

Art, Science, & Technology Showcase

Feb. 28, 2019 6:00 to 8:00

This year Northlake Woods will be holding a **STEAM Carnival** on **Thursday, February 28th**. All students from JK - 8 are welcome and encouraged to join in the fun. If you would like to participate, please complete and return the attached registration form by **January 14, 2019**. If you are working with a partner, each student must submit a fully completed form. (parent signature is required)

How Can Students Participate?

- **Create a Poster for the Hallway of Discovery:** Let's fill the halls with ideas for the students to spend the whole week enjoying, and parents to peruse on the night of the Carnival! Students can create a 22" by 28" bristol board poster. The content can be about their favourite Scientist, Astronaut, Engineer, Artist or other great thinker. Boards can be any colour your child chooses and can be purchased at Staples, Dollarama, Walmart or any other crafting store you choose.
- **Display a Science Project/Experiment:** Students can complete and present on a chosen Science topic or experiment during the STEAM Carnival (grade 7 & 8 students are welcome to submit their science project for entry into the Waterloo/Wellington Regional Science Fair). All work is to be completed at home; no classroom time will be scheduled. A cardboard display backer will be provided: Primary/Junior students will receive a 60 cm high by 180 cm wide (3-panels of 60 cm) backer; while Gr. 7 & 8 students will receive one 120 cm high by 180 cm wide. While we encourage students to choose any topic that excites them we also remind them to keep safety in mind. If they are using chemicals, flames, or any other dangerous material it should be done under parent supervision. Also keep in mind that live animals, toxic chemicals, and flames are not permitted in school, so in these cases document your experiment thoroughly with photographs and display the photographs on your boards. Please do not share food.
- **Display your original Art:** Let your creativity run wild in any medium of your choosing! The only thing we ask is that you tell us whether you need tablespace or wall space to display your work and whether or not you will be using a projector and/or require an electrical socket.
- **Crochet a piece of Coral for our Reef:** Students and parents are encouraged to participate in this "wooly celebration and celebrate the intersection of higher geometry and feminine handicraft as a testimony to the disappearing wonders of the marine world" crochetcoralreef.org (You can get started now on your own or come to a community event in the New Year).
- **Visit the STEAM Carnival to discover:** the science behind the art of "Juggling" (presented by a student doing their doctorate in the subject!), the fascinating process that corn goes through when popped, and so much more!!! Come and enjoy the festivities!

PARENTS PLEASE NOTE: Your child must bring their project to the gym for set-up on **Thursday February 28, 2019**, during setup times of 8:00 am to 8:30 am.

NLW STEAM Carnival ENTRY FORM - 2019

Please Print Clearly and Return to the School Office no later than January 14, 2019

Student's Name _____

Grade: ____ Teacher _____ Room # ____

I will be submitting (you may choose more than one)

A Science Project **A Discovery Poster** **An Art Project**

Area of interest (for art projects please specify if need a table or wall to display):

My art project requires a trifold display board: Yes No

I am working on **my own** **with a partner**

NOTE: Each group member must submit a signed registration form

Partner's Name _____

Grade: ____ Teacher _____ Room # ____

Partner's Name _____

Grade: ____ Teacher _____ Room # ____

I/We require an electrical outlet

I wish to participate in the Regional Science Fair (Gr 7, 8 only)

Parent/Guardian Signature: _____

Information to get you started

FOR POSTERS

Famous Scientists:

www.famousscientists.org is a great place to start. Scientists are listed according to the field they worked in. You can pick a person at random, or search for someone you already know.

Google It! Try googling one of the following:

- Women in Science
- Women in Science you should know
- Google Science Fair winners (Kid scientists)
- Scientists who didn't get credit
- trailblazing scientists

FOR SCIENCE PROJECTS

Google It! Again google is a great resource for information. Simply searching Science Fair brings lots of websites that can help you choose, create, and display your projects.

A few websites to try are:

www.all-science-fair-projects.com

www.sciencebob.com

www.sciencekids.co.nz

www.education.com (then search science projects)

FOR GRADE 7 or 8 REGIONAL SCIENCE FAIR INFORMATION

(<http://wwsef.ca/>), with special attention to the section on *project requirements* (<http://wwsef.ca/fairinfo.htm>). Following these will be your responsibility!

FOR EXAMPLES OF CORAL CROCHET

Google It!

- TEDTalk Crochet
- Crochet Coral
- How to crochet (there are tons of youtube videos out there)

How To Crochet a Piece of Coral: A few patterns to get you started

For any of these patterns you can use any size of crochet hook. The more variation in our coral reef the pattern! Any colour, size, and shape of coral is very appreciated!

Basic Hyperbolic Plane:

Step 1. To crochet a basic hyperbolic plane, begin with a line of chain stitches. 15 or 20 stitches for your first try is best.

Step 2. Row one single crochet (sc) in 5 stitches then 2 sc in the sixth stitch. Keep on repeating this pattern until the end of the row.

Step 3. Turn around and repeat the pattern in the next row and all subsequent rows.

Variations

- Use double or half crochets instead of singles, any stitch will work!
- Experiment with your rates of increase (sc in 3 stitches 2sc in 4th). As long as the rate of increase is constant you will create a hyperbolic plane (ie. a piece of coral)
- Different types of yarn behave in different ways. Synthetic yarn and a small hook is more rigid, while soft wools and a larger hook are more floppy.

Double Hyperbolic Plane: (crochet around both sides of a line, working in a racetrack pattern)

Step 1. Begin with a line of chains.

Step 2. Crochet along one side of the chain increasing at a regular rate.

Step 3. At the end of the row, increase 5 stitches in the last chain, then turn around and come back along the other side, continuing to increase at the same rate.

Step 4. Continue hyperbolic crochet around the racetrack in all following rows.

Pseudosphere: (hyperbolic crochet around a circle)

Step 1. Begin with a line of chains.

Step 2. After a dozen stitches, you need to turn the line into a circle. To do this, crochet three stitches into the last chain and then join this group of stitches into a tiny cone. (you should have a long string of chain with a small cone of crochet.)

Step 3. Begin to crochet around the edge of the cone increasing at a regular rate. (ex every 3rd stitch)

An imperfect (but still lovely) Pseudosphere:

Step 1. Crochet 4 chains.

Step 2. Join chains into a circle.

Step 3. Begin to crochet around the loop increasing at a regular rate as you spiral out.