First year
Yup'ik Region
Science Fair 2001

HANDBOOK

January 25 and 26, 2001

at

Bethel, Alaska

For more information, contact

Nita Rearden……..>543-4854
Julie McWilliams ……..>543-4806

December 12, 2000

Dear Teachers/Students:

We would like to invite you and your student to the First ANSES Science Fair 2001. The fair will be held at the Cultural Center in Bethel, Alaska. It will be a great opportunity for you and your students to develop fun learning projects!

The registration deadline is Monday, January 22, 2001. Students will set-up their projects anytime between noon and 5 pm, January 25, 200l. The Awards Ceremony will be held Friday evening, January 26, 2001. It is open to educators, friends and relatives of the participating students.

Any student from LKSD, Yupiit, and Kuspuk schools, in grades 7-8, is eligible to participate in the First Annual Yup'ik ANSES Science Fair. Three or four winners will be selected for the state fair.

Please read the enclosed information and guidelines carefully. Fill out the registration form, and return by January 22, 2001. All other forms (ie, conduct code, publicity and liability forms and Yup'ik Values checklist) should be included in your project notebook. Please make sure all projects adhere to display and safety regulations.

Participants and chaperones are responsible for their own travel, room, and meals, while at the science fair. Hopefully BRHS will be available for your use. Please bring sleeping bags, pads, and your necessary needs for a couple of nights.

If you have any questions, please contact, Nita Rearden at 543-4854 or Julie McWilliams at 543-4806.

We look forward to seeing you in Bethel.

Sincerely,

Nita Rearden, ANSES Coordinator
Julie McWilliams, Science Curriculum Specialist

TENTATIVE AGENDA
Thursday, January 25
Travel morning of January 25, 2001

Noon - 5 pm	Registration/Check-in/Set-Up Projects
7: 00 - 8:00 pm	Science Fair Committee Walk Through of Exhibits

Friday, January 26

8:45 - 9:00 am	Judges Registration/Check-In/Briefing
9:00 am - 1 pm	Judging with student participants only
1 pm - 2 pm	Lunch Break On your own.
2 pm - 5 pm	Judges meet without student participants.
6 pm - 7 pm	Awards Ceremony
7 pm - 9pm	Participants Take Down Projects

***Deadline**
Registration forms must be received by January 22, 2001.

Information for Students About Science Fair Projects

A Successful Science Project:

Is your own work—not that of an expert or your parents
Shows an understanding of the science area chosen
Is carefully planned, not a "rush" project
Has a notebook showing a complete record of all your work
Has a simple, well-stated title and neat lettering
Includes photograph, charts, pictures, graphs, that helps explain your work
Has accurate, valid and correct observations
Tells a complete story—It includes a problem and solution
Is self-explanatory
Is attractive and organized
Does not have to cost much money
Is one that gives credit to those who helped

A Science Fair Project Is Not:

Only a report
Necessarily a new discovery or an original piece of research
Constructing a plastic model from a hobby kit
An enlarged model or drawing

A week-end chore
One, two, or even three posters
Something done by your parents or teacher

Steps in making a Science Fair Project:

1. Pick your topic and discuss it with your teacher. Ask your teacher for suggestions.
2. Research your topic. Find out as much about your topic as possible.
3. have an Elder review your project and fill out Yup'ik Values Checklist.
4. Keep a project notebook and record all of your thoughts, preparations and ideas. Keep a record of your readings and interviews.
5. Organize your procedure and materials. Use the Scientific method information (below) to help you get started.
6. Make a timetable and work on your project a little each day. Don't wait until the last minute.
7. Conduct your experiment and take careful notes
8. Examine your results
9. Draw conclusions.
10. Construct our exhibit and make letters/graphics for your display board.
11. Mount your pictures, graphs, charts, etc.
12. Think about how you will present your project to the judges.

THE SCIENTIFIC METHOD INFORMATION

I. Demonstration
Answers: How? When? Where? One Condition.
Consists of:
- Statement of Purpose
  - Why are you doing the project?
- Gathering of information
  1. Interview - Elder/Expert
  2. Literature Review-Sources of Information
  3. Observation
  4. Personal Experience
- Build a Model
- Charts-Maps-Flowcharts
- Pictures
- Explanation

II. Experiment
Answers: Why? What if? Turned into hypothesis: Two or more conditions.
Consists of:
- Hypothesis
- Sources of Information
- Treatment Group(s)
- Control Group

Variables:
    Independent (being changed, input)
    Dependent (outcome)
Result:
    Charts, Graphs, Data Table-keep a journal/log
Conclusion of the research
Application and abstract
Acknowledgements-Bibliography

Display and Safety Regulations

Unacceptable for Display

1. living organisms (use photographs or drawings in place of living organisms)
2. dried plant material (eg, wood)
3. taxidermy specimens or parts (eg animal skins, leather)
4. preserved vertebrate or invertebrate animals (includes embryos)
5. soil or waste samples
6. chemicals including water
7. human/animal parts (exceptions: teeth, hair, feathers, nails, dried animal bones, histological sections, and wet mount tissue slides)
8. Human or animal food
9. sharp stems(ie, syringes, needles, pipettes)
10. poisons, drugs, controlled substances
11. dry ice or sublimating solids
12. flames or highly flammable display materials
13. tanks that have contained combustible liquids or gases,
14. batteries with open top cells.
15. awards, medals, business cards, flags, etc.
16. photographs or other visual presentations depicting vertebrate animals in other-

than-normal conditions (ie, taxidermy surgical techniques, dissection, necropsies or other lab techniques)

Acceptable for Display Only (cannot be operated)

1. Projects with unshielded belts, pulleys, chains, and moving parts with tension or pinch points.
2. Class III and IV lasers
3. Any device requiring over 110 volts.

Acceptable for Display & Operation with Restrictions

1. Class II Lazars:
    a. must be student operated
    b. posted sign must read
        Lazar radiation: Do Not Stare into Beams

(ANSES will provide sign if needed)

c. must have protective housing that prevents access to beam

d. must be disconnected when not operating.

2. Large vacuum tubes or dangerous ray-generating devices must be shielded properly.
3. Pressurized tanks that contained noncombustible may be allowed if secured.
4. Any apparatus producing temperatures that will cause physical burns must be adequately insulated.
5. High-voltage equipment must be shielded with a grounded metal box or cage to prevent accidental contact.
6. High-voltage wiring, switches, and metal parts must have adequate insulation and overload safety factor, and must be inaccessible to others.
7. Electric circuits for 110-volt AC must have a nine-foot (min.) cord. The cord must have sufficient load-carrying capacity and be approved by Underwriters Laboratories
8. Electrical connections in 110-volt AC circuits must be soldered or made with approved connectors. Connecting wires must be insulated. Greater than 110 volts not permitted.
9. Bare wire and exposed knife switches may be used only in circuits of 12 volts or less; otherwise, standard enclosed switches are required.

Size of Project Space:

Project space is limited to:
76 cm (30 in) deep
122 cm (48 in) wide
274 cm (108 in) high, including table.
Any exhibit exceeding these dimensions may be eliminated.
Exhibits may be smaller.

Limitations

Each student may enter only one project.
Team projects may have a maximum of three members.
Science fair exhibits must adhere to science fair safety and size requirements.

Eligibility

Any 7th or 8th grade student in the following School Districts: LKSD, Yupiit, and Kuspuk

Team Projects

Each team may have a maximum of three members. Each member of the team should be able to serve as spokesperson, be fully involved with the project, and be familiar with all aspects of the project. If all members are not in attendance at the Fair in Bethel, then documentation should be available which supports each team member's involvement with the project.

The final work should reflect the coordinated efforts of all team members and will be evaluated using the same rules and similar judging criteria as the other content categories. The team jointly submits one research plan. Names of all team members must appear on the forms. A copy of the research plan should appear in the data book with the project.

Requirements

1. Project Data Book

A project data book is a most critical piece of work. Accurate and detailed notes make a logical and winning project. Good notes show consistency and thoroughness to the judges. Include your copies of consent forms (if needed), copies of the Yup'ik Checklist with signatures, journal notes or log, and data sheets for collection of data.

2. Visual Display

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

If possible, use a display board that stands alone with three panels. Clearly label your title, statement of purpose or hypothesis, materials used, procedure, results, and conclusion. Use models, photographs, or drawings if appropriate. Make your display board logically presented, easy to read, and eye-catching. Be sure to adhere to the size limitations and safety rules when displaying your project. Do not hesitate to ask for advice from adults if you need it.

3. Oral Presentation

Judges will encourage students to speak freely and confidently about their research. They are not interested in memorized speeches - they simply want to TALK with you about your research to see if you have a good grasp of your project from start to finish. The judges may ask you: What were you trying to do? What did you learn? How you might change the experiment if you had to repeat it?

Judging

There will be two sets of judges:

a. Elders
b. Teachers/Scientists

Elders: Yup'ik Values

The Central Yup'ik Alaska AISES Science Fair will support and endorse the Y/Cup'ik Values during the Fair. The Elder judges will evaluate projects on their ability to maintain Y/Cup'ik Values. The following list was established by the teachers in 1996 and summarizes the values of the Y/Cup'ik people of the Y/Cup'ik Central Area.

Humor-Illaliurutlerkaq
Hard Work-Calirpagyaraq
Family Roles-Ilakellriit Caarkait
Successful Hunter-Nukalpiarullerkaq
Love for Children-Kenekluki Mikelnguut
Knowledge of Family Tree-Nallunritlerkait Ilat
Knowledge of Language-Nalluvkenaku Qaneryaraq
Respect for Nature and Animals-Qigcikluki Nuna Ungungssit-llu

Respect for Elders and Others-Takaqluki wall'u Qigcikluki Tegganret Allat-llu
Knowledge of Yup'ik Names-Nallunritlerkait Yugtun Atenek
Domestic Skills-Yuungnaqutem Cayarain Nallunritlerkaa
Sharing/Helping-Cikertaarutaqluni/Ikayurtaarutaqluni
Responsibility to Culture-Quanqellerkaa Piciryaram
Community Wellness-Nunat Calritnarqellrat
Cooperation-Ikayurtaagutleq
Spirituality-Ukvengqelleq
Humility-Ellmikutuulleq

Teachers/Scientists

Teachers/Scientists will use rubrics for evaluating the science fair projects. Copies of the rubrics are attached.

Category Codes/Description

The student/Adult Sponsor must decide in which category the student is competing.

Category (check one)

_____Life Science

_____Earth and space Science

_____Physics/Physical Science

_____Chemistry

_____Consumer Science

Checklist for Science Teacher/Expert in the Field and Elder

Student Name _____Grade_____

I have reviewed and signed the research plan. Yes [ ] No [ ]
The student and parent/guardian have signed the research plan. Yes [ ] No [ ]

SA - Strongly Agree
A - Agree
N - Neither agree nor disagree
D - Disagree
SD - Strongly Disagree

In your opinion this project reflects or maintains the following values:
(Circle the letters that most closely fits your opinion)

Humor	SA	A	N	D	SD
Hard work	SA	A	N	D	SD
Family Roles	SA	A	N	D	SD
Successful Hunter	SA	A	N	D	SD
Love for Children	SA	A	N	D	SD
Knowledge of Family Tree	SA	A	N	D	SD
Knowledge of Language	SA	A	N	D	SD
Respect for Nature and Animals	SA	A	N	D	SD
Respect for Elders and Others	SA	A	N	D	SD
Knowledge of Yup'ik Names	SA	A	N	D	SD
Domestic Skills	SA	A	N	D	SD
Sharing/Helping	SA	A	N	D	SD
Responsibility to Culture	SA	A	N	D	SD
Community Wellness	SA	A	N	D	SD
Cooperation	SA	A	N	D	SD
Spirituality	SA	A	N	D	SD
Humility	SA	A	N	D	SD

_____

Signature Role Date

First Year ANSES Science Fair 2000
Project Registration Form **DEADLINE January 25, 2001**

To Participate you must ...

1. Submit this registration form by January 25, 2001.
2. Submit copies of the Checklist for Science Teacher/expert and Elder.
3. Complete all information on this registration form

Project Information:

[_____] [_____]
Category Code Grade Level

[ ] Individual Project [ ] Team Project

Title of Project: (Limit to ten words or fewer)
_____
_____

Do you require an electrical outlet? YES NO
School Information:
School Name:_____Phone_____
Address_____Fax_____
Village_____Zip_____
Email (if possible)_____
Chaperone Accompanying student:_____
Address of Chaperone_____Phone_____
Participant Information:

#1 Individual or Team Member
Name_____Age_____
Nickname_____Grade____
School_____Home Phone_____
Village_____Zip_____
Gender_____
SS#_____Birthdate_____

#2 Team Member
Name_____Age_____
Nickname_____Grade_____
School_____Home Phone_____
Village_____Zip_____
Gender_____
SS#_____Birthdate_____

#3 Team Member
Name_____Age_____
Nickname_____Grade_____
School_____Home Phone_____
Village_____Zip_____
Gender_____
SS#_____Birthdate_____

Please Sign and have parent/guardian(s) sign below:

Liability for Exhibits

Every effort will be made to protect your exhibit. However, since the Science Fair Exhibition will be open to the public the LKSD ANSES Science Fair cannot and will not accept any liability or responsibility of any nature for any theft of, or loss or damage to, any exhibit or or any other property of any Exhibitor. Accordingly, it is recommended that each Exhibitor take product precautions to prevent any theft, loss or damage to his/her Exhibit and/or other property. Each Exhibitor should secure and guard his/her Exhibitor and/or other property at all times during the Exhibition, and remove all valuable components, especially those which are easily portable, when the Exhibit and/or other property is left unguarded by the Exhibitor. Computers should be secured with cables at all times by the Exhibitor. **I have read the above paragraph, and understand and accept that ANSES Science Fair 2001 cannot and will not accept any liability or responsibility for theft or damage to any exhibit.**

_____ _____
participant's signature Parent/legal guardian signature

_____ _____
participant's signature Parent/legal guardian signature

_____ _____
participant's signature Parent/legal guardian signature

_____ _____
Adult Sponsor Date

Publicity

The ANSES Science Fair is a prestigious event, and your presence there is newsworthy. The organization or businesses sponsoring awards at the Fair may want to publicize their involvement in such an important science competition by using photographs or information about you. Your cooperation may make it possible for other promising young student to get involved in science. You have my permission to use appropriate information about me for publicity purposes. This includes any photographs, videos, or likeness(es) that may be used by AISES, the Yup'ik Central AISES Science Fair, Alaska Native Knowledge Network, and/or Alaska Rural Systemic Initiative, or the sponsors for the purposes of illustrations, advertising or publication in any manner. I also consent to the use of my name in connection therewith.

_____	_____
participant's signature	Parent/legal guardian signature
_____	_____
participant's signature	Parent/legal guardian signature
_____	_____
participant's signature	Parent/legal guardian signature
_____	_____
Adult Sponsor	Date

Conduct Code

If your project is a team project, make one copy of this conduct code for each team participant. Each participant along with his/her parent or legal guardian must carefully read this conduct code and sign the code, and send in with the registration form. No student will be admitted to the fair who has not signed a copy of the conduct code.

Whenever there is a meeting or gathering under the name of ANSES (Alaska Native Science and Engineering Society) the following conduct code is maintained. Having a safe environment for students and adults to learn and develop into productive community members is highly cherished by ANSES leadership and membership. Therefore we request that you read over carefully the following code and sign as a symbol of your personal commitment to this code.

During the entire three days of the Science Fair (January 25, 2001), as well as during my travel to and from the fair I will

1. not use or abuse any alcoholic beverages, or drugs;

2. not engage in any verbal or physical abuse of any human being.

3. not engage in any sexual harassment, or inappropriate touching.

These values are important to me and I am proud to sign this document, to confirm my commitment to them.

_____ _____
Participant's Signature Date

_____ _____
Parent/Legal Guardian Date

Please return forms to
Nita Rearden or Julie McWilliams
Box 305
Academics Department / LKSD
Bethel, Alaska 99559