Keatsway Family Science Night
Wednesday, February 28, 2018

Who: Keatsway students with an interest in science, & their families

What: A voluntary, non-competitive science fair

Why: To pursue personal interests
To learn something new about the world around us
To develop a love of science
To build creative thinking, problem solving & planning skills

Where: Keatsway gym

Cost: A registration fee of **$2.00 per student participant**, to help cover expenses.

If you have any questions, please contact Keatsway at 519-886-1650 or parent volunteer organizers Sheila Vardy (srvardy@gmail.com) & Rebecca Steinmann (rebeccasteinmann@gmail.com)

Schedule

February 15th, 21st, & 22nd

9:00-9:30 am & 3:40-4:00 pm	**Registration,** in front of school gym. Please bring completed form & $2 fee; pick up display board. *If you cannot attend any of these registration times, please contact Sheila or Rebecca (see above) to make alternate arrangements*

February 28th

8:15-9:20 am	Participants bring projects to gym for **set up***
9:20-3:40	Class visits: teachers escort their students to view the projects
3:40-4:30 pm	****Presentations:** Participants present their projects to science professionals. Parent attendance is optional for this period. *Parents who will not be present should arrange student pick up in advance – phones will not be available for student use*
6:00-7:15 pm	****Open House**. A chance for families to view the projects and appreciate the hard work of participants. All children attending should be accompanied & supervised by a parent or other adult. *Take projects home at the end.*

**** Live animals and valuable or delicate items used in presentations should not be set up until after school when students are present at their displays. The gym will be unlocked and unsupervised for parts of the school day. Please do not bring live animals to school in the morning.***

***** All student participants are expected to attend both these events*.**

About Family Science Night

Participating in this event is a great opportunity for students to learn more about a science topic of interest and to share their discoveries with their families and the school community. Perhaps the most important aspect of science fair participation is that it helps students develop a curiosity about the world around them that will stay with them throughout their lives. All students from JK-Grade 6 are welcome to participate, and primary students are encouraged to join in the fun to get an early start on building a love of science. This is a non-competitive science fair. All participating students will receive a certificate and medal as recognition of their work.

Family Science Night is a chance for students to produce original work, present it to an interested audience, and receive recognition for their effort. While it is important that the projects are student-driven, family support can be very valuable. The objective is for the children to learn something new and gain a sense of accomplishment through their efforts, but family involvement may enhance this experience. The supervising adult(s) may facilitate the choice of topic and formulation of a research question, help with the logistics of presenting the results, and of course provide encouragement along the way.

Choosing a Topic

Students will enjoy Family Science Night more if they choose a topic of personal interest. A list of sample topics is provided below, but the possibilities are limitless! The starting point for a project may be asking Why? What? How? When? or Where? Answering any of these questions regarding a selected science topic can form the basis of an appropriate exhibit.

Sample Topics

Animals and Plants
The life-cycle of flowering plants
What makes a plant a weed?
Photosynthesis
The Importance of bees
Beneficial vs problem insects
A study of a favourite animal
Arctic animals & climate change
Keystone species
Butterfly migration
The food chain
Invasive animals or plants

Human Body
Teeth
Digestive system
Circulatory system
Why exercise?
The brain
How do prosthetic limbs work?
Immune system

The Environment
Plastics in the oceans
Endangered animals
The Greenhouse Effect
Wetlands
Pesticides
Solar energy
The importance of forests
The water cycle
The effects of melting polar ice
Cleaning up oil spills

Earth and the Universe
The sun
Rocks and minerals
Volcanoes
The Milky Way galaxy
Glaciers
Solar system
Weather
Light
Space exploration
Sound waves

Machines and Technology
Simple machines
Wind turbines
Electricity
Robots
Photoelectric cells
How an electric guitar works
Computer programming
Rockets
Electric cars
The International Space Station
Communication satellites
Sound waves

Food Science
How is maple syrup produced?
Mold growth on food
Bacteria in food – good and bad
Genetically modified foods
Food allergies
Chemical reactions in cooking

HOW TO APPROACH YOUR SCIENCE PROJECT

Think of a topic

Think of a question to try to answer

Do some beginning research. Too hard? Save for another year.

What type of project?

Experiment

An experiment involves a test under controlled conditions to discover or demonstrate a fact (test a hypothesis) or general truth. The work might involve multiple trials, observation, recording of the results, and then concluding what the student determines to be the answer to the original question.

Describe what you want to find out or demonstrate.

Identify variables and methods.

Record ALL results, expected and unexpected.

Study

A study is a presentation of research. The information can be obtained from any resource including the library, home, internet or interviewing a scientist. A study is ideal for younger students as they can find topics of special interest and present what they know about the subject. The presentation may include use of props such as pictures, models or other related objects.

More involved studies might also work well for older students who wish to research a complex topic in detail.

Invention

An invention is an original project that solves a real-life problem or creates an improvement to everyday life.

Describe what you are trying to make or improve and the purpose of your invention.

Test your invention and keep records of failures and successes.

Even if you can't quite get your invention to work, you can talk about why and how you might improve it.

Analyze results, summarize findings, evaluate invention

Prepare your presentation

Be proud of your accomplishment!
Can you think of ways to make it even better?

Family Science Night Project Planning Sheet

For Student Use Only – Do not Hand in

1. My project will be about:

2. The title might be:

3. The question I am asking is:

4. If I'm doing an experiment, I think this will happen (my hypothesis):

5. Books, websites and other references I might use:

6. I'll need these supplies:

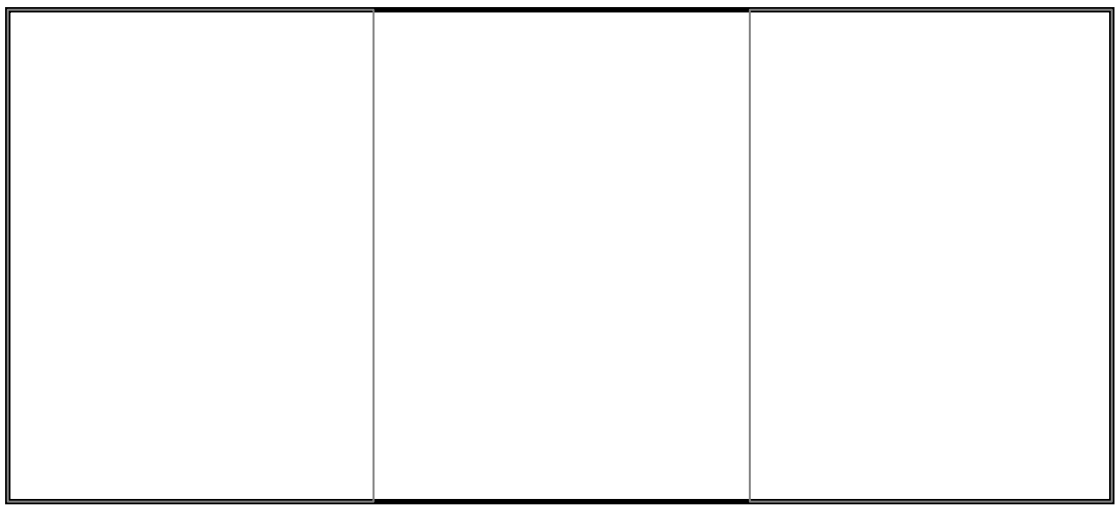
7. I might need help with:

8. The first three steps I will do to get started are:
A)
B)
C)

9. What did I find out?

Remember to look to the library for ideas and information. The school library has an excellent collection of science books available. The Waterloo Public Library and Kitchener Public Library branches are also good sources of books full of science project ideas and tips. See the next page for some helpful websites.

Imagine that your project is finished. Draw a picture of what your display will look like at the Keatsway Family Science Night.



Additional Resources to Help You Plan Your Project

School Library: Look for Mrs. Showers' special display of science fair related books

Websites that might provide inspiration and helpful information:

https://www.exploratorium.edu/snacks

http://www.funology.com/science-experiments/

http://letstalkscience.ca/

http://www.all-science-fair-projects.com/

http://billnye.com/?billnyeresourcetax=home-demos

http://www.education.com/science-fair/

http://madsci.org/experiments/

https://sciencebob.com/

http://www.sciencebuddies.org/

http://www.sciencekids.co.nz/projects.html

http://sciencemadesimple.com/

http://sciencefair.math.iit.edu/projects/