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### TEACHER GUIDELINES

# Teacher Guidelines for Student Science Day Projects (updated October 2020)

This document has been put together for The Ohio Academy of Science with the assistance of a former teacher who led student-research projects in her classroom. Using her experience, recommendations have been made to help the implementation and execution of independent research projects in your classroom. These guidelines represent a comprehensive plan with proven results when incorporated into a classroom curriculum. It is understood that not every school will authorize classroom time or credit for this independent research program. It is also recognized that many teachers will not have time available to follow all of the guideline recommendations. Teachers should adapt the guidelines to fit their individual circumstances as best they can.

This is a four-part document to assist teachers:

Part I Educational Value for Students

Part II Student Interdisciplinary Performance Expectations

Part III Guiding Students through Scientific Research Projects

Part IV Implementing a Local Science Day

### Part I. Educational Value for Students

Teachers who recognize the multiple advantages that the implementation of science research projects offer to students, often find themselves trying to convince their administrators, colleagues, and some parents that the time and effort needed for project completion provides significant rewards for students. This section offers a brief listing of learning objectives, and curriculum skills addressed to assist teachers in the discussion.

Science Days or Science Fairs are occasions for the display and evaluation of student- originated, inquiry-based or engineering and technological design projects. A successful Science Day Program will achieve several student-learner objectives:

- Enhance Self-Concept
- Develop Inquiry and Problem-Solving Skills
- Develop Engineering and Technological Skills
- Promote Development of Creativity
- Improve Organizational Ability
- Utilize Mathematical and Statistical Concepts, and Procedures
- Develop Verbal Communication Skills
- Enhance Presentation Skills
- Extend Written Communication Skills
- Promote Independent Learning
- Develop Research Skills
- Develop Critical Thinking Skills
- Deepen in-depth Knowledge of Science, Technology, Engineering and/or Mathematics

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### **TEACHER GUIDELINES**

# **Part II. Implementing Student Performance Expectations**

This section provides a brief overview of the expectations addressed throughout the completion of a science research project in Language Arts, Reading and Mathematics. With time being at a premium in the classroom, it is important to recognize that an interdisciplinary approach is both advantageous and manageable.

# Science Day Project work will increase a student's development of:

### Vocabulary

- Learning new science terminology
- Developing a personal glossary of the parts, procedures, equipment, methods, and processes regarding their project topic

### Reading Skill

- Using many reading processes such as: making inferences, drawing conclusions, identifying supporting detail, and others
- Using challenging articles and texts to gain Critical Reading experience
- Formulating testable questions
- Skimming and analyzing nonfiction resources for relevant information
- Using technical resources

### Written Language

- Taking notes
- Quoting authors
- Avoiding plagiarism
- Organizing a research paper
- Editing paragraphs of research
- Combining information from multiple sources
- Preparing an abstract
- Citing references

### Verbal Language

- Explaining science concepts, and principles
- Verbalizing the correct pronunciation of scientific vocabulary
- Increasing the ability to respond to different levels of questioning: Factual,
   Interpretive, Evaluative
- Using graphic visuals to assist in explanations

### Mathematics

- Developing a deeper sense of numbers
- Recognizing the importance of number accuracy
- Collecting raw data
- Organizing data to show patterns, trends
- Using appropriate Statistical methods

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### **TEACHER GUIDELINES**

# Part III. Guiding Students through a Scientific Research Project

This section will assist a teacher who is working with a large group or classes of students who each have separate topics/projects. The following information is suggested as a successful method of organizing a classroom of students, while maintaining written records of individual students throughout the research project process.

It is essential for teachers to read and become familiar with **The Ohio Academy of Science -Science Day Standards** and the **Student Guide for State Science Day**, before instructing their students about participation in a Science Day Program. After reviewing the documents, teachers may contact the Ohio Academy of Science with any questions or concerns about the student project expectations. The guides can be found here: <a href="https://www.ohiosci.org/requirements">https://www.ohiosci.org/requirements</a>

The **Student Guide for State Science Day** is a document written specifically for students that may be completing their project independently. The document provides a step by step approach that students may follow to complete a science research project. The eleven Appendices provide required forms and additional explanations that may be needed for entry into the Ohio Academy of Science's Science Day Program. The appendices are referred to throughout the document and should be made available for students that are completing a science research project.

Providing a copy of the **Student Guide** including the appendices (posted in the classroom and/or distributing the electronic file) will allow students to refer to the forms and procedures at any time. Specific dates that the required documents are due should also be made available at the beginning of the project work. Students will then be able to record the dates in their Project Data Book and on their checklist, Appendix 9. The **Student Guide** discusses the overall progression of project development, as well as the individual steps for students to follow to complete their project. The teacher/instructor should also describe the assessments that are scheduled for each section of student project work. Knowing the due dates, the project components, and the criteria for assessments well in advance, will enable students to plan the completion of the project around their personal schedules to meet the deadlines.

## Appendix T10 - Student Record Sheet (Use of this form is optional and only provided as an aide)

One of the most frequently mentioned problems that classroom teachers encounter in helping students to complete the science research project is keeping track of each and every student. Teachers often question if their students: need materials or equipment, are collecting accurate data, have enough notes, are correctly implementing their experimental design, or need more time to meet deadlines. Appendix T10 is a form that will enable teachers to record all the necessary student project information. It is recommended that the teacher print a copy of Appendix T10 for each student they are supervising. Alternatively, this form can be converted to an Excel spreadsheet to record each student's progress.

In situations where student research projects are part of the curriculum and/or where grading of progress is included, students should be earning in-class performance grades on a regular basis. This



practice will keep students on task and progressing through the project on a timely basis.



### Appendix T11 (Use of this form is optional and only provided as an aide)

Teachers should be prepared to offer a multitude of resources for students to search for their project idea. Consulting with a local Research Librarian prior to the students' search, allowed you to suggest current, scholarly and student friendly resources, as well as identify a contact person for students that may need individual assistance. If possible, two class periods should be scheduled to allow students time to search for new ideas with an instructor present to respond to questions and possible topic ideas. Students should then be ready to narrow their list of potential topics. After acquiring an overview of each topic of interest, the students can use Appendix T11 (or similar form) to write drafts of their most promising topics. Further research and a discussion with the science advisor should result in a chosen area of study for most students.

Formulating Design Statements or Hypotheses while considering variables, constraints, materials, etc. may take a few additional days of more in-depth research on the chosen project topic. Students should have a deadline for submitting their final copy of Appendix T11 for "Teacher Approval".

After earning approval of their project design, students will continue writing notes to learn additional information about their area of study. The required Research Plan, student Appendix 1, should be collected by the teacher when students have decided on the Methods and Materials to be used in their project. The Research Plan must be submitted and approved **before any** experimenting begins.

### Appendix T 12 Status Sheet (Use of this form is optional and only provided as an aide)

Once the students are working independently on their *teacher approved* projects, the teacher may want to begin using Appendix T12, the Status Sheet (or similar form). This document was created for the classroom teacher to be able to gain project information and assess the progress of each student. The form requests information on many project components, however the students only complete the statements that reflect their own progress. Dated forms are essential for the teacher to assess the progress of students week to week.

In lieu of paper forms, the teacher may wish to use Google Classroom or similar on-line programs to post student instructions and for students to upload completed forms and other updated documents throughout the course of the project.

If time allows, teachers who can schedule conferencing with individual students provides many benefits for the student: 1) the student is able to express their need for materials, or resources; clarification of written passages or definitions, 2) the student is able to discuss project components such as the Research Paper, the Project Data Book, the Display and the required forms necessary for them to compete in other events, 3) the student is able to relate their frustrations and disappointments, as well as future assignments, 4) the student receives encouragement and support from the teacher, 5) the student is provided with possible alternatives or solutions to problems with their experiment or design, 6)the student may wish to review their performance assessments with the teacher and make adjustments for future procedures.



### Photographic/Graphic Source Identification Student Appendix 5

It is important to suggest to students that photographs be taken throughout the experiment, the model building, or the prototype trials. The photographs provide evidence that the student actually completed the work themselves and will be useful as dated visuals on the student's poster display, and/or in written reports. Refer students to Appendix 5 in the **Student Guide.** This form should be printed or copied and then placed on the student's Display Boards during the Science Day event.

### **Project Data Book**

While the experiments or design trials are in progress, and your students are writing both quantitative and qualitative observations in their Project Data Books, repeated checks on each students' progress regarding recorded data should be implemented. Appendix T10, the Student Record Sheet, has a specific section for teachers to complete this task. Teachers may use their own discretion as to the number of times they wish to check student Project Data Books. It is important that the students are writing *everything* that is occurring in the experiment, the trials, the model building, the designs, etc. Teachers should also record the presence of: numbered pages, recorded dates, and the mention of observations, procedural changes, as well as other essential information in the student Project Data Book.

### **Research Report Drafts**

The first draft writing of the Research Paper should be completed after the project data has been collected. Students should be referred to Appendix 2 and be aware that this Report is required for District and State Science Day participation. Students should make all changes, corrections, and suggestions recommended by their science teacher/English advisor on their first draft before turning in the Final Draft. Once the final Research Paper has been collected, students should proceed to create the design of their Poster Display and begin writing an outline for their Oral Presentation to the Judges.

### Student Check List at Completion of Research Project

This Check List should be completed by all students. It will ensure that the student has followed the procedures and met the criteria of all required policies. Scheduling Presentation times for each student to present their project to their peers, the data they collected, their results and the visual evidence to support their conclusions is another significant part of the project. Students experience a sense of accomplishment when they are given the opportunity to present their own findings and discuss their project with their peers.

The same Judging Criteria used at the Ohio Academy of Science's Science Day events should be used to assess each student's oral presentation. Students should use their scores and the written suggestions by their instructor to improve their project before displaying at a Local Science Day. To be fair to students, it is imperative that the same criteria be used by the judges at a Local Science Day that will be used by judges at the District Science Day and State Science Day. Take time to review the Instructions to Judges documents available on The Ohio Academyof Science website.

http://ohiosci.org

# O ACA 1891 E SCIENCE

### **TEACHER GUIDELINES**

### Mini Lessons for Small Group Instruction

When students are having difficulty meeting deadlines, the Mini Lessons suggested below should be implemented to assist students in clarifying the components of the research project in question. Students may be placed in groups as to the area of need, such as: those needing extra help in writing their research paper, those who need help on their poster display, etc. The amount of time dedicated to addressing student needs is at the discretion of the teacher.

MINI LESSONS are sections of the project on which some students need a more detailed explanation, or additional examples to enable them to implement the skill, or strategy within their own project. You may want to create a file on each of these 12 topics, as well as others that you find necessary for your students.

- A. Choosing a Topic idea
- B. Identifying a problem and stating a hypothesis or design statement
- C. Locating Research Information and Resources
- D. Note Taking procedures
- E. Documentation
- F. Project Data Book Organization
- G. Experimental Design
- H. Collecting and Organizing data
- I. Analyzing and Interpreting results
- J. Research Report Components
- K. Planning a Display
- L. Outlining the Oral Presentation



# Part IV. Setting up a Local Science Day

This section briefly outlines the procedures a teacher/science day director may follow in setting up a local Science Day at their school.

### **Teacher Adherence to the Ohio Academy of Science Standards**

Teachers promoting student research projects and conducting local science days leading to District and State Science Days, are expected to have their students follow the official Science Day Standards outlined in this document, and those offered on the website at <a href="https://www.ohiosci.org/requirements">https://www.ohiosci.org/requirements</a>

Included in these Standards are the Judging Criteria for both individual and team projects that teachers should use locally and that must be used at all District Science Days. The Ohio Academy of Science discourages the assignment or use of special points or a scoring rubric unique to local science days and does not permit their use by District or State Science Days.

# Responsibilities of THE LOCAL SCIENCE DAY DIRECTOR:

### **SET DATE AND LOCATION**

Science Day Directors first must clear a date that coordinates with their own school's schedule, as well as the events in their District's schedule. When selecting the location it is necessary to keep in mind: a) the estimated number of students who will participate, b) the number of Judges required, c) the room needed for the Judges' meeting, d) the room for recording scores, rating and awards, e) the location for the Awards Ceremony.

### **COORDINATE VOLUNTEERS**

Many volunteers are needed to implement a Science Day program in your school.

Officers/coordinators of the school's PTA/PTO may be willing to assist. It is important to establish a contact person within the group that will coordinate with you and the group of volunteers. The contact person should be given a written list of the specific areas where volunteers are needed. It is suggested that you assist in the choosing of the volunteers appointed as coordinators of specific areas. Sometimes, it is to appoint teachers or staff personnel to be coordinators of areas such as: the Judges Room, the initial student set up of projects, and the room where the scores and ratings are calculated. The individual tasks to be accomplished in each area should be printed and posted. The directions for the tasks and procedures should be clearly stated to avoid any misunderstandings. You may want to establish a method and time with your coordinators/volunteers that you will be available to answer any questions or concerns.

### **ACQUIRE SUPPORT**

The need for financial and/or in-kind support will depend on the size of your Science Day (number of participants and Judges) and what you choose to award student participants. Many PTA/PTO Organizations will have funds to provide most of the Science Day needs. Small grants within the school district may also be available.

# THE CIENCE

### **TEACHER GUIDELINES**

### **DETERMINE THE SCHEDULE**

It is essential to have a manageable schedule for everyone participating in your Science Day. Obviously, the larger the number of participants, the longer the time needed for both Set Up and Judging. If it is a school day, students will need to be released from classes and monitors will be needed in the project location. The date and schedule will also be a determining factor for the number of professionals available to Judge. Consulting with your staff, administration, and other professionals should help you gain the support of colleagues to serve as Judges and/or coordinators.

### RECRUITMENT AND INSTRUCTIONS FOR JUDGES

The need for the participation and support of the professionals in your community cannot be overstated. The date and location, as well as the actual judging time period assigned, will determine their availability and willingness to assist. When recruiting Judges keep in mind the number of projects entered in each science area, as well as the grade level of the students. Contact all school administrators; community doctors, dentists, veterinarians, optometrists; government officials, and professional business personnel. Fairness in the assessment of student projects is essential. Three factors are major contributors to a successful assessment: 1) the qualifications of each Judge (level of education, no connection to students, etc.) 2) the implementation of the Ohio Academy of Science criteria; 3) the explanation of the instructions given to the Judges prior to their interviewing students. The goal is to have every student depart knowing that they were judged by a professional that was both knowledgeable in their field of study, and responsible in the use of the established criteria to assess their score.

Provide all Judging material offered on our website to each Judge as they are recruited. Addressing all the Judges prior to the event is extremely important to assure that they both understand their responsibilities and implement the judging process using the Academy's criteria and rating numbers.

### **ASSEMBLE JUDGES FOLDERS**

Even though you may have sent Judging Instructions with the letters to professionals when requesting their assistance in student project judging, often it is not read or studied. It is suggested that a folder be prepared for each judge to receive as they arrive at your Science Day event. The folders should be assembled prior to the event by volunteers. You will need to provide the documents that will be included: 1) print and copy the Ohio Academy of Science's Judging and Ethics Guidelines, 2) print a brief outline of the requirements issued to each student participant, 3) a sample scoring card with a place designated for Judges' Comments and Suggestions to the student, 5) a Thank You note for their participation. Name Tags identifying each Judge is also necessary. Every adult volunteer, judge, staff person, etc. must be identified to be present with students during the judging process.

### **DEVELOP ENTRY FORM**

An Entry Form may seem unnecessary especially if your Science Day is small, but it is an official, written consent from the student that he/she will be prepared and intends to participate in the event. It becomes even more important when a misunderstanding occurs with a parent or the student as to their intention to participate. Knowing the number of participants and their topics will assist you when recruiting judges.

# THE CIENCE

### **TEACHER GUIDELINES**

### **CREATE A PROGRAM**

An official program that lists each student participating with their specific Project Title, their Hypothesis, or their Design Statement provides parents, friends, and students with a keepsake/record of their participation. This information would be available when students submit their Entry Form.

### DRAW FLOOR PLAN

Designate space assignments prior to the event. Volunteers may tape numbers to tables that will be used the day of the Science Day, but you should sketch a floor plan as soon as the entry forms have been received to ensure that the location size will be adequate. If students are bringing their own card tables, the spaces should be numbered and displayed on the floor.

### PREPARE NAME TAGS

All Volunteers, Judges, Participants, and Administrators should have a name tag. Security is always important, so anyone working at the Science Day event needs to be identified. Anyone without a name tag should be asked for identification and their role at the event. Blank name tags and markers need to be available.

### **SET UP TALLY ROOM**

The Tally Room is a designated area where the Judges submit their completed judging cards. The Ohio Academy of Science Standards and Judging Policies should be available in this location. Teachers, working with a few volunteers will calculate the scores, determine the Ratings, and prepare the Certificates. This area should be off limits to parents of participants, and participants themselves. Trusted professional individuals should be assigned to this area to assure scores are not debated or discussed. School staff personnel should be assigned to read the Judges' Comments before the judging cards are returned to the students. Student Scores are not to be revealed until the Awards Ceremony.

### **ACQUIRE SUPPLIES**

Prepare a listing of the supplies that you will need throughout the event and make it available to a volunteer to acquire or purchase. Paper copying of documents, instructions, policies, etc. may be extensive and needs to be addressed when requesting support and funding.

### **ORDER AWARDS**

Awards are personal preference when involved with Local Science Days. The Ohio Academy of Science awards each participant at District and State Science Day an official Certificate that includes the earned rating. Some schools prefer to present certificates of participation, ribbons and/or trophies similar to athletic awards. This should be discussed and coordinated with your school staff and administration.

### **AWARD CEREMONY**

Receiving awards is another area of personal preference. Some schools want an evening event to allow parents and friends to attend and be able to highlight the students' accomplishments. Other schools prefer a shorter program that may take place soon after the scoring has been completed.

#### ACA

### **TEACHER GUIDELINES**

### **SPONSORED AWARDS**

Local Science Days may have community business members and/or professional organizations, or industries that are interested in recognizing student accomplishments their field of interest. These awards may consist of plaques, financial awards, internships, or something significant for the specific industry. The student participants earning the awards are chosen by the professional or community organization.

### **PUBLICITY**

Initially, the teacher will want to announce the date and time of the Local Science Day early so that articles may be written by local reporters and appear in the community newspapers. TV Channels and radio or school newspapers may also announce your event. You may decide to include a phone number or email address where you can be contacted by individuals interested in judging student projects. However, it is recommended that the Science Day Director write any articles that discuss the Ohio Academy of Science Standards involving student requirements, project components, and the Judging criteria to ensure that these topics are addressed correctly. The results of the Local Science Day event to be distributed to reporters after the conclusion of the event should also be written by the Science Day Director. This practice will ensure that all students are recognized for their participation and accomplishments, and if additional awards were earned that those students' names are correct as well.

### TIMELINE FOR LOCAL SCIENCE DAY DIRECTOR

- **4** Four or more months prior
  - Student project work in process
  - Ask for support from the PTA or PTO
    - (Need volunteers, awards, judges "snacks")
  - Confirm date, location, and schedule
    - (Local science day minimum 2-3 weeks prior to the District Science Day)
  - Prepare Judges' source listing

# # Two months prior

- Begin contact with judges
- Order materials (judging cards, certificates, ribbons, plaques, etc.)
- Acquire Supplies
  - (Name tags, pencils, pens, markers, a folder for each judge, masking tape, scissors, staplers, paper clips)
- Record keeping strategies
- Check facilities (all rooms to be used for student displays, judges' room, tally room, award presentation space and Public Address System)

# 4 One month prior

- Collect all Entry Forms
- Mail letters to Judges (include Judging Criteria, time, place, and age group of students)
- Design a floor plan placing all registered students
- Produce and assemble printed Program

# OH 1891

### **TEACHER GUIDELINES**

- Make space assignments (projects in 36" sections)
- Complete Judging cards
- Display Awards for Student Motivation
- Contact media
- Print Certificates
- Complete name tags (for participants, judges, officials, other volunteers)
- Confirm list of Volunteers (time available and task)

# 4 One week prior

- o Review the entire schedule with student participants
- Offer encouragement and support to student participants
- Assign Judges to Individual Projects (if possible)
- Assemble Judges' folders (OAS Mission, Standards, Judging Criteria, and Ethics)
- o Re-contact Media

# Science Day

- Meet with Volunteers
- Issue Participant name tags
- Project set up (36" space allowance)
- Assemble students at their assigned space number
- Judges' Briefing
  - Review the Judging Criteria, the procedures and the minimum number of points needed to earn a Superior Rating that may give the participant an opportunity to display at the District Science Day.
  - Discuss Judging Expectations and Ethics
  - Emphasize the need for Judges to write constructive comments and suggestions on the judging card that will be returned to the student participant.

# # Tally Room

- Essential to have a responsible, professional in charge of this room to ensure that the two Judging cards for each student have been totaled and then averaged correctly.
   The ratings are not to be discussed.
- Stamp or write the Rating on the certificates
- o Prepare lists of Awardees and all Superior Rated student Projects

# 4 Awards Program

- o Recognize all students individually when issuing the Certificates
- Distribute special Awards as applicable
- Name Superiors that are eligible for District Science Day
- o Thank all teachers, volunteers, and judges for their time and participation
- Issue summary news release immediately for Media that are present and/or to send to local news papers



### **APPENDIX OAS 10**

### **STUDENT RECORD SHEET**

Student's Name	·	Class/grade level
Identified Problem:		
Hypothesis/Design Statement		
Experimental Method	Date Approved	
Chosen Design		
Variables/conditions/constants/	limiting factors	
Sample sizeNumber of Trials		
Procedure for Data Collecting		
Equipment Located/Needed		
Materials Located/Needed		
Literature Search		
Date QUANTITIATIVE & C	QUALITATIVE DESCRIPTION OF NO	TES SOURCES NOTED



### STUDENT RECORD SHEET

<b>RESEARCH PLAN</b>	COMPLETIC	ON DATE	QUALIT	Υ	
PRODJECT DATA	BOOK CHECK	1			
<b>1ST</b> DATA	DUE:	QUALITY	<b>2ND</b> DATA	DUE:	QUALITY
BOOK CHECK			BOOK CHECK		
3RD DATA	DUE:	QUALITY	<b>4TH</b> DATA	DUE:	QUALITY
BOOK CHECK			BOOK CHECK		
FIRST DRAFT OF RESEARCH PAPER		DUE:	COMPLETED	QUALITY	
FINAL DRAFT OF RESEARCH PAPER		DUE:	COMPLETED	QUALITY	
DISPLAY		DUE:	COMPLETED	COMPONENTS VISIBLE	QUALITY
ORAL PRESENTATION		DUE:	COMPLETED	QUALITY	
TEACHER COMM Date	IENTS				
Date					



### APPENDIX OAS 11

### PROJECT WORKSHEET

QUESTION/PROBLEM TO BE INVE	STIGATED
DRAFT OF HYPOTHESIS	
DRAFT OF DESIGN STATEMENT	
NEED	
VARIABLES	
INDEPENDENT (MANIPULA	TIVE)
DEPENDENT (RESPONDING	i)
	<del></del>
CONSTRAINTS	
SAMPLING	
TRIALS	
EXPERIMENTAL GROUPS	
CONTROL GROUP	
PROTOTYPE	
TEACHER APPROVAL (check):	Т
APPROVED AS WRITTEN	APPROVED IF STUDENT IMPLEMENTS STATED CHANGES
TEACHER COMMENTS:	
DATE	
DATE	
DATE	
_	
DATE	
DATE	



# Appendix OAS 12 Science Research Status Report

Name		Date		
Topic				
Number of notecards/page	es I have writter	า		
Number of facts/sentences	s on each card/ <sub>l</sub>	page		
Number of complete Refer	ences written o	on my list or on	Note cards	
My NOTE TAKING is going:	(CIRCLE 2)			
Fine	Okay		Difficult	
l Need Help	I need more r	eferences	I'm doing we	ell
My Hypothesis/Design Stat	tement			
My Experiment is: (circle a	• •	· · ·		
Started	Going fine	Finishe	_	Has some questions
I need materials	I need help	No hel	p needed	
I have written about my pr	oject design/ex	periment in a n	otebook/data	a book, and I am writing all
the				
measurements and observ	ations in that be	ook also. My da		ently has: (circle all that apply)
Page Numbers		Dates		edures Listed
Materials Listed		Measurement	s Obse	ervations
I need help with my	Data Book			
My Research Report is				



# Appendix OAS 13 Assessment Student Inquiry and Design Projects

Student Name	Points Earned
1. Research Plan	/50
2. Controlled Experiment/Design a prototype with Project Data Book/Notebook	/100
3. A Research Report:	/100
a. Title Page (including date and name)	
b. Table of Contents	
c. Abstract (250 words or fewer)	
d. Introductions (background, problem, hypothesis, or technological design statement)	
e. Methods and Materials (used to study problem)	
f. Results (analysis of data collected, graphs, tables, photographs, and diagrams)	
g. Discussion (included conclusions/ implications/further study)	
h. References or Literature Cited	
Physical Display (Including Project Notebook)	/100
Oral Presentation	/100

Participation in a Local Science Day (met criteria \_\_\_\_ did not meet criteria \_\_\_\_)



# From the Student Guide to State Science Day Student Check List at Completion of Research Project

	_I have completed the Required Research Plan.
	_I have completed the Required Research Report.
	_I have completed the Required Project Data Book/Notebook.
	_I have Checked all OAS Standards and ISEF Rules to ensure I followed all procedures and protocols.
	_I designed an experiment to test variables or a prototype to respond to a design statement.
	I had adequate sampling and/or testing.
	I listed all materials and equipment used.
	I collected and organized my data.
	_I created graphics using the data I collected.
	_I wrote daily/frequently in my Project Data Book/Notebook.
	_I included dates, page numbers, thoughts, plans, and diagrams in my Project Data Book/Notebook.
	_I took photographs, or developed a flow chart, or drew diagrams of the experimentation or making of the prototype.
	_I reviewed the OAS Judging Criteria to make sure my project showed evidence of all criteria.
	_I took notes from each resource making sure that I identified the resourceused for each page or card of notes.
	_I used a documentation style such as MLA or APA throughout my research paper.
	_I am able to pronounce and explain all terminology used in my reports, onmy poster display and in my presentation.
	I have included all important information regarding my experiment, design, model or prototype.
	_I have edited all of my written research reports (EXCEPT my Project Data Book/Notebook)
	checking for sentence structure, spelling, punctuation, and grammar.
,	_I have listed <b>all</b> of my resources both in the text and at the end of the paper.
	_I have created all of my graphs, tables, charts, diagrams and poster display, OR if I used another source, I listed the source to give proper credit.
	I have developed my oral presentation with the evidence needed so that the judges will know that I am knowledgeable about my entire project.
	_I have prepared my poster display with graphs, tables, charts and diagrams that will help me explain my project with detail.
	_I have written the required Abstract that describes my project detailing all of the suggested sections. Copies of the Abstract will be exhibited with my project.
	_I have used the required format of the Research Plan to be included with my applications to District and/or State Science Day.
	_I have SIGNED both the Human Consent form and the ISEF Ethics Statement and sent them to the designated address for District and/or State Science Day.
	I will contact the Ohio Academy of Science if I have any questions or concerns.