



NAIVSEF

National American Indian
Virtual Science & Engineering Fair

Welcome to the NAIVSEF TEACHER AND STUDENT TOOL KIT!

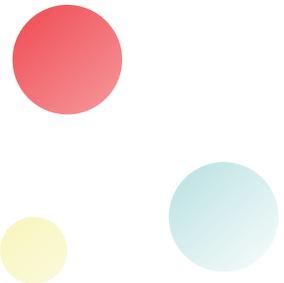
This tool kit was created as a resource for students and teachers to facilitate participation in the AISES science and engineering fair. The kit can be printed and provided directly to students, or teachers can use it as a guide for supporting student projects in or out of the classroom. It is filled with tips, worksheets, and other resources and administrative tools needed to create a successful project! The kit can be used as a whole or any part of it can be used as a standalone tool.

All general NAIVSEF information is also available online at <http://fairs.aises.org/>.

Thank you and welcome to NAIVSEF!



AMERICAN INDIAN SCIENCE
AND ENGINEERING SOCIETY



QUICK INFO SHEET

- NAIVSEF is a *Society for Science and the Public* affiliated science fair.
- 100% online Science Fair: Participants submit their projects as videos or slideshows online (<http://fairs.aises.org/apply>).
- Two entrant categories: Junior Division = grades 5-8 and Senior Division = grades 9-12.
- Students MUST be AISES members to enter.
- Registration open from September 18, 2017 – February 14, 2018.
- Can enter as an individual or teams of up to three.
- Each entrant must have an adult sponsor (parent/guardian, teacher or mentor).
- Only Senior Division winners to on to Intel International Science and Engineering Fair (ISEF) per ISEF rules.
 - AISES pays the way for winners and sponsors to attend ISEF!
- Winners of both divisions receive cash prizes from AISES.
- All students will register online ([http://naivsef.aises.org/naivsef registration](http://naivsef.aises.org/naivsef-registration)) and must follow ISEF rules and submit ISEF forms (<http://fairs.aises.org/apply> ; Tip: Use ISEF RULES WIZARD to figure out which forms [https://apps2.societyforscience.org/wizard/index.asp!](https://apps2.societyforscience.org/wizard/index.asp))

TIMELINE FOR JUNIOR AND SENIOR DIVISIONS

(Junior Division = 5th=8th grades; Senior Division 9th-12th grades)

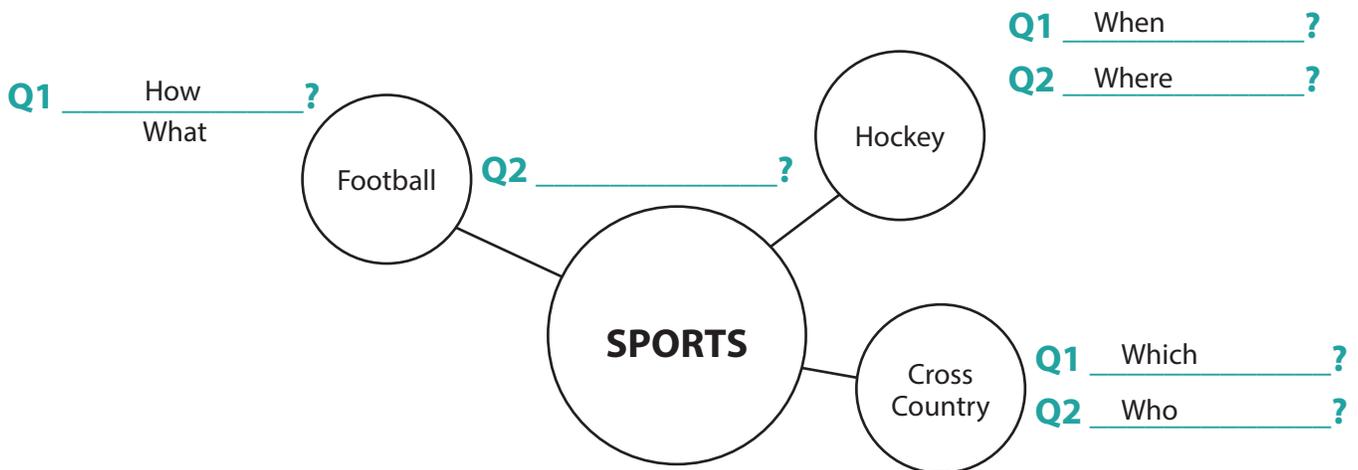
Online registration	September 18 – February 14, 2018
SRC review and research approval process	Beginning October, 2017
Deadline for submission of abstracts	March 1, 2018
SRC review of abstracts	March 2 – March 7, 2018
Last day to upload corrected forms/abstracts, if required	March 14, 2018
Deadline for submission of projects videos/slideshows	March 23, 2018
Online judging of completed projects	March 26 - 30, 2018
Interview date/time notices sent by email no later than	March 30, 2018
Interviews via teleconference calls (Fair Days)	April 7-8, 2018
Grand award committee review and selection	April 9-10, 2018
Winners notified and announced	April 13, 2018
Winning projects posted on AISES website	May 2018

TOPIC SELECTION HELP

The very first step for Science Fair is to select a topic. This can be done by observing the world around you, brainstorming about what interests you or doing some science-related internet research and then thinking of a question you have around what you have observed, brainstormed or found online.

Ways to help students to pick a topic...

- Have students develop a MIND MAP of their interests. First draw circles for each of their interests (ie: SPORTS; ANIMALS). From each of their main interests, draw a line (or “spoke”) and draw in new bubbles for words that come to mind when you think of the main interests (ie- for sports, perhaps “football”, “cross country” and “hockey” come to mind). Next, draw lines (more “spokes”) from each of these sub-topics that connect to questions they have about each sub-interest (the best science questions start with what, when, which, who, why, where, how!); students should create at least two questions per sub-interest (ie- for football, maybe “how dangerous is football?”). Next eliminate irrelevant questions (ie- “the best” will imply preference and cannot be tested). Now find the questions that have an independent and dependent variable. For example, “what is the best time to work out?” only has an independent variable (=time of day) but no dependent variable (=something to measure). However, “does running in the morning increase my heartrate more than running in the evening?” has both an independent variable (=time of day) and a dependent variable (=increase in heart rate).



Another good way to help students to select a Science Fair topic is to give them an “Individual Interests Survey”:

Selecting A Science Project Topic

Step #1

List four of your greatest interests. Items may include hobbies, sports, school subjects, things you think about when you are free to focus purely on your interests.

1. _____
2. _____
3. _____
4. _____

List 4 science topics or world or local problems that interest you.

1. _____
2. _____
3. _____
4. _____

List 3 occupations you may consider as an adult

1. _____
2. _____
3. _____

Step #2

Pick one item from each of the lists above. Ask yourself 4 questions about each topic. Be sure these are questions you would really like to know the answers to. Is there something annoying or that doesn't work very well? Are there changes that could be made to make your interest more efficient or enjoyable? What problems exist and could you find solutions?

My questions are:

From list of “interests”: _____

1. _____
2. _____
3. _____
4. _____

From list of "science topics or world or local problems": _____

1. _____
2. _____
3. _____
4. _____

From list of "occupations": _____

1. _____
2. _____
3. _____
4. _____

STEP #3

Now decide which question interests you the most. In choosing your topic, be sure to not take on more than you can handle. Narrow it down, take an in-depth look at a single aspect of the problem that interests you.

Tackle something that hasn't been done over and over again. ****Remember: your project must involve actual experimentation. It should not be simply a report, a description, a model or a system built (even advanced ones) from someone else's plans.*

THE TOPIC AND QUESTION THAT I WILL TRY TO ANSWER IS: _____

- **Sometimes allowing students to brainstorm on the internet can be a useful way to help generate ideas. The internet can be full of bad ideas and unvetted resources, so here is a long list of some of the best websites to assist students in selecting topics and/or to get them excited about areas of science that they could do an experiment about*:**

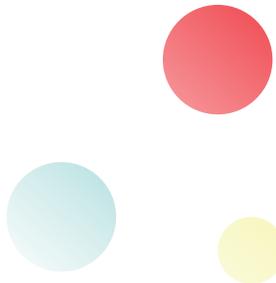
*(*It is important at this point to remind students that they are not looking to repeat a project or experiment that has already been done on one of these sites, but rather to be inspired to come up with a question and hypothesis about something they see.)*

- <http://www.sciencebuddies.org/science-fair-projects/project-ideas> (Check out the topic selection wizard! Many other general resources on Science Fair, too!)
- <http://www.cool-science-projects.com/Science-Fair-Project-Ideas.html> AND <http://www.cool-science-projects.com/science-fair-topic.html> (This site has loads of science info!)
- <https://www2.ucar.edu/research-resources> OR <https://scied.ucar.edu/students> OR <https://ucarconnect.ucar.edu/education/resources/students> (Great resources for Atmosphere related interests and studies!)

- <https://www.ars.usda.gov/oc/kids/agsciprojects/agscitoc/> (Agriculture usually doesn't get a category at science fairs, but the ideas here for agricultural science fair projects can lead you to projects in botany, chemistry, environmental science, or even medicine.)
- <http://www.energyarchive.ca.gov/energyquest/links/index.php?pagetype=energyed#projects> (A huge collection of websites for students to explore all in one place!)
- <https://www.thoughtco.com/selecting-a-science-fair-project-topic-609073> (Another great site to guide students through the process from start to finish!)
- <https://www.thoughtco.com/selecting-a-science-fair-project-topic-609073> (Another great site to guide students through the process from start to finish!)
- <http://www.all-science-fair-projects.com/> (Find hundreds of projects under Biology, Chemistry, Physics, Earth Sciences, and Engineering. Browse through the projects, or use the search engine to find a specific topic and complete instructions.)
- <http://www.bizarrelabs.com/control.htm> (This site has many different inspiring science fair projects on it!)
- http://www.si.edu/Encyclopedia_SI/nmnh/buginfo/scifair.htm (Love bugs? BugInfo describes several projects and explains how to conduct them.)
- <http://cms.math.ca/Education/mpsf/> (Math projects, including numbering systems, geometry, game theory, and more, at various levels of difficulty. Some of these ideas are probably best left for high school projects, but some topics include links to helpful reference sites.)
- <http://pbskids.org/dragonflytv/scifair/index.html> (Try the Super Science Spinner to find a project idea, or scroll down to the list of projects. You'll see each project described, with a few suggestions on how you can turn this idea into a brand new project that's all your own.)
- <http://billnye.com/#educational> (A good site for background materials and to inspire an idea for a science fair project!)
- http://www.funsci.com/fun3_en/electro/electro.htm (Learn to measure electrical conductivity and make several kinds of batteries. Good projects if you like to work with your hands and build things.)
- <http://www.lasciencefair.org/ideas.htm> (Lots and lots of ideas here, across many different topics. Great place for ideas but topics aren't sorted by difficulty, so you'll need to search to find the sort of project that would not be too hard or too easy.)
- <http://www.madsci.org/experiments/> ("Science should be fun...science should be edible..." Not all of these projects are edible, but don't worry – they warn you which ones aren't, and also which ones should have an adult present. Categories covered are: Astronomy, Biological Sciences, Chemistry, Earth Sciences, Mathematics, and Physics.)
- <http://faculty.washington.edu/chudler/experi.html> (Can your eyes deceive you? Do you remember your dreams? Can you build a model of the nervous system? Dr. Chudler publishes a long list of games and creative ideas for Neuroscience science fair projects. Projects are good for grades 3-12.)
- <https://ohio4h.org/books-and-resources/self-determined-projects-and-idea-starters> (Ohio State University's site describes some agriculture-related projects here. You'll want to be creative and not just repeat these projects and need to make them into ideas for experiments.) OR <https://ohio4h.org/statewide-programs/4-h-science/stem-pathways/challenges> (Again the Ohio State University website is useful, but on this link they do show you how to present a hypothesis, create a design and test that design, make needed improvements and then communicate your results with videos of their examples.)

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- <http://parentingteens.about.com/cs/homeworkhelp/a/blscproindex.htm> (A lot of variety in this collection of ideas presented as specific topics, but without telling you how to do them. With a little creativity, you should find it easy to turn one of these topic ideas into a project of your own!)
 - <http://school.discoveryeducation.com/sciencefaircentral/Getting-Started/idea-finder.html> (“Remember, your science fair project should start with a question.” Here are some questions that could make great science fair projects. The topics include “Animals and Insects,” “Food and Our Bodies,” and “Plants and Gardening,” and several Earth Science categories.)
 - <http://eastern.scifairs.k12.nf.ca/> (A list of many, many topic ideas, organized by difficulty and category. These aren’t detailed projects by themselves, but something here is sure to put an idea into your head!)
 - <http://www.sci-journal.org/index.php?link=reports.php> (Here’s another collection of student projects. The descriptions are fairly brief, but there’s enough information here to show you how each experiment was conducted.)
 - <https://www.exploravision.org/choosing-topic> (A short paragraph to help you think about how to come up with a topic!)
 - <http://education.usgs.gov/> (Shows how to build a table-top model that demonstrates the causes of an earthquake, a model that demonstrates the spreading of the ocean floor, your own weather station, or how to collect fascinating slimes off the rocks in your neighborhood—lots of great information for your research and it could inspire your topic!)
 - <http://earthquake.usgs.gov/learn/kids/sciencefair.php> (The U.S. Geological Survey provides a fun list of project ideas for studying earthquakes and other types of ground movement. You can also find instructions for building an earthquake simulator.)
 - <http://volcano.oregonstate.edu/volcano-models> (Complete how-to instructions for building several different types of model volcano. Projects for all ages; some projects are a little risky and shouldn’t be done for Science Fair—but remember, this is only to get an idea for an experiment!)
 - <https://www.geosociety.org/documents/gsa/geoteachers/NatureScience.pdf> (This article contains a really great “Talking Points” page!)
 - <https://sciencebob.com/science-fair-ideas/ideas/> (This is a shorter list of ideas so might be useful for younger students or those with an IEP.)
 - <http://www.onlinescienceprojects.com/guide/define.html> (This site has many different experiments on it that can be changed or added to and is a great general website for all aspects of a Science Fair!)
 - http://www.exploratorium.edu/science_explorer/index.html (“Get Messy, Get Airborne, Get Loud, Get Shocked! Try These Activities.” From blowing, bouncing, bursting bubbles to dramatic static, this site tells you what you need, what to do, as well as explaining what’s going on.)

MANY OF THESE SITES ARE GREAT FOR USE IN YOUR RESEARCH AND FOR LISTS OF RECOMMENDATIONS FOR GOOD REFERENCES TO USE FOR FURTHER RESEARCH!



PART BY PART GUIDE:

Keep the following in mind...

(1.) Question

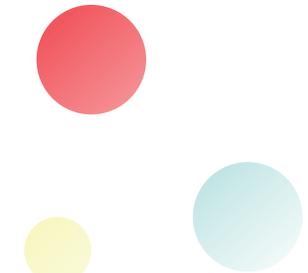
- a. A good question will be original and not just an original variation of a commonly done project.
- b. The question should be general enough that there are at least three offline sources on the subject.
- c. The independent/dependent variable(s) must be able to be measured by a count (i.e.—inches; laps; etc.) or be either present or not present (i.e.—lights off or lights on).
- d. Factors that might impact the experiment should be easy to control so the results are not impacted.
- e. During this part of the process, it is important to assess if the experiment is safe.
- f. Is there easy access to all needed supplies and materials? Or, is there access to a large enough sample for meaningful results?
- g. Now is the point to assess if there is enough time to do your experiment at least one full time before the fair.
- h. The project must fit all the rules and regulations of the science fair.
- i. Will you need the Scientific Review Committee to review your project?
- j. Topic/study areas to avoid: preferences; people recalling the past; highly subjective areas (i.e.—mood; feelings); things that are hard to measure and/or repeat; dangerous, hard to find, expensive or illegal materials; areas with questionable or no scientific validity (i.e.—ESP; ghosts); anything that is banned by ISEF!

(2.) Variables

- a. The variables must be able to be measured.
- b. Your independent variable should be able to be changed during the experiment.
- c. Identify all relevant dependent variables.
- d. All dependent variables must be dependent on the independent variable.
- e. All controlled variables should be at a steady value during the experiment.

(3.) Hypothesis

- a. The hypothesis is based on information from the research paper.
- b. The hypothesis should contain the independent and dependent variables.
- c. The hypothesis should be worded so that it can be tested in the experiment.



(4.) Data analysis

- a. There should be enough data to know if the hypothesis is correct.
- b. If appropriate, data should be summarized by an average.
- c. Math should be checked and rechecked!
- d. The chart should be carefully labeled with all data types and units of measurement identified and correct.
- e. The graph type should be carefully selected so that it accurately depicts the results and data.
- f. The graph should be named to describe what the data is about.
- g. The independent variable should be on the x-axis and the dependent variable on the y-axis.
- h. Accuracy is very important in plotting results.
- i. The graph and data tables should be neat and clear with proper spelling and capitalization.
- j. Be careful to have the proper scale (with the correct high/low values) on the axes.

(5.) Conclusion

- a. The conclusion must summarize the results and use them to support the findings.
- b. Be sure to state whether the results prove or disprove your hypothesis!
- c. It should state suggestions for changes to the procedures and/or possibilities for further research.

(6.) Display Board

- a. The display board must have all of the following on it: title; abstract; question; variables & hypothesis; background research; materials list; experimental procedures; data analysis and discussion to include graph(s) and chart(s); conclusions; acknowledgements; bibliography.
- b. The information should be well-organized and easy to follow.
- c. The font should be large enough to be easily read (at least size 16 font). The title should be even larger font.
- d. The title should be catchy and make the audience want to find out more.
- e. Pictures and diagrams should be carefully selected so that they accurately tell the story of your project.
- f. Careful attention should be paid to grammar, spelling, punctuation and capitalization throughout the display board!

(7.) Research Paper

- a. The research paper should define all important terms and concepts.
- b. The research should provide enough background to be able to make a prediction about the experiment.
- c. The research should have enough information to be able to understand why the results happened.
- d. The research must cover related key discoveries and early research as well as current theories, facts and data.
- e. All relevant math should be included (i.e.—formulas).
- f. Be very careful to properly cite and punctuate all quotes correctly.
- g. All facts and pictures used must have the source listed.
- h. All parts of the research paper need to be included (title; bibliography; etc.).
- i. It is important that proper grammar, punctuation, spelling and capitalization be used.

(8.) Research Plan

- a. All key words must be identified for the project.
- b. A list of all research questions must be developed as part of the research plan.
- c. All irrelevant questions should be thrown out.
- d. The answers to the research questions should provide the necessary information to design an experiment and predict the outcome.
- e. One or more of the research questions should be related to the equipment or techniques needed to perform the experiment (if applicable).



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Research Plan Instructions

Provide a typed research plan that includes your name on each page. The research plan is to include the following:

- 1. Question or Problem being addressed. What is the RATIONALE for your project?**
 - Include a brief synopsis of the background research that supports your research problem and explain why this research is important scientifically and, if applicable, explain any potential societal impact of your research.
 - Also, include citations in your project rationale.
- 2. Goals/Expected Outcomes/Hypotheses. Describe how your research question(s), hypothesis(es) and/or goal(s) build on the research described in your project rationale.**
- 3. Description in detail of method or procedures. (The following are important and key items that should be included when formulating ANY AND ALL research plans).**
 - Procedures: Detail all procedures and experimental design to be used for data collection. Be sure to describe in detail only those methods and procedures you conducted, and not those of your mentor, teacher, or from any other researcher.
 - Risk and Safety: identify any potential risks and safety precautions to be taken.
 - Data Analysis: Describe the procedures you will use to analyze the data/results that answer research questions or hypotheses.
- 4. Bibliography: List at least FIVE (5) MAJOR REFERENCES used to form the basis of your research project.**
 - References must be from science journal articles, books, or other publications.
 - Encyclopedias and Internet search engines (e.g. Google, Yahoo, WebMD, Wikipedia, etc.) are not considered as major references.
 - If you plan to use vertebrate animals, one of these references must be an animal care reference.
 - Choose one style and use it consistently to reference the literature used in the research plan. Guidelines can be found in the ISEF Student Handbook <http://www.societyforscience.org/document.doc?id=12>.

Items 1-4 below are subject-specific guidelines for additional items to be included in your research plan as applicable.

1. Human participants research:

- Participants: Describe who will participate in your study (age range, gender, racial/ethnic composition). Identify any vulnerable populations (minors, pregnant women, prisoners, mentally disabled or economically disadvantaged).
- Recruitment: Where will you find your subjects? How will they be invited to participate?

- **Methods:** What will participants be asked to do? Will you use any surveys, questionnaires or tests? What is the frequency and length of time involved for each subject? Please include a copy of the survey or questionnaire (if used) in the research study and provide information as to how the survey questions will inform the research project.
- **Risks:** What are the risks or potential discomforts (physical, psychological, time involved, social, legal etc.) to participants? How will you minimize the risks?
- **Benefits:** List any benefits to society or each participant.
- **Protection of Privacy:** Will any identifiable information (e.g., names, telephone numbers, birth dates, email addresses) be collected? Will data be confidential or anonymous? If anonymous, describe how the data will be collected anonymously. If not anonymous, what procedures are in place for safeguarding confidentiality? Where will the data be stored? Who will have access to the data? What will you do with the data at the end of the study?
- **Informed Consent Process:** Describe how you will inform participants about the purpose of the study, what they will be asked to do, that their participation is voluntary and they have the right to stop at any time.

2. Vertebrate animal research:

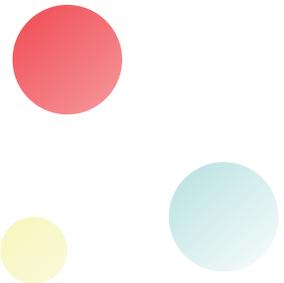
- **What POTENTIAL ALTERNATIVES to vertebrate animals were considered for this project? Be sure to present a detailed justification for use of vertebrate animals.**
 - Explain potential impact or contribution this research may have.
 - Detail all procedures to be used.
 - include methods used to minimize potential discomfort, distress, pain and injury to the animals during the course of experimentation.
 - include detailed chemical concentrations and drug dosages.
 - Detail animal numbers, species, strain, sex, age, source, etc.
 - include justification of the numbers planned for the research.
 - Describe housing and oversight of daily care.
 - Discuss disposition of the animals at the termination of the study.
 - Describe Biosafety Level Assessment process and resultant BSL determination.

3. Potentially Hazardous Biological Agents:

- Describe Biosafety Level Assessment process and resultant BSL determination.
- Give source of agent, source of specific cell line, etc.
- Detail safety precautions.
- Discuss methods of disposal.

4. Hazardous Chemicals, Activities, and Devices:

- Describe Risk Assessment process and results.
- Detail chemical concentrations and drug dosages.
- Describe safety precautions and procedures to minimize risk.
- Discuss methods of disposal.



Bibliography Requirements:

- At least five total sources. Of these, three reputable sources that are NOT websites must be used.
- Each source includes: Author's name, Title of article/book/etc., publisher, location where published and date.
- There should be a variety of sources (research journals, articles, books, etc.).
- The sources cited are relevant to the topic and include necessary information.
- The sources are cited in proper format.

What Does Proper Format Look Like*?:

(*Follow all formatting as shown below, including punctuation!)

Book

Author's Last name, Author's First name. *Title of Book*. Place of Publication: Publisher, Year of Publication.

Magazine or newspaper

Author(s). "Title of Article." *Title of Periodical*. Day Month Year: page(s).

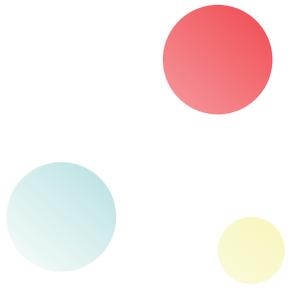
If you are using a fancy scholarly journal, like American Mathematical Society Monthly, there is a different format:

Author(s). Year of Publication. "Title of Article." *Title of Journal*. Volume # (Issue #): page(s).

Website

Author(s) of site (if available) or Name of Organization. *Title*. Name of the website or Name of institution/organization affiliated with the site (sometimes found in copyright statements), if applicable. Complete URL<location=electronic address (this is generally "https://www.something.com")> (Date you accessed the site)

Devitt, T. *Lightning injures four at music festival*. The Why? Files. <http://whyfiles.org/137lightning/index.html> Accessed January 23, 2001.



CHECKLIST: PARTS OF AN ABSTRACT

This checklist will help ensure you include all the necessary information in your abstract but the information does not necessarily have to be included in this order:

(I.) MOTIVATION:

Why do we care about the problem and the results? This section should include the importance of your work, the difficulty of the research field/area, and the impact your research might have if successful.

(II.) PROBLEM STATEMENT:

What problem are you trying to solve? What is the scope of your work (a generalized approach, or for a specific situation)? In some cases it is appropriate to put the problem statement before the motivation, but usually this only works if most readers already understand why the problem is important.

(III.) APPROACH:

How did you go about solving or making progress on the problem? Did you use simulation, or analysis of field data? What was the extent of your work? What important variables did you control, ignore, or measure? Do not just copy your procedures but rather talk about how you did your project.

(IV.) RESULTS:

What's the answer? Put the result in numbers if possible and a percentage is always a particularly good measurement for people to easily understand. Avoid vague results such as "very," "small," or "significant."

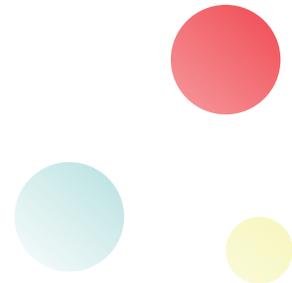
(V.) CONCLUSIONS:

What are the implications of your answer? Is it going to change the world, be a significant "win," find something interesting, or simply indicate that this path is a waste of time. (All of the previous results are useful!) Are your results general, or specific to a particular case? What did you learn?



Data Grading Rubric:

Name(s):		Date:	
Not there = 0		Partially there = 1	Clearly there = 2
Is there sufficient data to know whether the hypothesis is correct?			0 1 2
Has the data been summarized and is all the math correct?			0 1 2
Has the chart is properly labeled and all information is clear?			0 1 2
Is the appropriate graph type used?			0 1 2
Does the graph have a meaningful title?			0 1 2
Is the independent variable on the x-axis and the dependent variable on the y-axis?			0 1 2
Is the data plotted correctly and clearly?			0 1 2
Does the graph have a proper scale with the correct high-low values?			0 1 2
Is there proper grammar and spelling?			0 1 2
Is the graph neat and clear?			0 1 2
Total Score:			/20
Comments:			



Research Paper Grading Rubric:

Name(s):	Date:		
Not there = 0	Partially there = 1	Clearly there = 2	
All important terms and concepts are defined.	0	1	2
The research is thorough and leads naturally to prediction of the experiment and results.	0	1	2
The research presents enough information to understand why the results happened.	0	1	2
The research is broad enough that it includes both the history of relevant theories and discoveries and current theories, studies, etc.	0	1	2
References and quotes are included correctly and honestly.	0	1	2
All facts and pictures are cited.	0	1	2
All key components of a research paper are included (title page, research report, bibliography, etc.).	0	1	2
The research paper includes proper grammar, spelling, punctuation and capitalization.	0	1	2
	Total Score:	/16	
Comments:			



Final Report Grading Rubric:

Name(s):		Date:		
		Not there = 0	Partially there = 1	Clearly there = 2
The FINAL REPORT includes:				
*Title Page		0	1	2
*Abstract		0	1	2
*Table of Contents		0	1	2
*Questions, Variables & Hypothesis		0	1	2
*Background Research		0	1	2
*Materials List		0	1	2
*Experimental Procedures		0	1	2
*Data Analysis and Discussion		0	1	2
*Data Table(s) and/or Graph(s)		0	1	2
*Conclusions		0	1	2
*Acknowledgements		0	1	2
*Bibliography		0	1	2
*The abstract had a summary of the hypothesis, materials and procedures, conclusion(s) and result(s).		0	1	2
*The report contains proper spelling, punctuation, and grammar.		0	1	2
		Total Score:		/28
Comments:				

STUDENT AGREEMENT FOR SCIENCE FAIR

Student(s) Name(s): *(*Please remember that each team member must fill out a contract and answer each question but please include all team member names on this form!)*

Please select or write in your answer for the questions and categories below...

1. The Question I/we will be answering:

(Circle answers)

- | | | |
|--|-----|----|
| 2. Will this topic keep my/our interest for the next ____ weeks? | YES | NO |
| 3. Will I/we be able to find 3 or more REAL references on this topic? | YES | NO |
| 4. I/we are measuring one variable. | YES | NO |
| 5. Will I/we be able to measure changes in our variables? | YES | NO |
| 6. Does my/our experiment have a CONTROL and an EXPERIMENTAL Variable (a "fair test")? | YES | NO |
| 7. Do I/we have or can we easily get the supplies for our project? | YES | NO |
| 8. I/we will be able to complete my/our project by the deadline? | YES | NO |
| 9. My/our project meets all the requirements of the NAIVSEF. | YES | NO |

My parent(s) or guardian(s) and I have discussed this Science Fair Project and I am committed to completing this project on time.

Student's signature

Date

I have discussed the above Science Fair Project with my student and believe she/he is committed to completing the project and doing so on time. I agree to supervise safety of the project that my child completes at home.

Parent's/Guardian's signature

Date



NAIVSEF

**National American Indian
Virtual Science & Engineering Fair**



AMERICAN INDIAN SCIENCE
AND ENGINEERING SOCIETY