

VIRGINIA SHIP REPAIR ASSOCIATION
6th Annual Ship Repair Industry Awareness LEGO Competition

Competition Elements

1. Design of a ship, portion of a ship or ship component that is repaired in Hampton Roads. Examples might be a carrier, a berthing compartment or a communications center on a ship. Design must use LEGO Digital Designer software and not exceed a cost of \$500.00. Students can track the cost of their designs easily. When building the model the software has a link button to check the cost of the model as they go along. This allows them to save various versions.
2. Research and development of an 800 word essay on four to six occupations in ship repair that are done on the ship, or portion of the ship, they design. Examples: electrician, engineer, welder, and project manager.
3. Development of a visual presentation demonstrating the design and the occupational report.
4. Delivery of the presentation at the Competition Day, **April 26, 2011** at the Virginia Air & Space Center.

Stage I:

TEAM SIGN-UP

Schools sign-up by January 13, 2012

TEAM BUILDING

Schools are encouraged to open the competition team to a variety of students. The project has elements that require technical, presentation, written, verbal and design skills – so many kids can participate!

TEAM SELECTION

It is up to each individual school to determine how they will select the team. Teams may be any size, but we recommend any size team up to 12 members. At minimum, we recommend 8 to 10 members.

TEACHER ORIENTATION: Teachers will review an orientation on the competition rules and strategies via a tutorial on the VSRA website. Teachers will have access to written guidelines as well.

Stage II:

TEAM KICK-OFF

Teachers will plan a kick-off event to VSRA to bring the competition team together, review competition rules, and hand out team T-Shirts. Company partner representatives will attend the kick-off (a partner representative will be assigned to you after the application deadline)

Teacher Preparation:

Materials:

- Student access to research databases (i.e. Google, Highbeam, Virginia Library System etc.)

- Computer downloaded with the LEGO Digital Designer Software (available FREE at the LEGO website www.lego.com)
- Computer with Power Point software for visual presentation and MS Word for written presentation
- Students begin planning and developing pieces of the project.
- Students may contact Ship Repair companies from the Contact List provided to teachers for assistance in occupational information and input on their design work.

Stage III:

Students complete and rehearse their project for competition.

Teachers MUST submit copies of the written and visual presentation by CD or electronic file to the VSRA office at 150 Boush Street, Suite 802, Norfolk, VA 23510 or to BOnal@VirginiaShipRepair.org. **WRITTEN SUBMISSIONS DUE DATE March 15, 2012 VISUAL POWERPOINT MARCH 19, 2012. THE ORIGINAL PRESENTATION SUBMITTED IS NON-NEGOTIABLE. ANY CHANGES AFTER THE DEADLINE WILL BE PRINTED FOR THE JUDGES, BUT WILL NOT BE DISPLAYED ON THE SCREEN**

Competition Day – TBA (usually the last week in April) !!!

- Teams should wear their team or school shirts and arrive between 8:00 a.m. and 8:15 a.m. Competition starts at 8:30 a.m.
 - Students are encouraged to invite parents to the competition.
 - Teams will be given their presentation order by random selection the morning of the event.
 - Teams will be judged by a panel of industry representatives.
 - Teachers are responsible for travel arrangements to and from the competition site.
 - Team products will be judged according to the following criteria:
1. Accurate representation of ship repair in Hampton Roads (proportion, structure and quality) (10 points)
 2. Design accurately represents the ship (proportion, structure and quality) (10 points)
 3. Mark of innovation (some element added by the design team that would enhance the design, capabilities or usefulness of the ship they chose) (5 points)
 4. Design fits within the \$500.00 budget to build using LEGOs. (Designs exceeding this cost will be deemed ineligible for the first prize award) (5 points)
 5. Presentation suitably explains the ship design, design elements, cost, challenges in building and team learning. (20 points)
 6. Oral/Visual Presentation concisely outlines four to six ship repair occupations and includes information such as: skills required, benefits of the job, the purpose of the job and what is interesting and/or difficult about the job. (20 points)
 7. Oral/Visual presenters speak clearly, are well-versed in the material and have the available support from other team members to answer questions. (10 points)
 8. Written paper on occupations does not exceed one page for introduction of ship repair, one page per job category reviewed and one closing page. Maximum eight pages. (20 points)

Please direct questions or request assistance by calling Bahar Onal-Davis (757-233-7034) or Bonal@VirginiaShipRepair.org

**Virginia Ship Repair Association
Ship Repair Industry Awareness LEGO Competition
Project Timeline**

SOME THINGS TO CONSIDER:

- Who will work on each section?
- When will you meet?
- Where will you meet?
- How will your design benefit the ship building industry?

It is not mandatory that teams use this timeline. However, all good, quality projects have some method of planning in order to meet deadlines and ensure the team is prepared. This is a sample.

November	December	January	February	March	April
As soon as your team signs up and receives the welcome packet we STRONGLY recommend you hold a teacher meeting, review the rules and begin getting ideas. This is also a good time to renew your previous technical advisor or ask us to help you get a new one.			February 1 Last day for T-shirt orders and team names	March 19th projects due to VSRA (Written & Visual)	
		January 13 School teams must be signed up			April 26 Virginia Air and Space Museum: Finals
				March 27 Mariners Museum: Peninsula Preliminaries	
				March 29 Nauticus: Southside Preliminaries	

**Every project should use timelines. Project planning must include steps for:

- 1) Design,
- 2) Visual and oral presentation,
- 3) Visual, oral, and written presentation of four to six occupations in the ship repair industry.