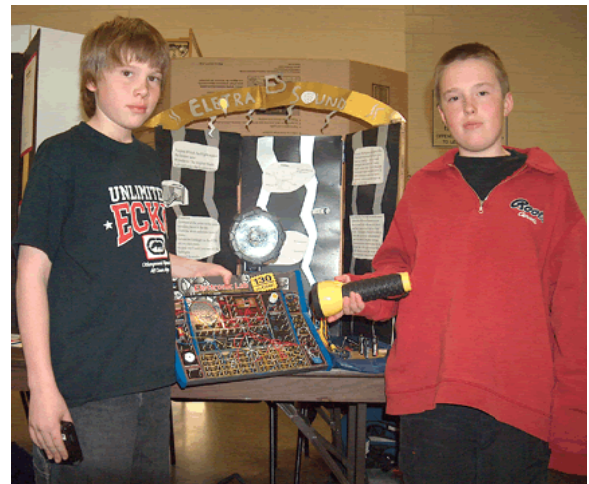




## JUNIOR SCIENCE & INVENTOR'S FAIR

### HANDBOOK 2014-2015



*With*

Avon Maitland District School Board

Huron Perth Catholic District School Board

Foundation For Enriching Education Perth Huron





## All About.....Sci-Tech Encounters

What is it? Sci-Tech Encounters includes two events:

**Science and Inventors' Fair** is a one-day event, which allows students to show their own research or invention to a series of judges. The projects can take the form of an experiment, a research paper, or an engineering project and students are asked to create a report, design a display and be prepared to present their project to the judges. The process usually begins in the classroom where the teacher is using the science fair or invention process as a means of teaching the scientific method.

**TechoChallenge** is a daylong event designed to allow students the opportunity to test their academic and problem solving skills related to science and technology. The events include a Pneumatic Robot Challenge, a triathlon, a construction challenge and a vehicle challenge. Classroom teachers are given some resources in order to help prepare their teams for the events. The key ingredients to success are teamwork, ingenuity and enthusiasm.

**Grade 6 students are invited to the Junior TechnoChallenge**

**When will these opportunities occur?**

## *Science Fair*

<b>Senior Science Fair</b>	<b>April 1, 2015</b>
<b>Junior Science Fair</b>	<b>April 2, 2015</b>

## *TechnoChallenge*

<b>Senior TechnoChallenge</b>	<b>May 14 2015</b>
<b>Junior TechnoChallenge</b>	<b>May 13 2015</b>

*All events will be held at the  
Seaforth & District Community Centre.*



## Curriculum Links:

1. Inventions and projects may involve any of the Science strands in the Ontario Curriculum Science and Technology (1-8).
2. Inventions and projects allow the students to develop attitudes and 'habits of mind' that are essential for meaningful work in science and technology. These include: commitment to accuracy, precision, and integrity in observation, experimentation, and reporting; respect for evidence; concern for the observation of safety procedures; and respect for living things and environment.
3. The inventions and projects allow for development of both oral and written communication skills.
4. The inventions and projects allow students to learn and use specialized scientific mathematical language.
5. These projects also build on and reinforce certain aspects of the language and mathematics curricula. For example, they emphasize the importance of clear, concise communication and involve the use of various charts, tables, and graphs for communicating observations and measurements.
6. Inventions and projects provide integrated learning opportunities which are ready-made for differentiated instruction.



## Participants

Elementary Schools may send a **maximum of two entries** per class, for **each** Grade 4, 5, & 6 class in the school. Additional entries may be arranged by contacting Don Pottruff, Math/Science/Technology Coordinator at the Seaforth Education Centre.

## Registration

Registration for the Senior Science Fair will be online at the Scitech website. Past pictures and other information can be found there as well.

SciTechEncounters.ca

A password is needed for registration and will be sent to teachers when the link opens.

## Fees

Fees are \$10.00 **per student**.

## Awards

Medallions will be awarded to the top 5 finishers in each grade.

## Assessment and Evaluation

A rubric for assessment has been developed for possible use within your school.

## The Exhibits

1. Display size: The maximum measurements are, Width: 1.2m, Depth, 0.8m, Height 3.5m, inclusive of the table on which the project sits.
2. The exhibit should be self-standing and stable.
3. If an electrical cord is required, you must bring your own C.S.A. Approved (3 prong) extension cord. You will need at least a 15m length of cord.

## Safety

Safety is a prime consideration at our fair. Suitable precautions must be taken to prevent personal injury, property damage, and legal action that could result from a lack of concern for safety.

A Safety and Regulations Checklist is to be completed as part of the online registration process. Feel free to contact Don Pottruff with any and all questions. This will ensure a safe and successful fair.



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## Junior Science & Inventors' Fair Schedule

### Seaforth & District Community Centre

9:00 am – 10:00 am	Students arrive  When students arrive at the Centre, they will be: - given Exhibit Numbers - given tags to fill out and attach to their projects - directed to a designated area for set-up
10:00 am – 11:30 am	Judging / Activity with students <i>Students are asked to bring a book to reading during judging time.</i>
11:30 am – 12:30 pm	Lunch will be provided for all students participating.
12:30 pm – 2:00 pm	Judging / Activity with students <i>Students are asked to bring a book to reading during judging time.</i>
2:00 pm – 2:30 pm	Finalize judging results for students
2:30 pm – 3:00 pm	Presentations of Participation Certificates & Awards Open House
3:00 pm – 3:30 pm	Project removal

**Please impress upon your students the need to be on time.**

*There are many projects to evaluate.*

Please advise parents by newsletter of the time of Open House, Presentation of Awards, and "Take-Down" of projects. Be sure to extend an invitation to all friends and relatives on behalf of the Science Fair Committee.





## Assessment Rubric

PART A: SCIENTIFIC THOUGHT – 45%			
Level 1 RANGE: (50% - 59%)	Level 2 RANGE: (60%-69%)	Level 3 RANGE: (70%-79%)	Level 4 RANGE: (80%-100%)
Duplicating a known experiment to confirm the hypothesis. The hypothesis is totally predictable.	Extend a known experiment through modification of procedures, data gathering and application	Devise/carry out an original experiment with controls. Variables identified. Some significant variables are controlled. Analysis such as graphs/simple statistics.	Devise and carry out original experimental research which attempts to control or investigate most significant variables. Data analysis includes statistical analysis.
MARK: 23, 24, 25, 26, 27	MARK: 27, 28, 29, 30, 31	MARK: 32, 33, 34, 35, 26	MARK: 37, 38, 39, 40, 41, 42, 43

PART B: ORIGINAL THOUGHT – 25%			
Level 1	Level 2	Level 3	Level 4
Little imagination shown. Project design is simple with minimal student input. A textbook or magazine type project.	Some creativity shown in a project of fair to good design. Standard approach using common resources/equipment. Topic is current or common one.	Imaginative project. Good use of available resources. Well thought-out above ordinary approach. Creativity in design &/or use of materials.	A highly original project or a novel approach. Shows resourcefulness, creativity in design, use of equipment &/or construction of project.
MARK: 12, 13, 14, 15	MARK: 15, 16, 17	MARK: 17, 18, 19, 20	MARK: 21, 22, 23, 24, 25

PART C: DISPLAY – 20%			
Level 1	Level 2	Level 3	Level 4
Little scientific skill is shown. Exhibit is sloppy & somewhat attractive. Illogical layout with unclear presentation.	Some scientific skill is shown. Exhibit is fairly well constructed & attractive. Layout is somewhat logical but presentation has unclear areas.	Very good scientific skill is shown. Exhibit is well constructed & attractive. Layout is logical. Presentation is clear.	Sophisticated scientific skill is shown. Exhibit is well constructed & very attractive. Layout is clear & logical. Presentation is clear & enthusiastic.
MARK: 10, 11, 12	MARK: 12, 13	MARK: 14, 15	MARK: 16, 17, 18, 19, 20

PART D: SUMMARY – 10%			
Level 1	Level 2	Level 3	Level 4
Summary has missing information, disorganized, several errors in spelling or grammar.	Summary has most information, fairly neat, some spelling &/or grammar errors.	Summary has all information, neat, few errors in spelling & grammar.	Summary has all information, is neat, & virtually error-free.
MARK: 5, 6	MARK: 6, 7	MARK: 7, 8	MARK: 9, 10

MARKS	PART A	PART B	PART C	PART D	TOTAL	LEVEL