

WILLIE HUTCH JONES
EDUCATIONAL & SPORTS PROGRAM



9th Annual Willie Hutch Jones Educational & Sports Program S.T.E.A.M. Fair Planning Guide & Registration Packet

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I. General Information:

Event: The 9th Annual WHJSEP S.T.E.A.M. Fair

Date/Time: March 23, 2024 from 11:30 am – 2:00 pm
setup will start at 10:30 am

Location: Buffalo State University-Science & Math Complex
1300 Elmwood Ave, Buffalo, NY 14222

*Refer to map

Questions/Event Contacts:

Aswad Jones – swadjones@gmail.com

Ms. Mykia LaNae – mykialanae@gmail.com or 716-715-4980

Submission Deadline:

Friday, March 1, 2024

II. Rules & Guidelines

The WHJESP S.T.E.A.M. Fair believes that all students have the right to compete fairly. The following regulations will keep projects uniform and consistent for judging, provided all listed rules are followed.

Prohibited Items:

In general, displaying anything that could be hazardous to the public or the space (Buffalo State University) is strictly prohibited, including the following:

- Any living specimens e.g. animals, plants, mold, etc.
- Containers filled with fluids, water or any other kind
- Food in non-airtight containers
- Sharp items e.g. needles, knives, glass or glass objects
- All chemicals (laboratory/household) deemed toxic
- Dry ice or other sublimating solids
- Open flames and highly flammable materials
- Batteries with open topped cells
- Moving parts with unprotected belts and pulleys
- Drugs or controlled substances, including firearms.

Project Requirements:

- A free-standing, tri-fold backdrop that is no more than 48" wide x 108" long x 30" deep. The project cannot lean on the table, wall, or another project. Nails, glue, or tape cannot be placed on the table or surrounding areas. No items should be attached to the display board except for paper and photographs (no 3-dimensional items). Refer to page 8, Presentation layout.
- All electrical wiring must be insulated. No power source will be provided.
- A place at a table is provided for all entries.
- Each project must have an entry form prominently displayed on the back of the project's display board. No last names or addresses on the front of the presentation board.
- If photos of friends, family, classmates, or helpers are present on the presentation, please have a "consent to have photos displayed" photo release signed for each person and affixed to the back of the display.

The following criteria will be used to judge the projects:

- Scientific method application (when applicable)
- Interpretation of data
- Display, neatness, creativity, and completeness
- Oral presentation

A team of two or three Judges will judge each project. If there is a large disparity between the scores, an additional judge will review the project. Students will remain with their projects during judging to explain their study. All others (teachers, parents, and other students) are not permitted in the project area while judging is in progress. Any violations of this policy can result in the disqualification of the project from the S.T.E.A.M. Fair. Judges will spend approximately 3 to 7 minutes at each presentation.

Scores from the judges will be added together to arrive at the total score. If a student is not present during the judging a pre-approved proxy may deliver the presentation in their place, otherwise the participant will receive a zero in the “Display” and “Oral Presentation” criteria. Refer to display and oral presentation criteria on page 4.

All participants will receive a certificate of participation.

Helpful Presentation Hints:

Relax, smile, and have fun! Remember, you are the expert on the material you are presenting. If you are feeling nervous, just follow these guidelines:

- Stand to the side of your display.
- Introduce yourself, point out the title of your display and why you chose to study this topic. State the problem that you studied (your question) and your hypothesis (what you think might happen).
- Talk about the sources (books, websites, and interviews) that helped you to understand your topic.
- Explain the steps you took to conduct your experiment, including at least three (3) trials. Show your data using graphs and charts.
- Be sure to explain what your data means; were you surprised by your results, or did you know what would happen because of your prior studies?
- Was your hypothesis correct? What did you conclude?
- Include any real-life connections.
- Are there future implications?

Look sharp, feel sharp, and you will be sharp. Dress professionally and speak clearly.

WHJESP S.T.E.A.M. Fair Judging Rubric for Display Board

Part 1 - Display Board

Title of Project	5	4	3	2	1	0
Purpose/Problem	5	4	3	2	1	0
Hypothesis	5	4	3	2	1	0
Procedure/Experiment (thorough and understandable)	5	4	3	2	1	0
Data (tables, graphs, charts)	5	4	3	2	1	0
Results/Data Analysis (verbal/visual summary)	5	4	3	2	1	0
Conclusions (supported by data and relevant to hypothesis)	5	4	3	2	1	0
Next Time (future ideas/implications)	5	4	3	2	1	0
Components (all on board)	5	4	3	2	1	0
Aesthetic (readable font, eye catching, creative)	5	4	3	2	1	0

Part 2 - Oral Presentation

State the title of the project, name(s) or presenter(s), grade level, and why they became interested	5	4	3	2	1	0
Explain the purpose and hypothesis	5	4	3	2	1	0
Explain background information	5	4	3	2	1	0
Summarizes procedure concisely	5	4	3	2	1	0
Explain the control group and why it is used	5	4	3	2	1	0
Identify the experimental variables	5	4	3	2	1	0
Explain results	5	4	3	2	1	0
Provide conclusion supported by data that is relevant to the hypothesis	5	4	3	2	1	0
Offers suggestions for future implications	5	4	3	2	1	0
Answer judges' questions effectively and accurately	5	4	3	2	1	0

5 – Exceptional, 4 – Above Average, 3 – Average, 2 – Below Average, 1 – Poor, 0 – Missing

IV. S.T.E.A.M. Fair Project Instructions

Getting Started and Journal:

Keep an S.T.E.A.M. journal to collect research, record observations, draw diagrams and pictures, and jot down any additional questions you might have for later. A S.T.E.A.M. journal is not a book report that is created after you are done. Rather, it is a diary that is continuously filled in as you work on your S.T.E.A.M. Fair project. Follow the steps of the scientific method and fill out the various pages as you complete each step. This S.T.E.A.M. journal will help you in the completion of your project and its presentation. Teams can share S.T.E.A.M. journals, although it is encouraged that every member has their own.

1. Choose an S.T.E.A.M. discipline that interests you!

- Science
- Technology
- Engineering
- Art
- Math

My chosen discipline is _____

I want to do an experiment involving _____

2. Come up with a Good Question...

This question will be the driving force behind your project and will help in the creation of your hypothesis.

Some examples include, but are not limited to:

- What is the **effect** of sunlight on the growth of plants? *Effect*, the action that occurred; the change that occurred.
- How does humidity **affect** fungi? *Affect*, something that influences; to change something.
- **If** I water a plant, **then** it will grow taller.

**Definition of scientific discipline-a particular branch of scientific knowledge.*

Create a S.T.E.A.M. Fair question using either the “Effect Question”, the “Affect Question” or the “If/Then Statement”:

3. Doing Research & Forming a Hypothesis...

Read about your topic. Resources include, but are not limited to, electronically published scientific articles, library books, textbooks, and magazine articles.

Make a list of all the resources you used, including titles, authors, and publication dates:

Discuss with others and share what you’ve read. Sharing information helps clear up any misconceptions and increases your comfortability with the selected topic.

Now that you have some background knowledge on your chosen S.T.E.A.M. discipline, you can guess what will happen when you test your question/problem. This type of “smart guess” or prediction is what scientists call a hypothesis.

What do you think will happen, even before you start your experiment?

Write down the problem and create a hypothesis based on what you have researched:

4. Testing your Hypothesis by Conducting an Experiment:

Make a list of the materials used.

Write a procedure, or the steps that you performed to run the experiment.

Identify your variables. Variables are factors that can change in an experiment. You should only test one variable at a time in order to ensure more accurate results. In other words, if you want to test the effect that water has on plant growth, then all the plants you test should be in the same conditions (these are called *control variables*): same dirt, same type of plant, same planting location, same amount of water given (this is called the *independent variable*). The thing that changes as a result of the experiment is called the *dependent variables*.

Make sure you test your experiment more than once to ensure it is done properly and to increase confidence in the results.

Collect your data. Write down the results of the experiment every time you test it. Be sure to organize your findings in a way that is easy to read. You may use tables, graphs, and charts to organize and display your results.

Be sure to use the right tools for the task at hand. To take accurate measurements, use tools like rulers, thermometers, graduated cylinders or measuring cups. Try to use the recommended standard of scientific measurement, the metric system to report all values (grams, meters, liters, Celsius, etc.)

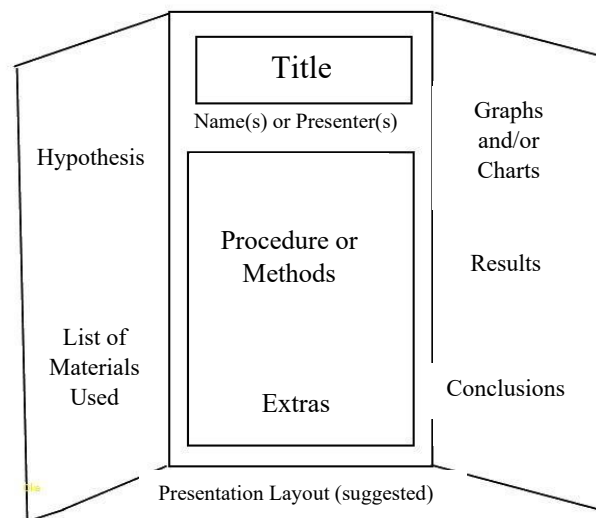
Write a conclusion. State what happened. Was your hypothesis right or wrong or neither? Were you successful or unsuccessful? Would you change anything about the experiment? Are you curious about something new after having completed this project? Most importantly, explain what you learned from doing this experiment.

5. Presenting your Results:

Your display is a visual summary of the experiment. The presentation should be neat and legible, and the emphasis should be on understanding and applying the scientific process.

The presentation board MUST include the following:

- Title (at the top of the display board)
- Name(s) of presenter(s)
- Hypothesis
- List of materials used (include how much, what kind, etc.)
- Procedure or method
- Graphs and/or charts (if applicable)
- Results (recorded in metric)/Interpretations
- Conclusion



*Although WHJESP will take precautions to protect the exhibits, there will be no assumed responsibility for any lost or damaged items during the fair. Valuable materials and equipment should be monitored at all times.

*Fraud and misconduct will not be condoned at any level of research or competition. Plagiarism, the use and presentation of another researcher's work as one's own, and/or fabrication or falsification of data will not be tolerated. Fraudulent projects will fail to qualify for competition.



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Photo Permission and Release Statement

Release Statement: As their guardian, I grant my child permission to participate in the 2024 WILLIE "HUTCH" JONES EDUCATIONAL & SPORTS PROGRAM S.T.E.A.M. Fair and confirm the truth of the above information. Furthermore, I hereby release all responsibility or liability from WHJESP and hold them harmless for any incident or injury which may be incurred before, during, or following the competition. This waiver releases the WHJESP and its sponsors from any lawsuits or claims from accidents or injuries.

Parent/Guardian's full name (printed): _____

Signature: _____ Date: _____

Photo Permission: I give permission to use my child's image on our website or any promotional advertisements.

Parent/Guardian's full name (printed): _____

Signature: _____ Date: _____

(Each individual must sign a separate photo/ release form and present day of the event.)