

G.E.Ms Star Competition 2011 Instruction Guide

Shopping List (From Lowe's or Home Depot, Hobby Lobby, Michaels - Wood, Pre-molding Section)

- ✚ To start make sure you have 10 drowels of equal length -(Wood - Pre-molding Section - Drowels) < \$1 each;
- ✚ One thicker drowel to be cut into 5 equal length - < \$1;
- ✚ Electrical wire (8-12ft) with a bulb socket and 2-or-3 pin plug at end;
- ✚ Light bulb - 50c;
- ✚ You may need more drowels for a 6-sided or more Star;

Shopping List (From Hobby Lobby or Michaels)

- Rubber-bands, fine wire or string to bind the drowels together;
- Colorful tissue Paper/Stencils/Stickers...etc;
- Elmer Glue to cover the start with tissue paper- 50c;
- String to hang Star;
- Box cutter for making notches in drowels;

Build Procedure:

Build two flat 2-dimensional Star, then bind them together, the stretch them a part to make a 3-dimensional Star.

Step A: Build a two 2-dimensional 5-sided Star

- ❖ Take a pair of drowels and tightly tie two ends of the drowels by looping a rubber band/wire around several times and then stretch to make a V;
- ❖ Repeat Step (1) above to create a 4 V's;
- ❖ Then take 1 drowel and tie it to one of the loose-end of a V shape drowel to create the shape IX;

- ❖ Then take a V shape you have created and a IX shape you created and interweave the two shapes for support, tying the two loose-ends to create a flat 5-sided symmetrical Star with good support when held by any of it's apexes;
- ❖ Repeat Step (3) and (4) to create yet another 5-sided symmetrical flat Star;

Hint: You may want to notch the both ends of the drowels 1cm from the end to give the rubber band/wire a better grip avoiding it from slipping off. Also you may want to bind the intersections of the octagon in the center for better support.

You should now have 2 flat Stars.

Step C: Combine the two 2-dimensional Stars together

- Place the 2 flat 5-sided Stars on top of each other and again tightly tie/bind each of the 5 paired-apex together;
- You should now have the two flat Stars tightly secured at all apexes;

You should now a 1 flat Star (still 2-dimensional) which can be held by any of it apexes;

Step D: Build a 3-dimensional Star

- ✚ Now pull/stretch apart the two Stars at it's center octagon to see how wide a start you would like it. CAUTION! Take care not to stretch too much or you will break the drowels. This should be wide enough to hold a light bulb with at least an extra 5cm on all sides of the light bulb. Measure this length and it should be anywhere between 4-6 inches;
- ✚ Cut 5 equal drowels of this length;

- ✚ Cut/split each of these 5 dowel at both ends to about an inch deep at both ends. Caution! Do not cut too deep or it will split the dowels completely. Do only one first and perform step (4) below to ensure you have a good fit. Then repeat;
- ✚ Stretch the two stars apart at the intersections that make the octagon and fit the 5 equal cut dowels at the 5-apexes of the octagon to hold the two flat stars apart. Make sure these 5-pegs are steady. Bind them if necessary.

You should have a 3-dimensional Star.

Step E: Decorating the Star

- ❖ Be creative and innovative as you wish;
- ❖ Hide the tied apexes with tassels;
- ❖ Cover up all parts - front, back and sides of star with translucent (to let light through) decorative tissue papers of varying colors and decorate with stencils, stickers...using Elmer's glue; leave the top-end V of the star uncovered to drop a light bulb through to the center of the octagon;
- ❖ Hide or show star-framework as you wish with frills... Etc;
- ❖ Tie a string to each top-end 'V' apexes of the Star enabling you to hang the Star upright;