Mentor Agreement
Mentors should keep this document

THE ROLE OF A MENTOR:

The role of a mentor is to assist a student in designing and carrying out his/her science project in a safe and timely manner. By agreeing to mentor a student(s) you are acknowledging that you possess a working understanding in a given field, though the project may lie somewhat outside of your specific expertise. Your signature also indicates that you have spoken directly with the student(s) and agreed upon a specific purpose for their experiment. **This purpose may change between now and November 22nd (the final application due date), but should be an approximation of what they will be doing for the science fair**. Should the planned experiment require specific equipment, you are also agreeing to either supply it yourself, or assist the student in acquiring it from another source. Your signature also indicates that you will work with the student to help him/her obtain your approval (in the form of your signature) for four other specific parts of the project beyond creating the purpose question. These four other parts are: the Southeast Alaska Science Fair Application, which includes the project plan; the first lab log; the third lab log; and the conclusion, at which time you will be asked to evaluate the students interaction with you (**see timeline**). You are also agreeing to edit the students' conclusion to help assure its accuracy and quality.

By signing this contract, you are also agreeing to **help** lead the student to resources that will enable them to do background research for their chosen topic. These resources can include; scientific journal entries, magazine articles, web sites, or any other applicable source of research material, including your own knowledge. The application due by November 22th requires six such sources as a bibliography for the experiment. It is not your responsibility to provide these resources to the student, only to provide help where you can.

It is the student's responsibilities to gather their equipment, set up the experiment, and carry it out. It is also the student's responsibility to meet all deadlines for their class. **Should your signature be required to meet such a deadline, it is dependant on the student to arrange a meeting with you, at your convenience, giving you at least a week's notice for each meeting.** Students are also required to go over the calendar of due dates with you before you sign the mentor agreement to assure that you do not already have prior out-of-town engagements that might conflict with these due dates.

A student may receive help from any number of adults to complete a project, but they may only have one official mentor. Only the official mentor may sign official paperwork for the INTEL science fair and due dates for his/her class.

THE PURPOSE QUESTION:

All eligible science fair projects for the purpose of our class must fall into the category of scientific investigations with **measurable variables**. Due to the nature of the student's class and my own limitations as a teacher of over 120 students engaged in the fair process, I do NOT encourage engineering projects. Please note that it is possible to do a scientific investigation regarding the topic of engineering. Building something AND THEN TESTING IT IN SOME WAY is perfectly acceptable.

The purpose statement of a scientific investigation is the question that the student(s) will attempt to answer through experimentation with your guidance. **This requires that the student actually engage in scientific experimentation, rather than simply researching known information. Students are also expected to gather their own data**. It is not recommended that student projects be designed around any preexisting data in that the purpose of the project is to give students hands-on experience in gathering data. I will make some small exceptions to this requirement where data can not be obtained in any other way and the experiment has great merit. Due to the nature of the process we will be following in class, students are asked to form their purpose question such that data is quantifiable and capable of being graphed. In most cases, this

means that the question can be worded in the form of: "How does _____ affect _____?"

Although I will **not require** that the question strictly follow this form, I strongly suggest that questions be designed a simple cause and effect scenario. Students may have more than one independent or dependent variable at the discretion of the mentor and myself. It is expected that the student(s) will work with their mentor to refine the purpose of the experiment so that it is engaging, challenging, and able to be completed in the given time frame. Students must have a testable hypothesis or null hypothesis.

Experimentation for projects should require approximately 15 to 20 hours of work (this includes time for building any apparatus and all data gathering) for a single student, and 30 to 40 collective student hours for a team project. Project experimentation will span a time of approximately ten weeks. Projects may begin once approved by the Science Fair Scientific Review Committee (SRC). I have NO CONTROL over this approval process. This approval is based on a set on nationally set standards for safety. I apologize in advance for the constraints the National requirements place on projects, as well as the rather complicated set of application forms required by the National Fair.

Science Fair applications are due by no later than Monday, November 22nd. Once approved, students may start their experiment. Students should be able to begin their projects by Monday, November 22nd. Students wishing to start early, may submit a completed application and have it approved **BEFORE** starting their experimentation, and we will do our best to get it reviewed in a timely manner.

NOTE: All Science Fair applications have several places that require mentor signatures. Please be sure to work with your student(s) to ensure that the forms are thoroughly filled out by **11/22/10.**

As a final note, a mentor is just that, a mentor. While the science fair is a contest, it is a contest of STUDENT ability. A good mentor has the ability to teach a student a great deal about the application of science as it is applied in the 'real world." Mentors also have the golden opportunity to be positive role models and foster an appreciation of good science. Given this, it should go without saying that the Capitol City Science fair is not a place for community scientists to compete against one another or to use as a platform to further personal agendas... it's about the students. To all of you who are about to give up your time in the interest of furthering a student's understanding and appreciation of science, I thank you.

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If, at any time in the course of your mentorship, you have any questions please feel free to contact me at the school. This is especially important should you feel that the student you are working with is not fulfilling their duties as a young scientist.

Jonathan Smith: 523-1571 or via E-mail: smithj@jsd.k12.ak.us.

Grayed areas indicate those sections requiring mentor signatures or feedback. All of the grading rubrics for these components can be found at: http://www.ptialaska.net/~gennie/SEASF.htm. This site will also eventually have samples of old experiments to act as guides for you ant the students. A search engine quarry of "Southeast Alaska Regional Science Fair" will also bring you to this address. Just click on the text that indicates the rubrics and worksheets. You will also find updates of fair information on these pages.

Rubric	NOTES	Due Date for an A
Topic	You will not be "locked" into your topic until your Science Fair application	9/13/10

	and Procedure have been approved.	
** Team Petition	Only required of those students who want to work as a team. **(** Sophomores only)**	9/20/10
Mentor	This must be an expert in your topic, but CAN NOT BE A PARENT OR OTHER DIRECT RELATIVE	10/04/10
Bibliography	Note: this is also needed for your Science Fair application.	10/11/10
Background Report	Should pertain to the actual project	10/25/10
Plan	The SRC must approve your Science Fair Application and plan and I must approve your plan before you may start your actual experimentation. The plan must include a plan for statistical analysis of all data to be obtained.	11/08/10
Science Fair Application	**This is NOT a flexible date**, I have no means of taking late applications – The SRC requires all applications for review by this date. NOTE: all signatures are required.	11/22/10
Lab Log #1	The SRC must approve your Science Fair Application and I must approve your procedure before you start experimentation. Lab logs must reflect a total of at least 5 hours of work for an individual, at least 10 hours of work for a team.	12/13/10
Lab Log #2	Lab logs must reflect a total of at least 5 hours of work for an individual, at least 10 hours of work for a team.	01/10/11
Lab Log #3	Lab logs must reflect a total of at least 5 hours of work for an individual, at least 10 hours of work for a team.	01/31/11
Data/Graphing /Analysis	You may arrange with your mentor to work on your own statistical analysis.	02/07/11
Conclusion	Most important piece of the project – take your time, follow the rubric	02/14/11
Abstract	This can be done over the weekend	02/18/11
Complete Notebook	Be sure to write your procedure and update your bibliography	02/23/11
Visual Display	You will want to start this well before the due date.	03/07/11
THE SCIENCE FAIR	**All projects must be on display at the fair by 4:30 p.m. on Friday, March 11th and all students MUST be present at their projects from 9:00 a.m. to 1:00 p.m. on Saturday, March 12th.**. Any student who is sick must have a written doctor's excuse. Students unable to attend the award ceremony scheduled for 7:00 p.m. on Saturday, March 12th must be excused by me by 02/16/11. Students wishing to be considered for second tier judging must be available on Sunday 03/13/11.	**3/11/11 -3/12/11**

Student(s) Name: _____

Mentor Agreement

To be filled out by the mentor in the presence of the student and returned to the students instructor

(This assures that the student has communicated this information properly.)

Project Topic: _____

Tentative Science Experiment Purpose:

How does _____ affect _____ ?

Or other format: _____ _____ .

Testable hypothesis (null hypothesis):

_____

_____

Please **have the student** make a sketch below of how the data will be graphed after it is obtained:

Questions:

1. Are all variables stated in the purpose above measurable (given the time frame of ten weeks (15-20 hours of data collection) and the resources available to the student)?

2. What are the perceived risks of the project? (Please be as cautious as you can in designing the experiment, as the SRC is very strict.)

3. The project does not attempt to survey minors (those under 18) in any way? _____

3. Does the project involve the death of any vertebrate animals, excluding fish under specific circumstances?

Yes _____ No _____ (if yes, the project is NOT ALLOWED as per National Science Fair regulations)

4. Will you, to the best of your knowledge, be available to meet with the student **at least 4 more times** between today and 3/03/08 to check on student progress? These four meeting times must coincide with times just prior to the due dates listed in the table below as students will be required to have your signature of these documents to assure that you have met to discuss their progress.
Yes _____ No _____ (student must find a new mentor)

Due Date	What's Due	Projected meeting date
11/22/10	Science Fair Application	
12/13/10	Lab Log #1	
1/31/11	Lab Log #3	
2/14/11	Written conclusion and student evaluation	

5. Would you like to be a judge in the Capital City Science Fair held on the **night of March 11th and the Morning of March 12th**? You can be both a mentor and a judge, but you will not be allowed to judge the student you have mentored.

6. Have you received the following information from the student: the mentor agreement information pages for future reference, the students name, phone number, E-mail address (if they have one), and hours that they can be contacted?

Yes _____ No_____

Agreement:
I agree to mentor the above project. I understand my role is to act as a source of information, guidance and inspiration, but, in the end, it is the student's responsibility to complete the project.

Signature: X _____
Date: _____

THE FOLLOWING IS TO BE FILLED OUT BY THE STUDENT

This information is to be exchanged at the time of the first mentor meeting.

Mentor Name: _____

Phone number: _____

E-Mail: _____

Contact times (days and hours): _____

Mentor Qualifications: _____

To prepare for the case of an emergency on the part of the mentor, students are asked to have the name and contact number of a person who could fill in for them. Students are asked NOT to contact this person. This name should be someone the

student COULD contact if they had to. This person doesn't necessarily have to be able to help you.

Backup Mentor Name: _____

Phone number or E-mail: _____