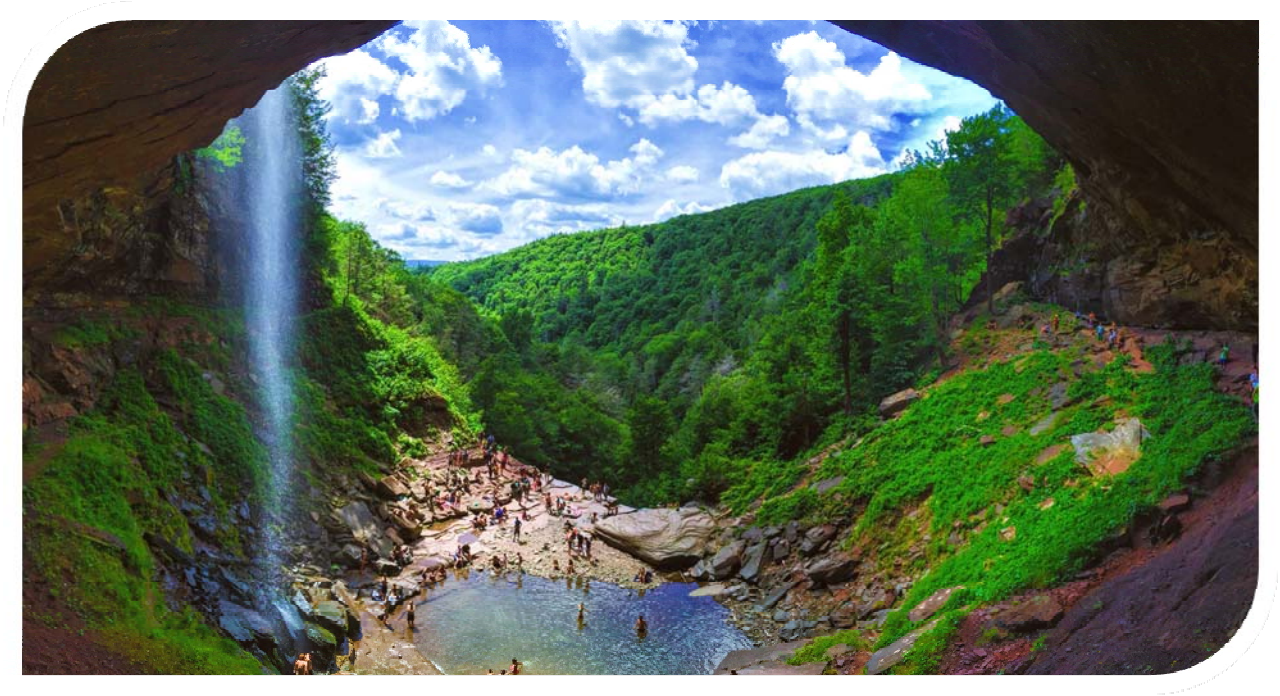
WHAT IN THE WORLD?

Directions for planning, preparing and participating in the 29th Annual Corning-Painted Post Science Fair.

March 10th, 2018
Corning-Painted Post High School



Science Fair – Middle School Division
Corning-Painted Post School District

http://www.corningareaschools.com/sciencefair.cfm

CORNING-PAINTED POST AREA SCHOOL DISTRICT
165 Charles Street
Painted Post, New York 14870
607/936-3704

January 2, 2018

Dear Student:

We're so glad you are interested in science and our Science Fair ***"What In the World?!"***, which is scheduled for March 10, 2018, at **Corning Painted Post High School**. Students in grades 6 through 8 from Corning school district will be able to participate at the middle school level.

The Science Project for students at the middle school level may take one of two designs:

1. Experiment or
2. A Demonstration of a Scientific Principal. The demonstration should not be a simple restatement of the principal (i.e., *"What is centrifugal force?" or "What is friction?",* but should be a demonstration of the **application** of the principal to an area that is of interest to the student (i.e., "How do ice skaters successfully perform moves like a triple axel?").

This packet contains information to help you prepare your project. First, fill out and return the Official Registration Form found on Page 20 of this packet. Please make sure you return the registration to your science teacher. We have set Feb.3rd as the final registration date. On February 12th we will mail a confirmation letter to everyone who is registered for the fair. If, by February 22nd, you have not received your confirmation letter and you plan to participate in the fair, be sure to contact your science teacher or me for a late registration form.

It is very important that you read ***"How to Prepare a Science Project"***: this section will answer many of your questions, explain how to conduct your research, and tell you what must be included in your display. The ***"Project Elements"*** will help to insure your report contains the three necessary elements (notebook, written report and visual display). Be sure to read ***"Basic Rules and Safety Precautions"*.** These guidelines must be followed by all students. Any project which does not observe these guidelines will be disqualified.

"Your Display" will help you build your display for your exhibit at the Science Fair. If you choose not to have your display exactly as is suggested, that will be acceptable. However, you will still be expected to have your display within the maximum size restrictions.

The ***"Student Time Line"*** will help you to develop a plan for your experiment so that you will finish in time to display your work at the Science Fair. You should discuss this plan with your mentor, so that your goals are realistic.

The ***"Objectives for Middle School Students Participating in the Science Fair"*** and the ***"Science Fair Evaluation Form"*** have been included so that you will be aware of the factors the evaluators will take into consideration. Note that part of the evaluation is based on an interview between you and the evaluator.

If you have any questions that cannot be answered by either your science teacher or your mentor, please call Science Fair Director, Jeffrey Marchionda (936-4156) or Secondary Science Convener, Heather Wolfe (654-2966).

Good Luck!

Jeffrey Marchionda, Science Fair Director
Heather Wolfe, Secondary Science Convener

GENERAL INFORMATION SHEET FOR SCIENCE FAIR

GENERAL: The Corning-Painted Post Area School District is sponsoring its twenty-seventh annual Science Fair ***"WHAT IN THE WORLD?"***. It will be held on March 10, 2018, at **Corning Painted Post High School**.

PARTICIPATION: Any student in grades K to 8 in the Corning School District may enter a project. Students in grades 6 through 8 may enter projects completed as an individual student or by two students working as partners.

MENTORS: All students must work with a mentor. A mentor is an **adult** who is willing to assist a student in defining a project idea, provide guidance in setting up the project, experimental procedures and analysis of results, and who insures that the student follows the rules, regulations and safety requirements of the Science Fair. A mentor **DOES NOT** do the project for the student. All work should be the student's own. Students may choose their own mentors: a teacher, a relative, a neighbor, or a friend.

SET-UP: Registration and project display set-up will be **Saturday, March 10, 2018**, at **Corning Painted Post High School** between the hours of **9:30 – 10:30 a.m.** Students are responsible for setting up their own displays.

EVALUATIONS: All projects will be evaluated on **Saturday, March 10, 2018**, between **11:30 a.m. – 2:30 p.m.** Evaluators will interview each student regarding his/her project. Once the evaluation process begins only students participating in the Science Fair and evaluators may be present in the exhibition hall. **Parents, family and friends can view the projects between 10:30 – 11:30 a.m. on Saturday, March 10, 2018**. **All projects must be dismantled and taken home by 2:30 p.m. on Saturday, March 10, 2018.**

AWARDS (Grades 6 though 8 only): Middle school projects will be evaluated according to a set of assessment criteria (rubrics) that are listed in this packet. Certificates and ribbons will be awarded to participating students sometime during the week of March 19 – 23, 2018.

PLANNING PACKET: This planning packet will provide general information regarding the science fair; a registration form; a time line for planning; a guide for writing your report; display regulations; and a list of the factors that will be used for evaluation.

OFFICIAL REGISTRATION FORMS: Registration for the Middle School Division of the Science Fair begins January 2, and ends Feb. 2nd. On February 12th we will mail a confirmation letter to everyone who is registered for the fair. If, by February 21st, you have not received a confirmation letter and you plan to participate in the fair, be sure to contact your science teacher or Mr. Marchionda for a late registration form. An official registration form is included on page 20 in this Planning Packet. **Only those students who are officially registered for the Science Fair will be allowed to participate on March 10, 2018.**

IDEAS FOR PROJECTS: There is a list of websites that describe possible ideas for Science Fair projects attached to this packet and included on the science fair website http:/www.corningareaschools.com/sciencefair.cfm . Students are not limited to these ideas, but are encouraged to follow-up their own interests with scientific investigation.

FOR FURTHER INFORMATION: Contact Science Fair Director, Jeffrey Marchionda (936-4156) or Secondary Science Convener, Heather Wolfe (654-2966).

BASIC RULES AND SAFETY PRECAUTIONS

1. **All projects must be approved by the teacher/mentor before beginning.**

2. Only one exhibit is allowed per student. Projects which are a continuation of a previous exhibit must involve significant new experimentation.

3. Student experimenters should wear safety goggles (eye protection) and follow standard safety practices when working with fire, hot liquids or caustic chemicals. Parent approval and supervision is required for these projects.

4. All experiments using vertebrate animals or humans as subjects should cause no harm or undue stress to the subject(s). These projects require the approval from Mr. Marchionda (936-4156) before beginning the experiment.

5. No live vertebrate may be exhibited at the fair (models, toy animals, or photographs should be used instead). Exceptions may be granted with special permission.

6. Students should avoid doing experiments involving bacteria cultures. Bacterial cultures may not be exhibited.

7. Human parts other than teeth, hair, nails, histological sections and liquid tissue slides (properly acquired) should not be displayed.

8. The use of controlled substances (drugs, chemicals, anesthetics, etc., regulated by the Comprehensive Drug Abuse Prevention and Control Act of 1970) must conform to existing local, state and federal laws. Such substances may not be exhibited.

9. No dangerous or combustible chemicals should be displayed. Rockets or engines must not contain fuel. All chemicals displayed should have the contents clearly marked on the container.

10. No open or concealed flames are permitted. Devices producing temperatures in excess of 70 degrees C must be adequately insulated.

11. The following electrical safety rules must be observed:
    a. Wiring must be properly insulated and fastened.
    b. Household and high voltage circuits must include an adequate overload safety device.
    c. High voltage equipment must be shielded with a grounded metal cage or box to prevent accidental contact.
    d. Approved cords and switches must be used for circuits operating on 110 volts. Open knife switches are not acceptable for circuits exceeding 12 volts.
    e. Wet cell batteries with open tops are not permitted.
    f. Devices which generate dangerous rays (vacuum tubes, lasers, etc.) must be properly shielded. Only class I and II lasers may be operated at the exhibit. these lasers:
        (1) Must have a protective housing preventing access to them.
        (2) Be operated only in the presence of the exhibitor and be disconnected when not in use.
        (3) Be accompanied by adequate warning signs (i.e., "Danger! Laser radiation, do not look into beam").

HOW TO PREPARE A SCIENCE PROJECT

I Choosing a Subject

A. Deciding what to do may be the most difficult part. Start by listing subjects you are interested in (i.e., football, sewing, chemistry, music, etc.).

B. From each general subject area, list questions that you think might be interesting to answer. Examples might be: "How does temperature affect air pressure in a football?"; "Which thread is strongest?"; "How constant is the chlorine content of our drinking water?"; or, "How do the notes of a clarinet and saxophone differ?" Try to make your question as specific as possible.

C. Finally, choose one that you think you can answer. This is the "Problem" you will be solving. Before choosing it, do some preliminary research and consider these three questions:

   I. Will it be interesting and safe?
   2. Can I get the necessary equipment or materials to do it?
   3. Will I have enough time to complete it?

D. Research available resources.

   1. First, find out as much as you can about your topic. Look up information in science books and magazines or interview a scientist or specialist in the area you are studying.
   - Can you find a variety of sources relating to your topic? Remember, the fewer resources available, the harder it will be to write your report.

E. State your hypothesis:

   This is sometimes called an "educated guess." What do you think you will discover once your experiment is finished? Your hypothesis does not have to be correct, rather, you will be doing the experiment to test it and see if it was right. A sample hypothesis might be, "I expect the air pressure in a football to change by l0% from the hottest day to the coldest day."

F. Design the Project
   - List the materials you would use
   - Outline the procedures you would follow
   - Include tables/charts for collecting data

G. Carry out the Experiment:

   I. Make measurements and record your data in metric units whenever possible.

   2. Use a control when applicable.
   In the case above we will have two footballs. One will be heated and cooled. The other will remain at room temperature. The unaffected one is called the **control** and allows us to make sure that it is the heating and cooling of the other one that is causing the change in the pressure, and not some other factory (such as humidity or cosmic rays). Each time we measure pressure in our experimental sample will also check the pressure in our control sample. By measuring the control, we will also see how much air is lost each time we insert the pressure gauge into the ball.

   3. Manage your variables properly. All external influences must stay the same (controlled variables)

except the **one** you are testing (manipulated variable).

a. In our sample experiment, we must use the same footballs, thermometer and pressure gauge each time and keep all other factors (humidity, etc.) constant. The only factor we will change is the temperature. We will heat the experimental ball in an oven and cool it in a freezer, then measure and record the pressure inside the ball.

4. Have a sufficiently large sample size and perform your experiment more than once. If you do the same experiment ten times, will the results be similar?

   a. Do you think all footballs will react the same way? Should you try other ones to be sure? Is it okay to compare footballs from different manufacturers?

5. Collect and present your results. Tables, graphs and charts are helpful in evaluating data. You may have to do some statistical analysis to best evaluate your results (averages, means, medians, modes, standard deviations, etc.).

6. From your results, form your conclusion. Was your original hypothesis correct? Can you do additional experiments to verify your results?

   a. An example might be to guess from your data what the pressure in a football will be at a temperature you haven't yet tested. It is also possible that you may have negative results.

   b. For example, you may discover that the pressure doesn't change in the football (from - 10 degrees C to 35 degrees C). These results are to be reported and are perfectly acceptable!

   Remember that your results and your conclusion are a product of **your** experiment. Someone else may do the same experiment and get different results. You reduce this possibility by doing your experiment more than once.

H. Write up the Project

Your Report must include the following

- Title Page
- Table of Contents
- Introduction
- Description of the Process
- Analysis of the inspiration, research and influences guiding the work
- Conclusion
- Bibliography
- Appendices, where appropriate

I. Construct a Science Fair Display

WHAT ARE THE ELEMENTS OF A GOOD SCIENCE FAIR PROJECT?

A Top-Notch Middle School Science Project Includes Three Elements: a Project Notebook (Process Journal), a Written Report, and a Visual Display.

1. **PROJECT NOTEBOOK / PROCESS JOURNAL**
   A process journal is necessary because it provides accurate and detailed notes make a logical and winning project. Good notes show consistency and thoroughness to the judges, and help when writing a paper. It should be updated regularly during the development of the project and should be used to record progress honestly, containing thoughts, ideas, feelings, decisions, and reflections.

2. **REPORT**
   A report should be displayed along with a project notebook, and any necessary forms or relevant written materials. A report helps organize data as well as thoughts. A good report includes eight sections (see examples below). Most sections should be short; be sure to label each section.

   Section 1. Title Page
   Center the project title, and put your name, address, school, and grade at the bottom right.

   Section 2. Table of Contents
   Number each section when finished.

   Section 3. Introduction
   The introduction sets the scene for your report. The introduction includes your hypothesis, and explains what prompted your research and what you hoped to achieve.

   Section 4. Description of the Process
   What methods and materials were used in your project? Your report should be detailed enough so that someone would be able to repeat the project just by reading the report. Include detailed photographs or drawings if you have them.

   Section 5. Analysis of the Inspiration, Research and Influences Guiding the Work
   The discussion is the meat of your paper. Briefly summarize your results. Be specific, do not generalize. Include data tables where appropriate. Never introduce anything in the conclusion that has not already been discussed. Compare what happened with what you thought would happen. Explain how you tried to use controls (in an experiment) and list some of the controls that were in this experiment.

   Section 6. Conclusion
   The results and conclusions should flow smoothly and logically from your data. **Be Thorough**. Explain to the reader exactly what you did. What might you do differently if you repeated this project? What other experiments might be conducted on the topic?

   Section 7. References (Bibliography or Works Cited)
   Your reference list should include any material that is not your own (i.e. books, journal articles.

   Section 6. Appendices (where appropriate) and Acknowledgments
   You should always credit in your paper those who assisted you, including people, businesses, and institutions, as well as financial support and donated materials.

YOUR DISPLAY

3. VISUAL DISPLAY

You want to attract and inform. Make it easy for interested spectators and judges to assess your study and the results you have obtained. Make the most of your space using clear and concise displays. Make headings stand out, and draw graphs and diagrams clearly and label them correctly. You would be surprised how often visuals are mislabeled, so pay careful attention.

A. Follow the display guidelines given in this packet. Make your display look interesting and present all information clearly. Plan ahead to be sure that all lettering and segments will fit.

B. **Your display must contain:**

1. **Problem**
2. **Hypothesis**
3. **A list of your materials**
4. **Your procedures**
5. **Your results** (i.e. data tables, photographs, etc.)
6. **Your conclusion** (i.e. graphs, etc.)

These items are all described in the above sections.

Display Suggestions:

The center panel might contain the project title, hypothesis and statement of the problem (lettering should be large and clear enough for someone to see from a distance). It may also include any visual material (photos, drawings, etc.).

Side panels might have supporting material (more photos, drawings, graphs, charts, etc.)

It is suggested that you put the Procedure on the left panel and the Results and Conclusions in the right panel. Be sure to double-check your grammar and spelling.

Your project notebook should be placed on the table with your display so that evaluators can look at it. Be sure to label the notebook with your name, school and project title.

C. Expensive or fragile items should not be displayed. Instead, use simulations, models or photographs. Items which are displayed in front of the backboard should be adequately secured (i.e., batteries, wire, switch, motor secured to a piece of plywood).

D. Design your backboard for easy transport. Carefully pack all fragile materials before transporting them to and from the fair.

E. Display Size and Shape Limitations:

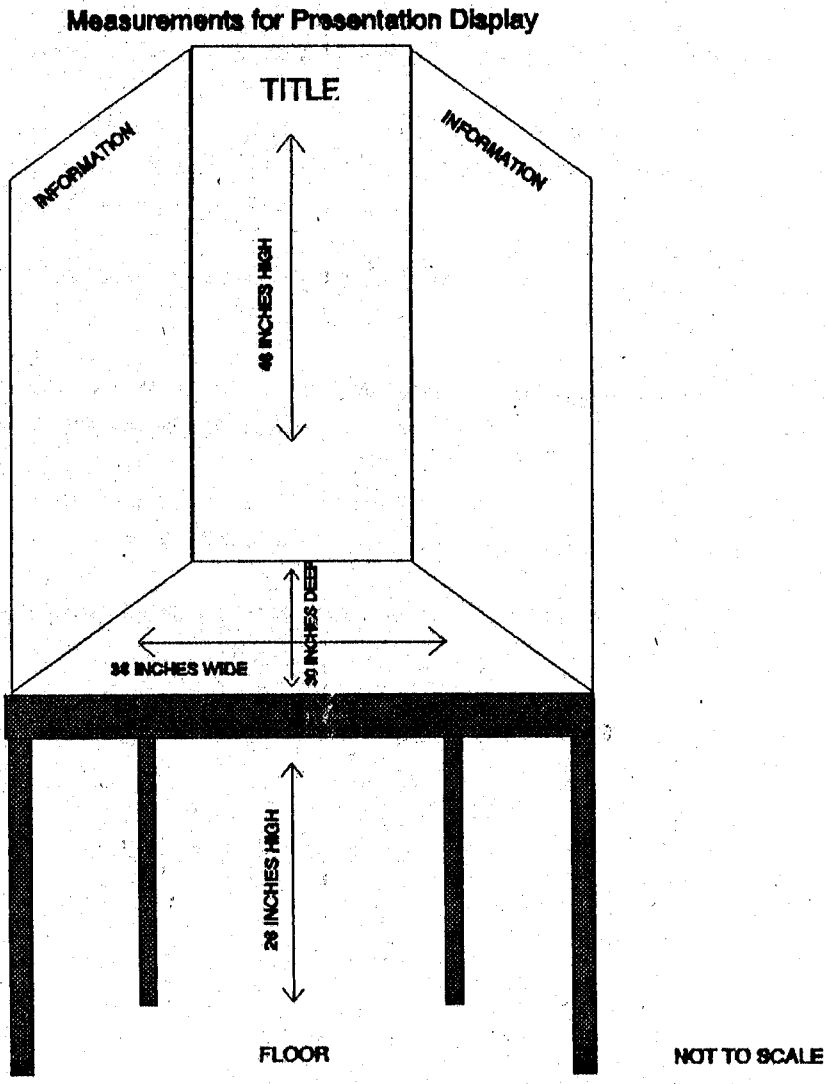
1. The Backboard should be a 2 or 3 sided shape within the size limitations stated below.

2. When displayed, the project should not occupy more than 120 cm of length and 75 cm of depth and 274 cm in height from floor to top of display (tables are 76 cm in height). If equipment is to be displayed it must be contained within the prescribed area (see top view diagram). **Additional space cannot be provided for your display.**

3 Backboards should be made of masonite, pegboard, hardboard or wood to which poster paper, cardboard or fabric may be attached.

F. Have a photo taken of you and your project for your scrap book. Years later you'll be glad you did!

DISPLAY DIAGRAM



MIDDLE SCHOOL STUDENT TIMELINE

DUE DATE	COMPLETED	
Jan.	_____	Choose an area that interests you. Identify a problem or specific topic to investigate within that area.
1-2-2017	2-2-2017	Initial Registration Date. Registration forms to be turned in to your science Teacher.
Feb.	_____	A. Research your topic thoroughly. Sources include science books, technical journals and interviews with people in your field of study.
Feb.	_____	B. Organize everything you plan to do.
Feb.	_____	C. Write out your procedure.
Feb.	_____	D. Propose a hypothesis. This is an educated guess concerning the outcome of your experiment.
Feb.	_____	E. Gather all necessary materials.
Feb.	_____	F. Perform your experiment. Remember to include a control, if applicable, properly manage all variables, maintain an adequate sample size and collect your data in metric units when possible.
Feb.	_____	G. Analyze your results. Use tables or graphs to show important relationships.
Feb.	_____	H. Form your results, formulate your conclusions. Was your original hypothesis correct? Must you perform any additional experiments to prove or support your conclusion?
Feb.	_____	I. Begin work on your display. Present the information you collect on easy to-read graphs or tables. Reserve special areas on your display for your Problem, Hypothesis, List of Materials, Procedure and Results.

Sign-in and setup for projects is between the hours of 9:30 – 10:30 a.m. on Saturday, March 10, 2018. Between 10:30 – 11:30 a.m. is time for your family and friends to view the projects. The evaluation process will start at 11:30 a.m. and end at approx. 2:30 p.m. A t 2:30 p.m. students must dismantle their projects and take them home.

OBJECTIVES OF THE MIDDLE SCHOOL DIVISION OF THE SCIENCE FAIR

1. Students should identify a clear and achievable goal.
2. Students should respond thoughtfully to ideas and inspiration.
3. Students should describe and justify a focus on the chosen area(s) of interaction.
4. Students should organize their work in a coherent manner according to the required structure.
5. Students should describe the steps followed to achieve the stated goal. Students should present information clearly.
6. Students should adhere to the stated goal throughout the project.
7. Students should present references, bibliography and symbolic representations appropriately.
8. Students should select and utilize adequate, varied resources.
9. Students should identify the strengths and weaknesses of the project at different stages of development.
10. Students should identify and use relevant information critically.
11. Students should, where appropriate, suggest ways in which the project could have been tackled differently.
12. Students should acknowledge sources of information appropriately.
13. Students should assess the achieved results in terms of the initial goal.
14. Students should choose techniques relevant to the project's goal.
15. Students should show awareness of the overall perspectives related to the chosen topic or piece of work.
16. Students should justify the techniques. Students should meet deadlines.
17. Students should apply the chosen techniques consistently and effectively.
18. Students should follow agreed procedures and work plans.
19. Students should analyze the information in terms of the goal and the focus of the project.
20. Students should make appropriate use of a process journal or log book.
21. Students should express personal thought. Students should show initiative, enthusiasm and commitment to the task.
22. Students should support arguments with evidence.

Evaluation Forms for the Middle School Science Fair

General

The following assessment criteria have been established for Middle School Science Projects. The criteria are aligned with the personal project in the IB Middle Years Programme.

The Science Project for students at the middle school level may take one of two designs:

3. Experiment or
4. A Demonstration of a Scientific Principal. The demonstration should not be a simple restatement of the principal (i.e., *"What is centrifugal force?" or "What is friction?",* but should be a demonstration of the **application** of the principal to an area that is of interest to the student (i.e., "How do ice skaters successfully perform moves like a triple axel?").

Criterion A	**Planning and Development**	**Maximum 4**
Criterion B	**Collection of Information/Resources**	**Maximum 4**
Criterion C	**Choice and Application of Techniques**	**Maximum 4**
Criterion D	**Analysis of Information**	**Maximum 4**
Criterion E	**Organization of the Written Work**	**Maximum 4**
Criterion F	**Analysis of Process and Outcome**	**Maximum 4**
Criterion G	**Personal Engagement**	**Maximum 4**
	Maximum Total Points	**28**

Criterion A: Planning and Development

Maximum 4

Students should be aware that it is essential to define a clear goal before starting detailed research and work. A goal can be defined as a statement, or one or more key questions, which identify the focus of the project based on an experiment or demonstration of a scientific principal. The goal may alter during the course of the project but students need to state and explain clearly the reason(s) for a change in goal. Evidence of students' achievement in this criterion will be found in the introduction, the body of the work and the conclusion of the student's report..

Level of Achievement	Descriptor
0	The student has not reached a standard described by any of the descriptors given below.
1	The student **identifies the goal** of the project but **does not provide an outline** of how he/she aims to achieve this goal.
2	The student identifies and **describes** the goal of the project and **provides a simple outline** of how he/she aims to achieve this goal.
3	The student identifies and **clearly** describes the goal of the project and **provides a coherent account** of how he/she aims to achieve this goal. The development of the project is **generally consistent** with this description.
4	The student identifies and clearly describes the goal of the project **within a context,** and provides a **coherent and thorough** description of how he/she aims to achieve this goal. The development of the project is **totally** consistent with this description.

Criterion B: Collection of Information/Resources

Maximum 4

This criterion allows the student to demonstrate the ability to collect relevant information from a variety of sources and to compile a bibliography of sources used in the project. Students should select sufficient information and appropriate resources to substantiate all arguments and/or to support the project. Students should also acknowledge their sources of information clearly in the body of their text through clear referencing.

Level of Achievement	Descriptor
0	The student has not reached a standard described by any of the descriptors given below.
1	**Few** sources of information and resources have been collected, or the majority is **irrelevant** to the goal of the personal project. The student has provided a **summary bibliography**, where many elements are missing. **Few references** are made in the text to sources of information used.
2	The student has chosen and used a **limited amount** of **relevant** information and resources, from a **limited number** of appropriate sources. A bibliography has been compiled with **most elements present and/or appropriately presented**. **Some references** are made in the body of the text and appendices, where appropriate.
3	The student has chosen and used a **good** amount of relevant information and resources, from a **fairly extensive number** of appropriate sources. A bibliography has been compiled with **all important** elements present and/or appropriately presented. **Detailed references** are made in the body of the text and appendices, where appropriate.
4	The personal project contains **excellent**, relevant information and resources from a **wide variety** of appropriate sources. The bibliography is **complete and well presented**, with **clear references** to sources in the body of the text and appendices, where appropriate.

Criterion C: Choice and Application of Techniques

Maximum 4

This criterion assesses students' abilities to choose techniques relevant to the project's goal, as defined by the key questions, or statement of intent of the project. Students should justify this selection and apply the chosen techniques consistently and effectively. Students should choose a goal that is achievable. Because of circumstances that may be beyond their control, students may find unforeseen difficulties prevent successful completion of ambitious projects. These types of ambitious project may still result in a good level of achievement for this criterion.

Level of Achievement	Descriptor
0	The student has not reached a standard described by any of the descriptors given below.
1	**Large parts** of the project are **not relevant** in terms of the goal that had been identified by the student. The techniques used are **largely inappropriate** and **inadequately applied**.
2	The techniques chosen **vary in their appropriateness with some being applied to an acceptable standard** in order to contribute to the achievement of the goal. The student **begins to provide justification** for the use of the chosen techniques.
3	The techniques chosen are **generally appropriate and well applied** to contribute to the achievement of the goal. The student provides **some justification** for the use of the chosen techniques
4	The student has chosen **absolutely appropriate** techniques, provided **specific justification** for their choice and applied them **effectively** to achieve the stated goal.

Criterion D: Analysis of Information

Maximum 4

This criterion measures students' abilities to analyze information in terms of the project's goal. Students should express personal thoughts and support arguments with evidence.

Level of Achievement	Descriptor
0	The student has not reached a standard described by any of the descriptors given below.
1	The project contains **little reflection** in terms of the goal, and is **largely narrative/descriptive**. The student misses many opportunities for personal treatment of the topic/theme.
2	The project contains **some** reflection in terms of the goal. Personal thought is **mostly supported** with arguments and evidence.
3	The project contains **significant** reflection in terms of the goal. The student **generally** supports personal thought with arguments and evidence. However, some opportunities for analysis are **not pursued**.
4	The project **clearly shows** the depth of reflection and vitality of the student's own **ideas and vision**. The student consistently supports a **truly personal response** to the topic with arguments and evidence.

Criterion E: Organization of the Written Work

Maximum 4

This criterion focuses on the presentation of the written work (including title page, contents page and page numbering, overall neatness, the appropriate use of graphs, diagrams and tables, where appropriate). It also assesses the internal structure and coherence of the work.

Level of Achievement	Descriptor
0	The student has not reached a standard described by any of the descriptors given below.
1	The written work is **poorly organized**, lacking a sensible order and coherent structure. The presentation of the work (for example, table of contents and page numbering) is **lacking** in several respects.
2	The student has made **some attempt at logical organization** and an attempt to respect the **required structure** of the personal project. There are some coherent links between parts of the personal project, and the presentation of the work is **often appropriate**.
3	The student has made a **good** attempt at logical organization, respecting the **required structure** of the personal project. There are some good links between parts of the personal project, and the presentation of the work is **almost always appropriate**.
4	The organization of the work is **completely coherent** with the required structure. Ideas are sequenced in a **consistently** logical manner with appropriate transitions. Overall presentation and neatness of the work are **excellent**.

Criterion F: Analysis of Process and Outcome

Maximum 4

Evidence of students' achievement in this criterion will be found in the conclusion and also in the body of the structured piece of writing. Students are expected to describe, and reflect on, the stages of development of the project and the thought processes followed. Students should reflect on the ways in which the project has fulfilled the initial goal. Students should attempt to define new perspectives that could be investigated further through future inquiry into the topic/theme. Using their process journals as a prompt for reflection, students will provide comments on such questions as:

- *What have been the strengths and the weaknesses of the project at different stages of development?*
-
- *What would the student do differently next time?*

Level of Achievement	Descriptor
0	The student has not reached a standard described by any of the descriptors given below.
1	The student's review is simply a **narrative summary** or a **superficial review** of the development of the project in terms of the goal set at its start.
2	The student **adequately** reviews his/her project in terms of the goal set at its start. The student's review shows **some reflection** on different stages of the process including an **adequate analysis** of the quality of the product.
3	The student **consistently** reviews his/her project in terms of the goal set at its start. The student's review shows **significant reflection** on different stages of the process. The evaluation includes a **good analysis** of the quality of the product.
4	The student consistently and **thoroughly** reviews his/her project in terms of the goal set at its start. The student's review shows **excellent reflection** on different stages of the process. The evaluation includes an **excellent** analysis of the quality of the product. The student presents **new perspectives** emerging from the chosen topic.

Criterion G: Personal Engagement

Maximum 4

This criterion focuses on an overall assessment of students' engagement and application of approaches to learning skills during the planning and development stages of the project. Qualities such as organization and commitment to the task should be considered. By their very nature these are difficult to quantify and the assessment should take into account the context in which the project was undertaken. The assessment should also take account of working behaviours such as engagement with the evaluator during the interview, as well as the appropriate use of supporting documentation such as log books and process journals. The levels of achievement awarded should be based on a holistic judgment of the degree to which these qualities and working behaviours are evident in the project as a result of the interview process.

Level of Achievement	Descriptor
0	The student has not reached a standard described by any of the descriptors given below.
1	The personal project shows **little evidence** of any of the required qualities and working behaviours.
2	The personal project is judged to be **satisfactory** in terms of most of the required qualities and working behaviours.
3	The personal project is judged to be **good** in terms of most of the required qualities and working behaviours.
4	The personal project is judged to be **outstanding** in terms of the required qualities and working behaviours.

CORNING-PAINTED POST AREA SCHOOL DISTRICT SCIENCE FAIR
March 10, 2018

OFFICIAL REGISTRATION FORM
MIDDLE SCHOOL DIVISION (GRADES 6 THROUGH 8)

YOU MUST FILL OUT AND RETURN THIS FORM TO BE REGISTERED FOR THE FAIR.

IF YOU ARE WORKING WITH A PARTNER OR ON A GROUP OR PROJECT, YOUR PARTNERS MUST ALSO FILL OUT A FINAL ENTRY FORM!

PLEASE PRINT

Name:_____**Home Phone:**_____

Street:_____**City/Town:**_____**Zip:**_____

School: _____**Grade:**_____**Science Teacher:**_____

Partner's name: _____

*****Each partner must submit their own registration form to be properly registered for the science fair*****

Project Title (PLEASE PRINT NEATLY):

_____

Project Description:

_____

This Project is:
_____an experiment
_____ a demonstration of a scientific principle

If you have any special requirements (electrical outlet, etc.) for your project display, please check here. Electricity is only available for a limited number of displays. Please ask for electricity only if it is absolutely essential to your display. You will be responsible for bringing your own extension cords, adaptors, etc. to Corning Painted Post Middle School.

_____ I will need an electrical outlet
Other special needs:

Parent Signature:_____**Date:**

PLEASE RETURN THIS FORM TO YOUR SCIENCE TEACHER NO LATER THAN February 3, 2017