

Ship Models included in this program are built with LEGO® bricks. LEGO® is a trademark of the LEGO Group of companies which does not sponsor, authorize, or endorse this site.

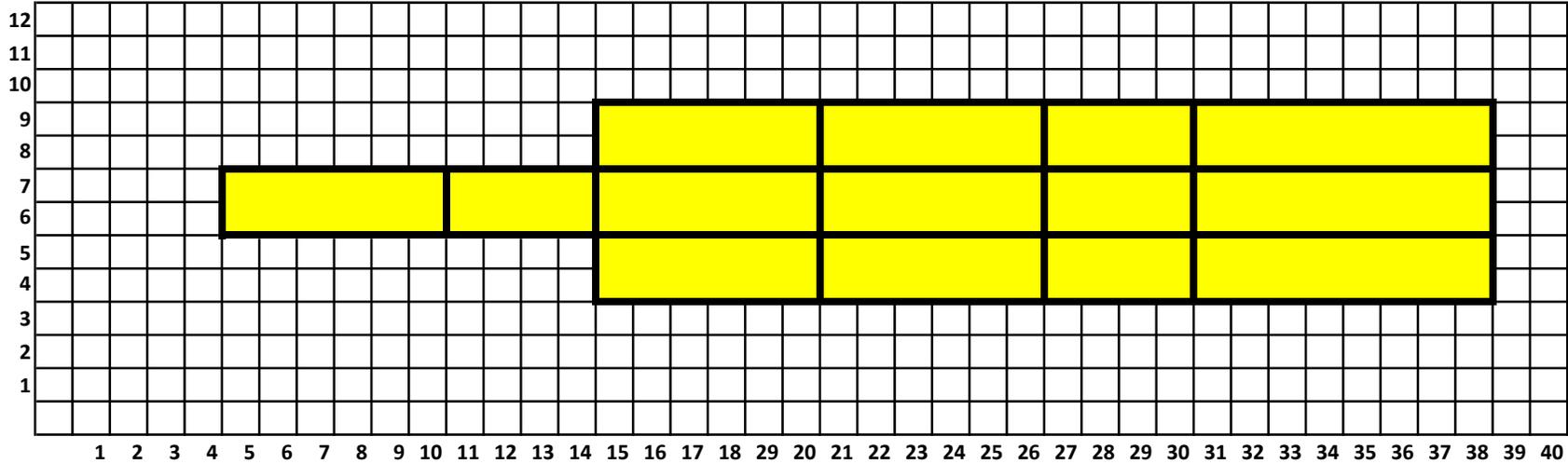
USS Ranger Model

Instructions: Follow each step and layer the color-coded bricks on your building grid. Subsequent steps are layered on top of previous layers.



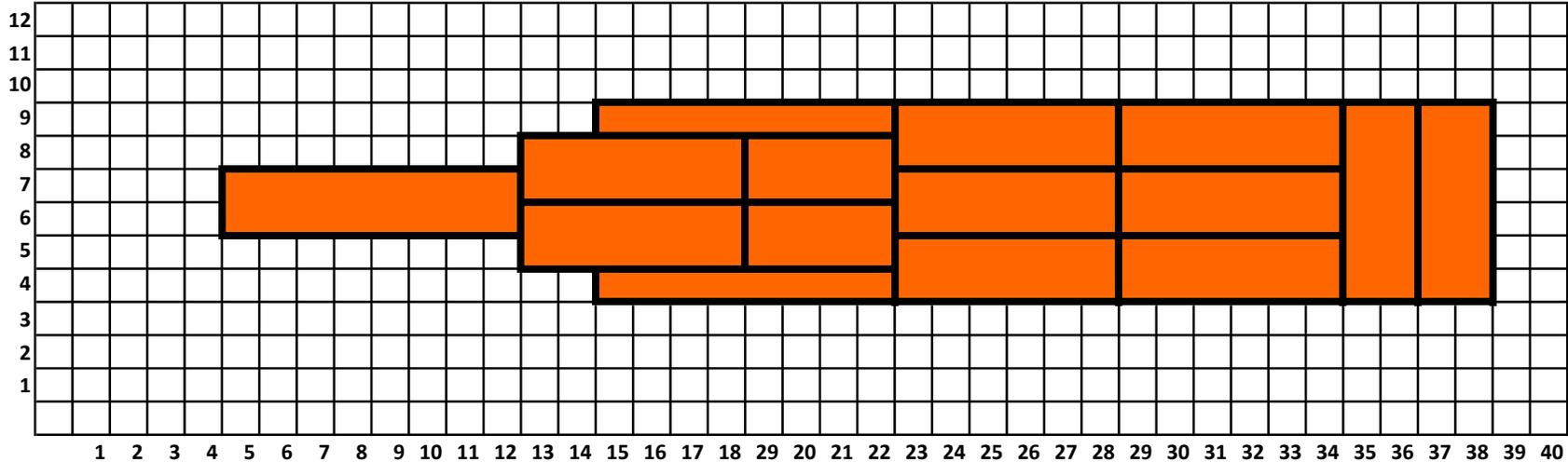
Step 1: Lay down the first layer (shown in Yellow)

RED BRICKS



Step 2: Lay down the second layer (shown in Orange)

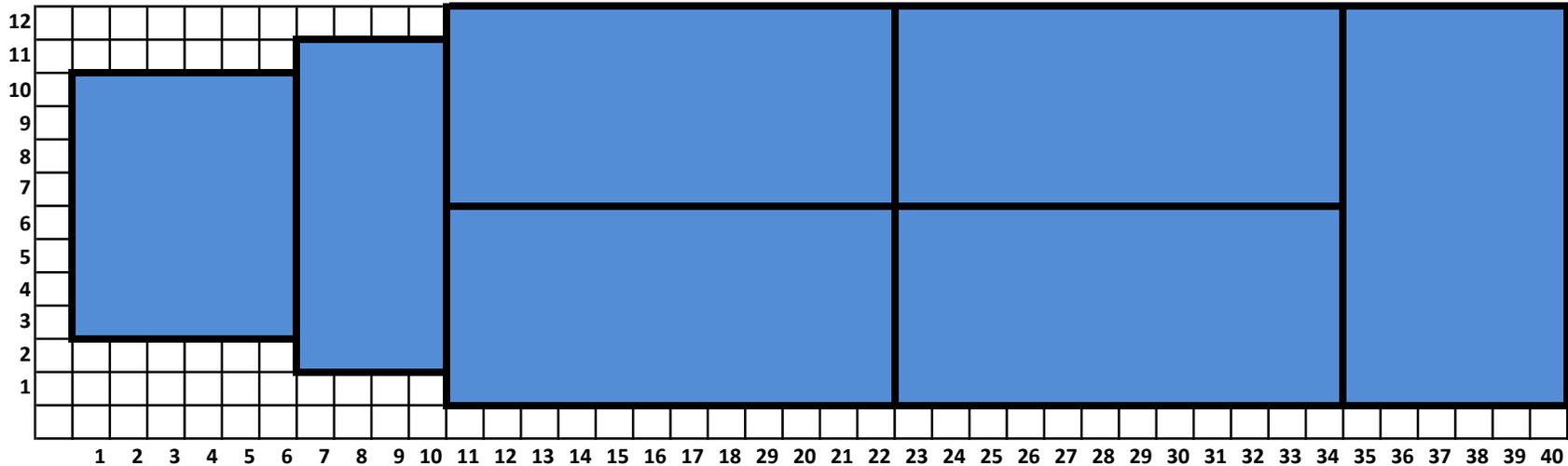
WHITE BRICKS



Step 5: Lay down the top deck (shown in Blue)

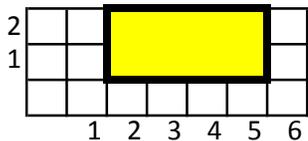
Note: Flat pieces are required for this step.

BLUE BRICKS - FLAT PIECES



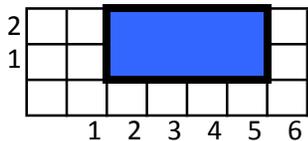
PART II: Construct the Island
(Step 1: Shown in Yellow)

WHITE BRICKS



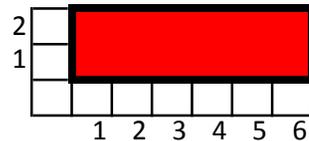
PART II: Construct the Island
(Step 2: Shown in Blue)

WHITE BRICKS



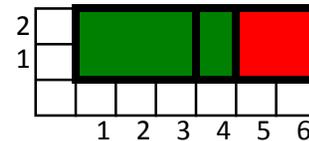
PART II: Construct the Island
(Step 3: Shown in Red)

WHITE BRICKS



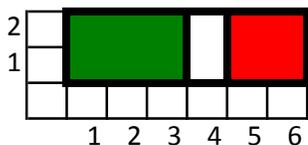
PART II: Construct the Island
(Step 4: Shown in Green)

WHITE BRICKS



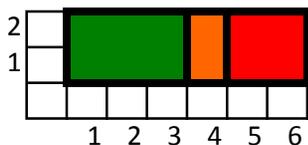
PART II: Construct the Island
(Step 5: Shown in White)

WHITE BRICKS



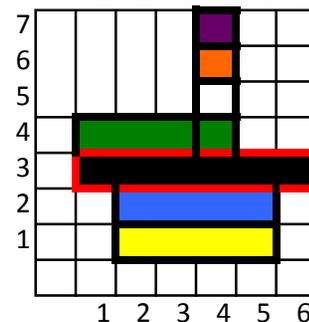
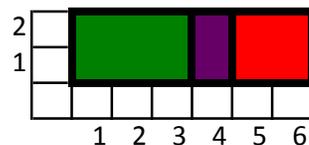
PART II: Construct the Island
(Step 6: Shown in Orange)

WHITE BRICKS



PART II: Construct the Island
(Step 7: Shown in Purple)

WHITE BRICKS



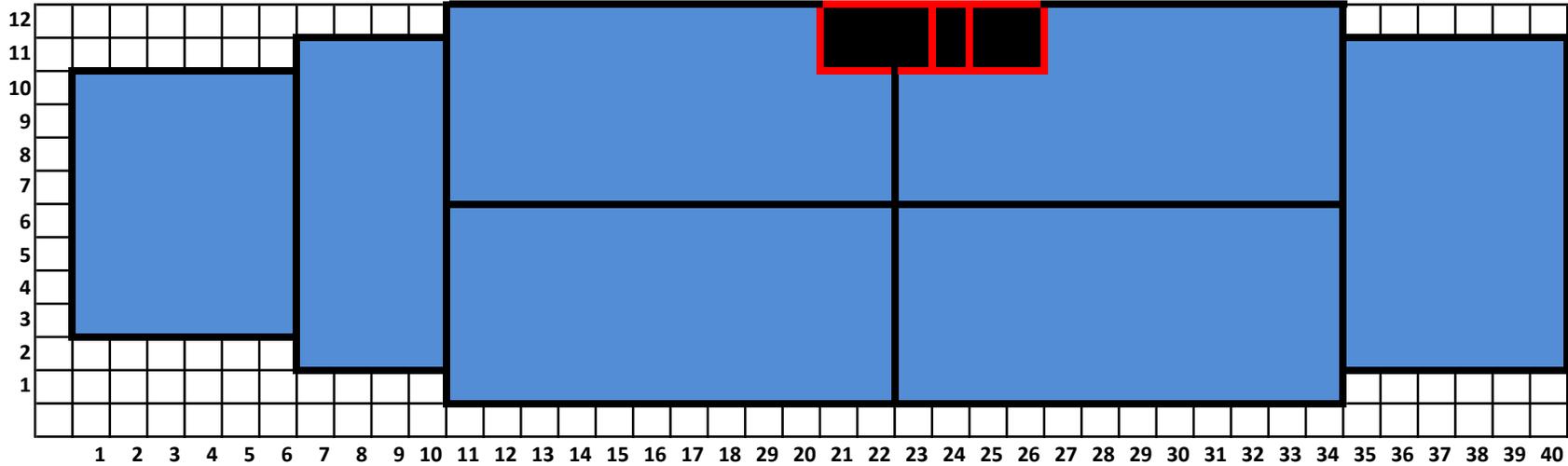
SIDE VIEW

USS Ranger Model
Step by Step Instructions

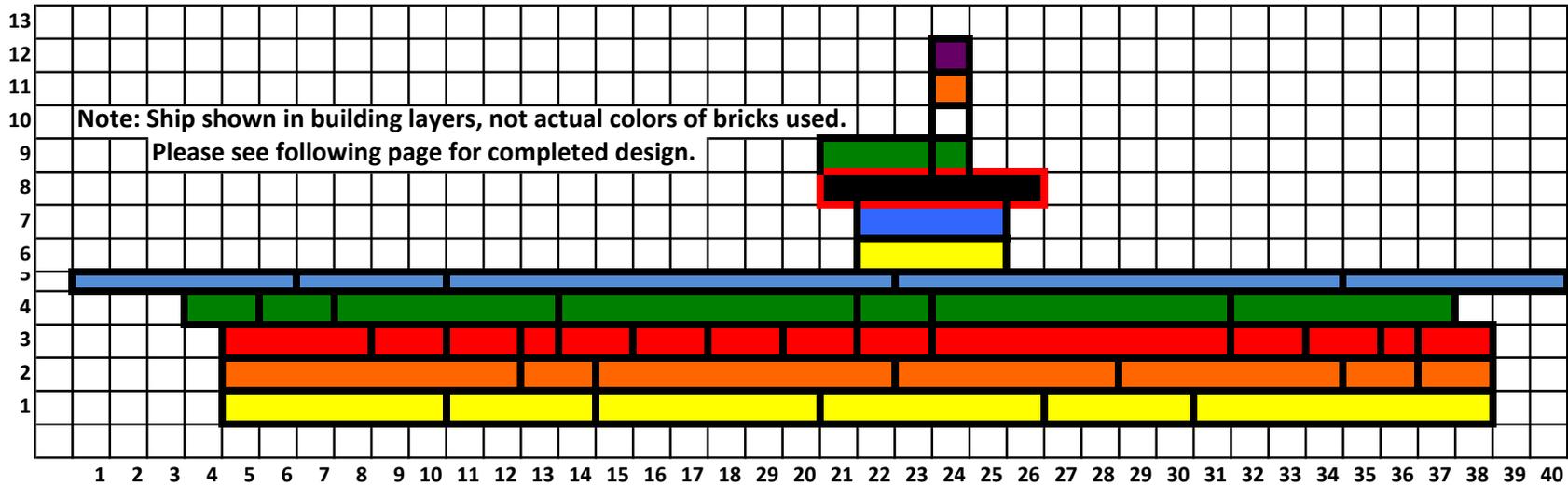
PART III: Place island on main deck (shown in Black)

USS RANGER ISLAND OUTLINED IN RED

WHITE BRICKS



a



USS *Ranger* Model
Final Ship Dimensions

BOTTOM VIEW

Note: Ship is shown in building layers, not actual colors of bricks used.
Please see following schematic for completed design.

