

Independent Study/Inquiry Project for Inventions Unit

Fourth graders are involved in a unit study on inventions that culminates with an “invention convention.” Students learn the science and the history of inventions. They read stories about children and adults who are inventors. They also read about inventors who have become famous and they watch videos depicting the struggles that inventors go through. They learn about everything related to inventions beginning with simple machines up to how to obtain a patent. The study ends with an independent study research project about an inventor of their choosing and an “invention convention” where students create their own inventions.

This unit has several opportunities for various group configurations. There are whole group, small group, an independent study groups. In particular there is an opportunity for inquiry project or independent study. I work very closely with the librarian to teach the students how to locate information on inventors. The students are taught how to do searches for information in the library and how to sort through loads of information. They are given research formats to use, which helps them to focus on the most important information. At that point, students are free to explore the library resources, Internet, reference materials, etc. that are available to them to them to produce a research project of their choosing. Students become the directors of what they will research and learn and what methods of research they will use. This is where the teacher becomes a facilitator and guide when students hit stumbling blocks.

For the most part, students work independently as all students are researching different inventors or topics. However, it does occasionally become necessary for students to aid one another in research techniques. They also like to share new information with their peers as they discover it, which should be encouraged.

Kelly Batts, 4th Grade Teacher

Independent Study: Primary Components

1. Selection of a topic for investigation
In deciding upon a topic, you will need to consider things like your interest in the topic, available sources, the degree of professionalism and challenge required in Independent Study, limitations inherent within the research process, and whether or not your plans will meet the demanding requirements of the review board.
2. Conducting research with heavy reliance upon primary sources
Independent study research means going beyond books and magazine articles others might have written on your topic. It requires critical thinking, problem-solving, and a search for data and other information that might be found in interviews, surveys, letters, experiments, professional journals, on-the-job experience, or a limitless number of other sources. Real research requires real investigative skills.
3. Written presentation of the research
Written documentation of your work will be necessary for both the learning process and for accountability purposes. The precise type of written presentation may vary from independent study to independent study, but the review board will expect a quality, professional product before assigning final credit.
4. Producing the product which evolves from your research
The production phase will require you to produce a product where you apply the knowledge you gain during the research phase. This product must be an outgrowth of your research and must be on a professional level. It might be a performance, a show, an invention, a book, a play. . . . The possibilities are limitless.
5. Presentation of your learning to the designated review board
This step will be the final one in determining the success of your Independent Study. This is where credit is assigned. Yes you'll be jittery. But you'll be proud as well, for few things offer as much reward as sharing the results of months of intensive effort with others who are interested in and inspired by your accomplishments.

Susan Lamar

Independent Study Proposal

Name: _____ ID# _____ Grade: _____

Address _____ Age: _____ H.R.: _____

Parent's Name: _____ Telephone: _____

Anticipated Date of Project Completion: _____

Teacher, etc. who will oversee the independent study: _____

(Attach additional sheets if necessary.)

Describe your interest area: (What has stimulated your interest in this area?)

What activities have you already undertaken to explore this field of interest?

What do you think your research will include?

Describe how you will communicate what you've learned. Describe (What will your project involve? Cost? Time? Resources?)

Which classes have you already taken that have helped you want to learn more about your field of interest?

In which activities have you been active both in school and outside of school that demonstrate good work habits?

I am applying to do an Independent Study for _____ semester of _____ (school year). I have discussed my ideas for independent study with my parents and a teacher, and they have indicated their permission for me to participate in this program by their signatures below.

Student Signature _____ Date _____

Teacher Signature _____ Date _____

Parent Signature _____ Date _____

Screening Committee's Analysis of Application for Independent Study

Name: _____ ID# _____ Grade: _____

Homeroom/Advisement: _____

Anticipated Date of Project Completion: _____

Teacher, etc. who will oversee the independent study: _____

(Attach additional sheets if necessary.)

General Information:

1. Content area of student's proposed independent study (example: science, math):

2. Specific description of the problem or the questions student is planning to investigate.

Methodology:

1. What advance training is being provided to the student by the Enrichment Specialist or screening committee?

2. What resources will the Enrichment Specialist or screening committee provide to the student or help the student secure? List books, magazines, telephone contacts, interviews, etc.

3. What types of help or assistance will the Enrichment Specialist or screening committee provide to assist the student in completing the project or product?

Product:

1. What is anticipated to be the student's product or independent study outcome? Describe in as much detail as possible.

2. What difficulties does the Enrichment Specialist or screening committee expect the student to encounter in completing this independent study? List all which have been discussed with the student and/or parent.

Audience:

Is the audience who will see or benefit from the independent study appropriate to the product or project selected by the student?

Additional Comments:

____Project approved ____ Project not approved ____ Further information needed prior to approval

Signature of Enrichment Specialist or Screening Committee Representative _____