DOCUMENT RESUME

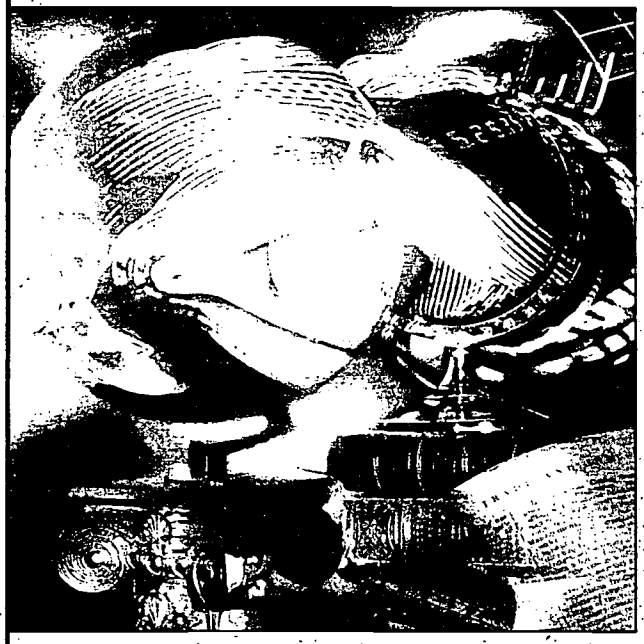
ED 406 729 EA 028 291

TITLE	Integrated Workplace Learning Project. Teacher Reference Guide/Student Planning Guide. Connections: Linking Work and Learning Series.
INSTITUTION	Northwest Regional Educational Lab., Portland, OR. Education and Work Program.
SPONS AGENCY	Department of Education, Washington, DC.
PUB DATE	Jan 97
NOTE	143p.
CONTRACT	VN93003001
AVAILABLE FROM	Northwest Regional Educational Laboratory, Document Reproduction Service, 101 SW Main Street, Suite 500, Portland, OR 97204 (phone: 1-800-547-6339).
PUB TYPE	Guides - Non-Classroom (055)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	Active Learning; *Career Planning; Cooperative Learning; Cooperative Planning; *Education Work Relationship; *Educational Planning; *Experiential Learning; *Internship Programs; Secondary Education; Student Projects

ABSTRACT

An integrated workplace-learning project is a self-directed, intellectually rigorous, field-based learning experience in which students apply academic skills in solving real-world problems in the community. This guidebook was designed to help teachers and other school staff collaborate with students and employers to plan integrated workplace-learning projects. It discusses the purpose of integrated workplace-learning projects and provides tools for designing and implementing them. The guidebook is divided into five sections. The introduction defines the meaning, purpose, and importance of integrated workplace-learning projects. The second section describes a step-by-step process for designing such projects. The steps outlined in this section correspond to the student planning guide, a tool that helps students collaborate with teachers and employers to create projects that are academically rigorous and relevant to the world of work. The third section contains two completed sample student planning guides, each of which outlines a project in a different career area. The career areas highlighted are fast-food restaurant manager and electrician. The last section contains a student planning guide, a tool that walks students through the process of planning an integrated workplace-learning project. A master copy of the student planning guide and a second master copy suitable for photocopying are included. A glossary is also included. (LMI)

integrate



CONNECTIONS
LINKING WORK AND LEARNING

Preface

Integrated workplace learning projects are a way for students to connect learning at school with learning at work. Whether students are doing an internship or an extensive work-based learning experience, completing a senior-year community service assignment or holding down a part-time job, planning is often the most challenging aspect of an integrated workplace learning project.

Students, teachers, and employers ask the same questions: What should the project be about? How should it be structured? How will it be assessed? Not knowing where to start, many people never do. This reference guide is designed to make planning a doable process. It outlines the essential elements of integrated workplace learning projects and provides a step-by-step student guide for planning projects from start to finish.

The Northwest Regional Educational Laboratory (NWREL) chose to develop this guide because it is committed to fostering productive partnerships between schools and communities, expanding opportunities for youth to make informed career and life decisions, preparing youth for the demands of a changing workforce, and using the community as a learning resource.

NWREL has a 30-year track record of providing research and development services addressing the needs of children, youth, and adults. While governed by a board of directors drawn from Alaska, Idaho, Montana, Oregon, and Washington, the Laboratory's leadership activities extend nationwide.

NWREL's Education and Work Program serves local and state organizations committed to building systems that serve all persons on their life and career journeys. The program has been a leader in school-to-work and educational reform for more than 25 years. Its staff of professional educators has worked with organizations throughout the Northwest and the nation to develop innovative educational programs in such areas as work-learning integration, assessment, career guidance, and school-business partnerships.

Northwest Regional Educational Laboratory

Table of Contents

This publication is based on work sponsored wholly, or in part, by the U.S. Department of Education under contract # VN93003001, Community Education Employment Center (CEEC). The content does not necessarily reflect the views of the Department or any other agency in the U.S. government.

Acknowledgments

The development of this guide was predicated on partnership. The Northwest Regional Educational Laboratory (NWREL) would like to thank the many people who committed their time and talents to help make this a useful resource for anyone interested in creating stronger connections between schools and employers.

NWREL Staff:

Dionisia Morales, Writer

Larry McClure, Education and Work Program Director

Andrea Baker, Senior Associate

Robin Harris, Replication Specialist

Barbara Warren-Sams, Information/Publication Specialist

Dennis Wakeland, Editor

Keisha Edwards, Research Assistant

Designer:

R²Art—Reneé Renfrow

Cover Photo:

William Whitehurst/The Stock Market Photo Agency

Design & Review Teams:

- Barbara Dougherty (Vocational Studies Center, WI)
- Nancy Forbes (Board of Cooperative Education Services, NY)
- Hal Haefer (Poplar High School, MT)
- Gloria Jackson (Sharp Learning Center, GA)
- Chad Marshall (Young Adult Learning Academy, NY)
- Adria Steinberg (Rindge School of Technical Arts, MA)
- Michelle Swanson (Sir Francis Drake High School & Autodesk Foundation, CA)
- Margaret Vickers (Jobs for the Future, MA)
- Anne Watts (Ready, Set, Go: CEEC, WA)

From Portland Night High School, OR:

- David Mesirow
- Ginny DiMaggio
- Mary Donofrio Joanis

From Roosevelt High School, OR:

- Marlene Dunster
- Timi Elwood
- Sharon Freeman
- Judy Holmboe
- René Léger
- Dan Malone
- Kerry Stevenson
- Catherine Theriault
- Nancy Vandervelde

U.S. Department of Education:

Paul Geib, Program Officer

Kate Holmberg, Program Officer

In addition to the people who contributed to this guide, various written materials were used as resources, including:

- *Experience-based Career Education*, the Northwest Regional Educational Laboratory
- *Experience-based Learning: How to Make the Community Your Classroom*, the Northwest Regional Educational Laboratory
- *Making High Schools Work*, Gene Bottoms, Alice Presson, and Mary Johnson (Southern Regional Educational Board)
- *Design Technology*, Susan Dunn and Rob Larson (The Falmer Press)
- *Project Teaching*, David Wray (Scholastic Publications)

integrated workplace
learning project

introduction

This guide helps you—teachers and other school staff—collaborate with students and employers to plan integrated workplace learning projects. It discusses the purpose of integrated workplace learning projects and provides tools for designing and implementing them.

What is in this guide?

This reference guide is divided into five sections:

- **Introduction** defines the meaning, purpose, and importance of integrated workplace learning projects.
- **Planning** describes a step-by-step process for designing integrated workplace learning projects. The steps outlined in this section correspond to the *Student Planning Guide*, a tool that helps students collaborate with you and employers to create projects that are academically rigorous and relevant to the world of work. A master copy of the *Student Planning Guide* is included in the last section of this reference guide.
- **Sample projects** consists of two completed *Student Planning Guides*, each of which outlines a project in a different career area. The career areas highlighted in the sample projects are fast-food restaurant manager and electrician. These samples can be useful resources for understanding how to structure a successful project and for helping students brainstorm, organize, and modify their project ideas.
- **Glossary** includes definitions of key terms used throughout this reference guide, as well as others relevant to work-based learning.
- ***Student Planning Guide*** is a tool that walks students through the process of planning an integrated workplace learning project. This section includes a master copy of the *Student Planning Guide*. Packaged separately is a second master copy you can photocopy for your own use.

"Projects are fun and hard at the same time. They make you open to learning more things, but you have to know what you're doing. With workbooks you just feed back what you already know, but projects really make you think."

—Student

What do we mean by *project*?

Project-based learning engages students in complex, real-world issues and asks them to acquire and apply skills and knowledge in a variety of contexts. Over the course of planning and implementing a project, a student proposes, clarifies, organizes, tests, modifies, interprets, and reflects on ideas. Identifying and resolving problems become essential skills as unanticipated issues present themselves and potentially change the scope of the work. At the completion of a project, students demonstrate what they have learned by presenting products to members of their school and community.

In contrast to traditional classroom instruction, projects give students substantial input to the learning process by encouraging them to negotiate with teachers and employers on the content, timeframe, and assessment criteria for the project. Students' interests and needs become key factors in determining how a project is structured and carried out. This is not to say that the class curriculum is forgotten or that students do whatever they please. On the contrary, the class curriculum is an essential framework as students conceptualize and complete work on their projects.

What do we mean by *integration*?

In the context of this guide, integrated learning describes a project-based experience that connects the skills and knowledge students gain at school with those they gain at a workplace. The purpose of integrated learning is to weave together school- and work-based learning so that students understand and experience academic subjects in a real-world context.

It is important to point out that this is not the only definition of integrated learning. It can, for example, refer to connections made within a subject area, across disciplines, between academic and vocational courses, or between different groups of learners. No one definition is more useful or valid than another; each serves a different purpose and facilitates a different practice of teaching and learning. However, for the purposes of this guide, integrated learning is defined in terms of the connection between school and work.

What do we mean by *workplace*?

Workplace has a broad meaning in this guide. It represents businesses and organizations, as well as other opportunities in the community—such as service learning activities. A workplace is any setting where students, working with an adult mentor, can integrate what they learn in school with the skills and knowledge they will need for future careers.

Throughout this guide "employer" is used to describe the person at the workplace who is serving as a mentor to help the student plan and implement a project. When we refer to the employer we mean anyone—supervisor, volunteer, team leader, owner, front-line worker—who is committed to helping the student learn, apply, and link important skills and knowledge.

What do we mean by an *integrated workplace learning project*?

An integrated workplace learning project is a self-directed, intellectually rigorous, field-based learning experience in which students apply academic skills in solving real-world problems in the community. Students, teachers, and employers work collaboratively to define the theme, goals, and activities of the project and to negotiate its outcomes and assessment criteria. Projects culminate in one or several products that are presented to an audience of teachers, administrators, student peers, employers, parents/guardians, and other members of the community.

"Projects are hard, but like a job, when you have to do something you have to do it. Life isn't a piece of cake. Projects prepare you for the real world."

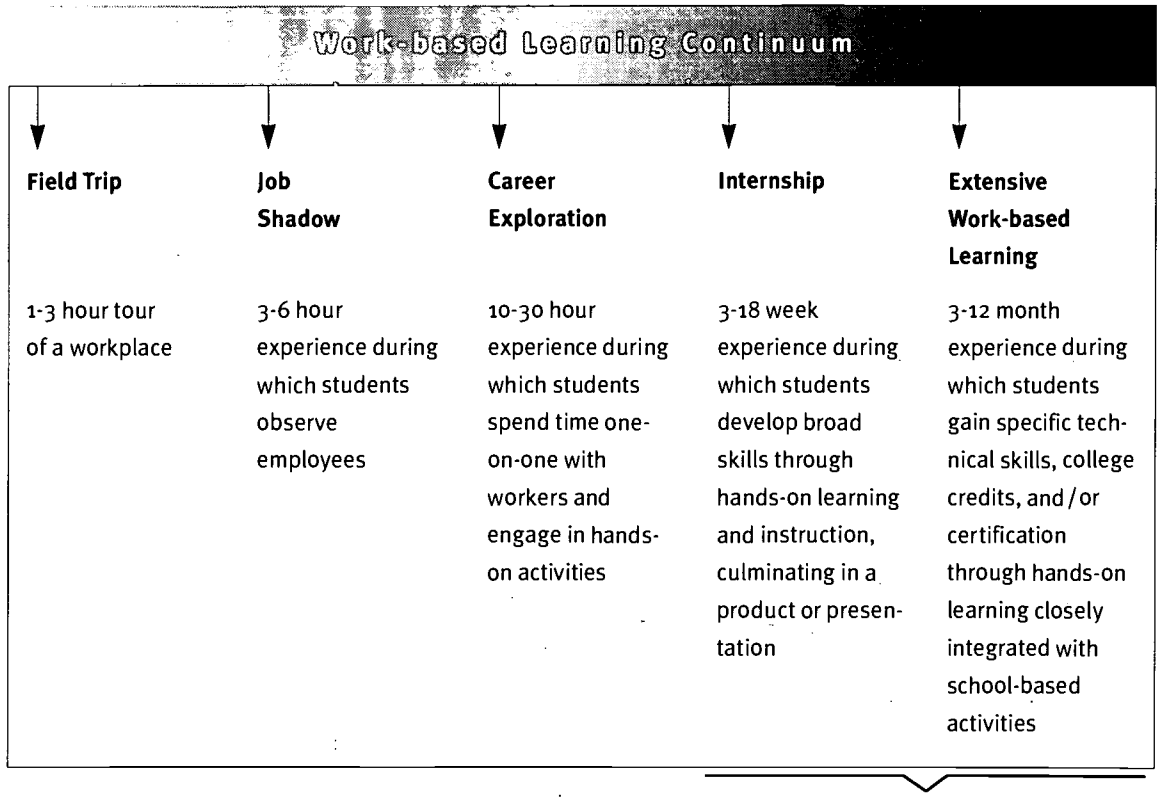
—Student

Who should do an integrated workplace learning project?

Integrated workplace learning projects are recommended for students involved in internships or extensive work-based learning

experiences (see the work-based learning continuum below). Integrated workplace learning projects are best suited for these two types of work-based learning experiences because students spend relatively long periods of time at a workplace and have access to the resources—such as mentors, equipment, and materials—necessary to complete project activities. The project provides the structure and documentation of the learning.

Integrated workplace learning projects are also useful for students who already have part-time jobs and are interested in receiving credit for their activities outside of school. There is great potential for students to learn and apply valuable skills at their jobs, provided the experience is structured. Projects can provide that structure, allowing students to meet their responsibilities at work while making connections with what they learn in the classroom.



Every workplace has opportunities to create projects that are both academically rigorous and relevant to real-world problems. For example, a student working at a fast-food restaurant can design and produce an information brochure on ways to prevent E.coli contamination in the home. The student can apply learning from a chemistry course to understand the conditions under which E.coli bacteria thrive, from biology to research the human immune system, from desktop publishing software to design the layout of an effective brochure, from English to clearly articulate key information, and from math to calculate printing costs. Communication and problem-solving skills will be essential to convince the school or community to pay for the production of the brochure. At the workplace the student can study training manuals and health codes to understand standard practices for avoiding E.coli contamination on the job and extrapolate them to apply to the home. Once the project is complete, the student can make presentations in the community and distribute brochures as a public service. For a similar example related to an after-school job, see the sample project on page 27.

"I think it must be strange for grown-ups to see good, intelligent work by young people."

—Student

Finally, an integrated workplace learning project may also be appropriate for students who have a senior project requirement for graduation. Senior projects usually require students to collaborate with teachers and possibly community members, plan and produce a product, and make a presentation of their final work. Unlike internships and extensive work-based learning experiences, senior projects do not necessarily require spending significant time at the workplace. If students choose to work closely with members of the community to complete their senior project, an integrated workplace learning project is one approach to structuring the work. Students who do not make the community a significant part of their senior projects may still benefit from the integrated workplace learning project planning process, which puts strong emphasis on goal setting, task organization, time management, and assessment.

What makes a good integrated workplace learning project?

Every integrated workplace learning project is unique. Projects vary depending on the time and interests of the students, teachers,

integrate

"With projects I feel I can become a real facilitator and shift the control to my students' hands, giving them the opportunity to truly problem solve and be the learner."

—Teacher

and employers involved in planning and implementing them. Although no two projects are ever the same, some fundamental elements characterize them all:

- The student's interests are reflected in the project—Part of the purpose of an integrated workplace learning project is to increase a student's level of responsibility for and commitment to his or her own learning. One way to do this is to involve the student in deciding the topic, products, and activities of the project. Students who have the opportunity to express their interests and ideas, and then see them represented in their work, tend to become more engaged in the learning process.

- Students and teachers assume new roles in the learning process—Integrated workplace learning projects demand changes in the traditional roles of "student" and "teacher." Projects require students to be proactive. With the opportunity to help decide what they learn and how they learn it, students need to take the initiative in generating, articulating, organizing, realizing, and presenting their ideas. Teachers become facilitators, helping students identify and resolve issues for themselves by providing support and advice. Through projects students become active learners, testing their ideas, making mistakes, modifying their plans, and finding alternative solutions. For teachers this means spending time overseeing students' work and helping to guide its direction.

- The project addresses a real-world problem or issue in the community—Using their personal interests as a foundation, students should design a project that has relevance to people besides themselves. Students can learn a great deal by exploring topics that have personal meaning but no connection to the community; however, they often benefit more when their projects are not only interesting but also address the needs of others. Young people often feel and are led to believe that they are powerless in society. Integrated workplace learning projects are a way to demonstrate to students that they can have an effect on the lives of the people around them if they apply their skills, knowledge, and creativity. Students have the potential to use projects to solve real-world problems in their communities and when they succeed they not only understand the value of learning, but also their value to society.

- **The course curriculum is the framework for making the connection between learning at school and at the workplace**—For integrated workplace learning projects to have a connection to school, they must reflect what is taught in the classroom and have value both to teachers and students. Therefore, projects should not be in addition to what students learn in school, but be another way of exploring the course content and acquiring skills and knowledge. When assisting students with the design of their projects, teachers should help them integrate class content and skill requirements. Students and teachers will have a greater sense of investment in the process if they see how the project will help students meet course requirements. Thus, as part of their discussion of how the project will be assessed, students and teachers should decide what course credit the student will receive for completing the project.

- **The project has a clear purpose, activities to accomplish, and measurable outcomes**—Every integrated workplace learning project should have a clear beginning, middle, and end. The project should be structured so students know what they are doing when and for what reason. Without clearly articulated goals, activities, timeframes, and outcomes, students may become overwhelmed because they do not know where to begin, what to do next, or how they are being held accountable for their work. For students to take the lead in initiating their own projects and for teachers to be effective facilitators, there must be a format or system for organizing the process.

- **The project culminates in a demonstration of skills through products and presentations**—Products and presentations are ways for students to demonstrate what they have learned. A product is a tangible item a student produces that is directly related to the purpose of the project. Each product should have a specific use and should not be produced simply for the sake of having something to do. For example, if a student writes a report summarizing research findings, the report could be used to prepare a series of presentations to classmates, workplace supervisors, or members of the community. If a student creates a map of a local park, it could be used to lead a group of elementary students on a tour. Through products students show what they have learned; they should be planned as meaningful sources of information that have a practical use in the school, workplace, or community.

"I liked having an exhibition at the end of the project. A lot of tests are just about memorizing facts and dates. At an exhibition you can show that you know what you are talking about and that you really learned."

—Student

integrate

"The students used the standard library resources, but the majority went beyond the library, using the Internet and local, state, and national agencies. They gained more mature social skills from making phone calls, writing letters of request, interviewing, and sending thank-you notes."

—Teacher

- **An employer is involved in planning and evaluating the project**—Part of the purpose of the integrated workplace learning project is to anchor classroom learning in the realities of the world of work, and to give students hands-on experience with the way academics are applied on the job. To plan a project that effectively uses the resources and skills required by a workplace, it is a good idea to have the input of an employer. An employer can assess whether a project is doable and validate its authenticity in terms of the daily demands of the workplace. Because they play a key role in helping students implement their projects, employers should be involved throughout the planning process as ideas for the project evolve.

- **Students draw information from a variety of sources and experiences to identify and solve problems**—Integrated workplace learning projects challenge students to design and implement a series of activities that are both academically rigorous and relevant to the real world. To accomplish these goals they need to draw on a wide variety of resources. Using methods such as research, interviews, experiments, artistic expression, observation, and hands-on training, students gain the rich information required for their projects. Using their personal experience, creativity, imagination, and existing skills as a foundation, students should be encouraged to develop and test new ideas using a broad range of information sources.

Why should students do integrated workplace learning projects?

The value of integrated work-based learning projects is highlighted by recent research on how people learn.

- **Learning is an active process**—To learn new information, ideas, and skills, students have to work actively with them in purposeful ways. They need to integrate this new material with what they already know—or use it to reorganize what they thought they knew. Through integrated workplace learning projects students are not only taking in new information, but also creating new products with that information and using them in practical ways.

- **Learning is fundamentally influenced by the context and activity in which it is embedded**—Projects immerse students in challenging tasks or questions. Rather than beginning with facts and ideas and then moving to applications, integrated workplace learning projects begin with problems that students must resolve by marshalling pertinent facts and ideas. Instead of being distant observers, students become immediate practitioners. Rich contexts challenge students to develop and use higher-order reasoning and problem-solving skills.

  When projects integrate classroom learning with workplace activities, students not only see practical application for what they have learned in the classroom, but they also experience it in a context that helps them make connections between what they are learning and what they want their futures to be. Through projects each student's experience has immediate purpose and value; more importantly, the accumulation of such experiences forms a base for future attitudes and understanding.

- **Learners are diverse**—No two students are alike; each one brings diverse perspectives, priorities, backgrounds, learning styles, experiences, and aspirations to the classroom. Projects give students a chance to express their individuality, while still meeting rigorous academic standards. For example, two students working at a bakery might design different projects based on their personal and academic interests. One student might combine biology and chemistry to write new "heart smart" recipes for the pastry chef, while the other might use English and social studies to design and administer a community survey on ways to improve customer service at the store. Because they offer a flexible way for learning skills and knowledge, integrated workplace learning projects are particularly useful for students working in groups. By design, projects accommodate different learning styles and interests so when students work together, their diversity adds value both to the process and the products.

"Sometimes when an adult teacher teaches you, there is some sort of misunderstanding. With our project, when we work in a group, we create a situation where students teach students, students teach teachers, and the teacher teaches students, too."

—Student

integrated workplace
learning project

planning

Planning is the most critical aspect of integrated workplace learning projects. When students thoughtfully design their projects, they know what to do when, and why. A well-articulated plan also provides teachers and school staff a point of reference to support students' efforts and assess their progress.

About the *Student Planning Guide*

The *Student Planning Guide* (following page 117) is a tool students use to plan integrated workplace learning projects. Working with you, possibly other teachers, and employer partners, students complete a step-by-step process to articulate the goals of the project and how they will accomplish them. The *Student Planning Guide* is divided into two sections:

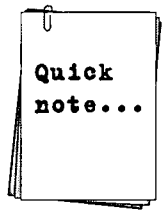
- **Developing a proposal** shows students how to describe what they will be doing with their project and why they are doing it. The three steps in this section help students brainstorm project ideas related to their interests, refine them in terms of learning opportunities at school and the workplace, and define the overall scope of the project in a proposal format.
- **Making a workplan** helps students explain exactly how they are going to accomplish the goals they described in their proposals. The eight steps in this section (Steps 4-11) help students identify the products, purposes, activities, timeline, and assessment methods for their projects. Students create the workplan by "planning backwards." This means they begin by describing the end results of the project and then work backwards to determine what they need to do to make the project happen.

Throughout the *Student Planning Guide* are devices—examples, quick notes, and modifications—to help students understand and complete each step:

- Examples (indicated by a black bar, such as the one to the right) illustrate how a particular step should be done. The examples are taken from a sample project so students can see how ideas evolve in the planning process.

EXAMPLE

integrate



- **Quick notes** (presented with a graphic of papers clipped together) appear at the beginning and end of sections and offer students hints and encouragement for completing the planning guide.
- **Modifications** (indicated by a stop sign) are opportunities for students to reflect on their plans; stop signs mark points in the planning process when students should consider whether they want to modify or change direction. Space is provided at the end of the guide for students to keep track of changes they make as they plan and implement their projects. Carefully thought out modifications to a project are indicative of effective problem solving.

How to use the planning guide

There is no one right way to use the *Student Planning Guide*; it is a versatile tool designed to meet a variety of needs. You can use it for students to plan individual, small group, or whole class projects. You can use it to help students make connections between your subject area and the workplace, or to encourage them to involve several teachers to make broader links between school and work. The *Student Planning Guide* can be used for both short- and long-term efforts and does not limit the complexity of a project. No matter how you choose to use it, all the steps in the process are pertinent to helping students put together rigorous and relevant learning experiences.

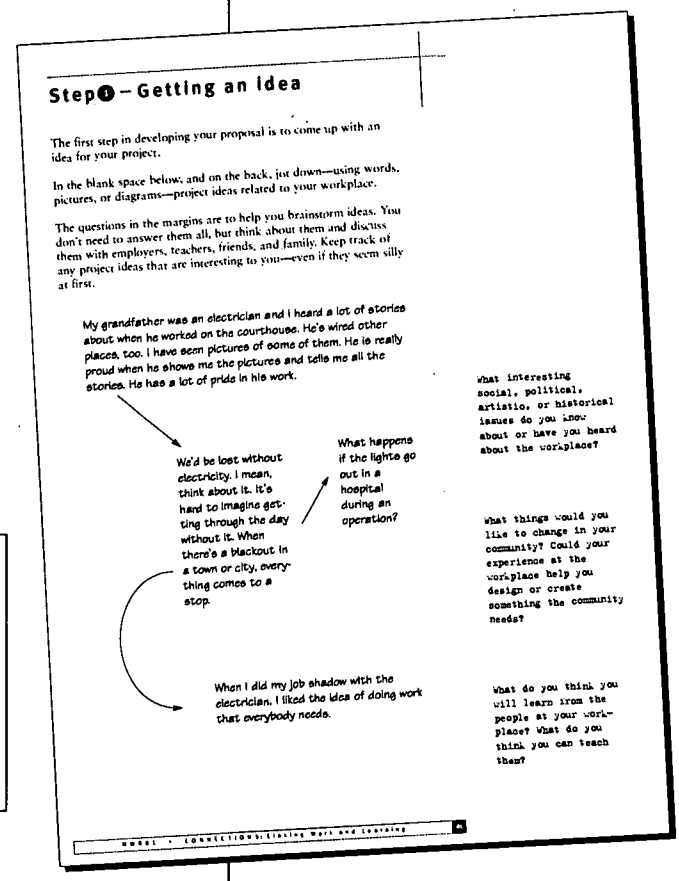
A note about the planning process

The following pages describe the process for planning an integrated workplace learning project. Your role in the design phase of the project is essential. Guiding students through the process of articulating their interests, goals, and activities may seem cumbersome at first. But the more up-front, organizational support you provide, the better able students will be to carry out the projects on their own. Keep in mind that students can plan individual or group projects. Whether they work alone or in teams will depend in large part on the time and resources you have for working with them as they plan and implement their projects.

Steps in the planning process

There are many ways to plan a project—how you approach it depends on the time, commitment, interests, and resources of you, your students, and the employers involved. However, some elements are part of any good planning process, such as brainstorming and refining ideas, setting realistic goals, defining specific activities, creating a reasonable timeline, and making mid-course corrections. The *Student Planning Guide* incorporates all these elements and arranges them so that students use their own interests as a bridge to connect learning at school with learning at work.

The following pages describe the two sections of the *Student Planning Guide* and each step in the planning process. These descriptions are to clarify any questions you might have about the steps students complete or how best to support their efforts. The sample pages that appear in the margins are from a *Student Planning Guide* completed by a student who did an internship project with an electrician. (The full version can be found starting on page 75.)



Step 1 – Getting an Idea

The first step in developing your proposal is to come up with an idea for your project.

In the blank space below, and on the back, jot down—using words, pictures, or diagrams—project ideas related to your workplace.

The questions in the margins are to help you brainstorm ideas. You don't need to answer them all, but think about them and discuss them with employers, teachers, friends, and family. Keep track of any project ideas that are interesting to you—even if they seem silly at first.

My grandfather was an electrician and I heard a lot of stories about when he worked on the courthouse. He's wired other places, too. I have seen pictures of some of them. He is really proud when he shows me the pictures and tells me all the stories. He has a lot of pride in his work.

We'd be lost without electricity. I mean, think about it. It's hard to imagine getting through the day without it. When there's a blackout in a town or city, everything comes to a stop.

What happens if the lights go out in a hospital during an operation?

When I did my job shadow with the electrician, I liked the idea of doing work that everybody needs.

What interesting social, political, artistic, or historical issues do you know about or have you heard about the workplace?

What things would you like to change in your community? Could your experience at the workplace help you design or create something the community needs?

What do you think you will learn from the people at your workplace? What do you think you can teach them?

NWREL • CONNECTIONS: Linking Work and Learning

The first section of the planning guide, ***Developing a Proposal***, has three steps designed to help students brainstorm and filter through project ideas, choose a topic, and write a proposal describing the scope and purpose of the work. Students will eventually use the proposal to develop workplans.

- **Step 1: Getting an idea** is a series of questions to help students brainstorm project ideas. Students do not need to answer all the questions. They should choose the ones that interest them and use them as catalysts for ideas.

  Teachers and employer partners play an important role in this early stage of planning. Students should talk to people at school and the workplace using the questions in Step 1 to brainstorm possible project topics. To help students come up with an even richer array of ideas, encourage them to discuss

the questions with friends and family as well. Emphasize that brainstorming is an opportunity to let ideas flow freely, and caution them against prejudging or evaluating ideas that surface through their conversations.

Good ideas develop over time, so give students the chance to mull theirs over. As they reflect on what their project could be about, remind them to record their ideas in the planning guide using lists, webs, diagrams, pictures, or whatever other method they prefer.

Sometimes employer partners will have projects in mind for students. In such cases students should still complete this first step of the planning process. It is important for them to establish a sense of project ownership, even if the topic is predetermined. This brainstorming process can help them explore ways their interests complement those of the employer.

"I knew I wanted to do a video about kids and drugs for the hospital to use, but really I didn't have a clear direction. It took some time to think things through and figure out where I was going to take it. It helped talking to people and bouncing my ideas off them and hearing what they had to say."

—Student

- **Step 2: Choosing a topic** asks students to select an idea from their brainstorm in Step 1 to develop into a project proposal. It is important for students to choose a topic they feel invested in; otherwise, it may not sustain their interest. The topic should be broadly defined, describing the general direction the work will take. Students will capture the specific project details later in their workplans.

  After students choose a topic, they answer a series of follow-up questions that ask what they know about and expect to learn from their projects. These questions get students to begin thinking about the kinds of activities their projects will demand and the potential impact their work will have on the community.

- **Step 3: Writing a proposal** asks students to describe their projects in detail. Using a series of probe questions, students specify the goals of their projects and how they will achieve them, the skills they anticipate learning at school and the workplace, and the way the project will benefit others.

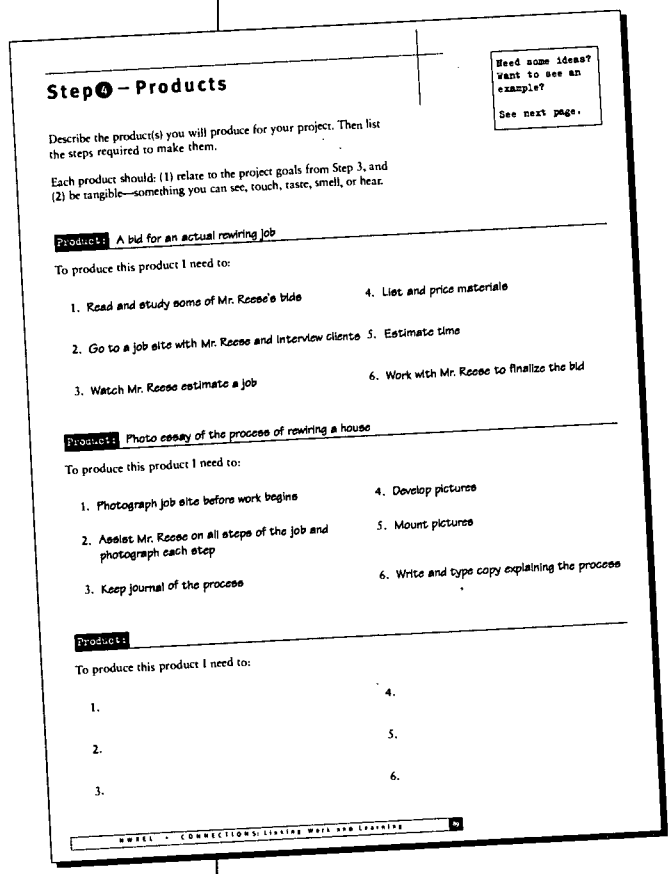
  It is a good idea to check with students and review their proposals before they begin planning specific activities. Because the proposal lays the foundation for the work a student will do for the next weeks or months, you want to be sure the purpose and scope of the project are clearly spelled out and doable.

The second section of the planning guide, ***Making a Workplan***, consists of eight steps designed to help students translate their proposed ideas into specific products and activities. In any planning process, once you have established *what* you are going to do, the next task is to determine *how* you are going to do it.

- Step 4: **Products** asks students to identify what they will produce through their projects. Students "plan backwards" by first identifying what they want to accomplish. The remaining steps in the workplan focus on how to make the products happen. Students should use their proposals (Step 3) as a guide in generating their list of products. Remind students that the purpose of the products is to help them realize their goals for the project.

  Only tangible items should be included as products—things you can see, hear, taste, touch, or smell. The acquisition of skills or knowledge—such as ability to improve English or the capacity to apply math—should not be listed. Products are the demonstration of these skills and knowledge—such as creating a slide presentation (by using English and communication skills) or designing a recycling station (by applying math). Once they have generated their list of products, students detail the steps required to produce them. Encourage students to be as specific as possible. The more detailed they are now, the easier it will be later to complete a timeline and calendar for the project.

  As you coach students in generating their product list, help them set realistic goals for what they will produce. Some students may create a list of products that would be impossible to complete given the available time and resources, while others may underestimate what is possible. There is no right number of products; a realistic list should take into consideration the complexity of each. For instance, one student might list a single product that



Step 4 – Products

Need some ideas? Want to see an example?

See next page.

Describe the product(s) you will produce for your project. Then list the steps required to make them.

Each product should: (1) relate to the project goals from Step 3, and (2) be tangible—something you can see, touch, taste, smell, or hear.

Product: A bid for an actual rewiring job

To produce this product I need to:

1. Read and study some of Mr. Reese's bids
2. Go to a job site with Mr. Reese and interview clients
3. Watch Mr. Reese estimate a job
4. List and price materials
5. Estimate time
6. Work with Mr. Reese to finalize the bid

Product: Photo essay of the process of rewiring a house

To produce this product I need to:

1. Photograph job site before work begins
2. Assist Mr. Reese on all steps of the job and photograph each step
3. Keep journal of the process
4. Develop pictures
5. Mount pictures
6. Write and type copy explaining the process

Product:

To produce this product I need to:

1.
2.
3.
4.
5.
6.

NWREL • CONNECTIONS: Linking Work and Learning 19

requires the entire project time to complete; another might list several less labor-intensive ones. At this point in the planning process, it may be difficult for students to anticipate all the factors that can hinder or enhance their ability to produce certain products. Encourage them to plan as thoughtfully as possible with the understanding that there will be opportunities to review and modify their product lists.

- **Step 5: Purposes** asks students to describe how they will use the products they list. By completing the sentence, "I will use my __(product)__ to __(purpose)__," students identify a practical application for the items they produce. Once they have identified a purpose for each product, students list the steps required to accomplish it. Purpose statements should be as specific as possible; the more detail students include, the easier it will be for them to complete a timeline and calendar for the project.

  As you work with students to complete purpose statements, each one should: (1) use an active verb, (2) designate a specific audience, and (3) highlight the intended impact of the product. Steer students away from passive or general language—such as "I will use my slide presentation to show to the chamber of commerce" or "I will use my recycling station to give to the bank." These statements are vague and lack a clear sense who the product is meant to serve and what its intended effect is. More active, purposeful statements would be, "I will use the slide presentation to demonstrate economic trends in the community to members of the chamber of commerce," or "I will use the recycling station to instruct bank employees on the environmental costs of wasting paper products." When students identify concrete purposes for their products they are often surprised to realize that there are important things they can do on their jobs and in the community. Step 5 helps students recognize that their projects have meaning in the real world.

- **Step 6: Resources** asks students to think about the research they will conduct, the people they will contact, and the materials they will use to complete their projects. It is important that students are realistic about what they can and cannot do based on the resources available to them. In Step 6

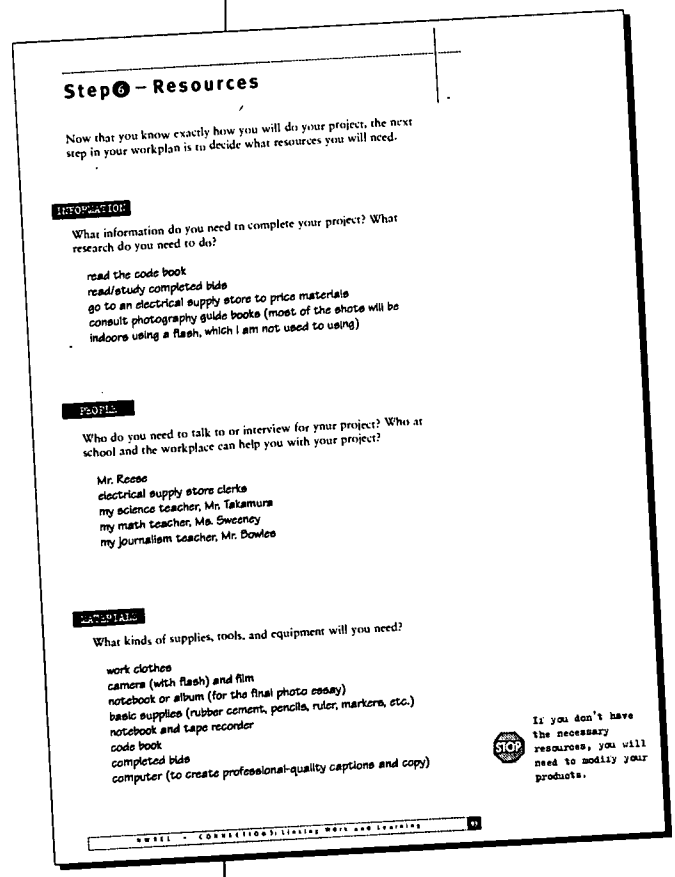
"What I really love is the feeling that I was beneficial. I have never really experienced that before—looking up on the screen and realizing that what's up there would be totally different if it weren't for my input. This was a tremendous thing for me."

—Student

students need to decide whether, given their resources, (1) it is possible to accomplish their products and purposes, and (2) it is possible to accomplish them in the manner they envision.

For example, a student may want to make a video showing the community's current economic situation and have it run continuously in the lobby of the chamber of commerce building. However, if production costs are too high and if fire codes prohibit using the lobby as a gallery, then neither the student's product nor purpose is possible. The student must revise the plan and come up with products and purposes that reflect limits on available resources. A slide presentation to members of the chamber of commerce might be more reasonable.

Even when students' products and purposes are reasonable, it is a good idea to discuss how they envision carrying out their plans. For example, imagine the student working on the presentation for the chamber of commerce wants to use new computer software to scan photographs and manipulate the images to create customized slides. To ensure that the greatest number of chamber members see the presentation, the student wants to deliver it during the chamber's annual meeting. These plans are exciting and ambitious; the question is, are they doable? For example, if there is not enough time for the student to learn how to use the necessary software or if the annual chamber meeting is reserved for discussing official business, then the student needs to rethink the workplan. In this instance there is no need to modify the product and purpose, only the way they are accomplished. For example, the student could take photographs of the community and duplicate existing ones from books and museums to use for slides without scanning and enhancing them. The presentation could be given during a regular chamber of commerce meeting. By making and distributing special flyers or invitations, the student might be able to attract most members to attend the meeting that day.



Step 6 – Resources

Now that you know exactly how you will do your project, the next step in your workplan is to decide what resources you will need.

INFORMATION

What information do you need to complete your project? What research do you need to do?

read the code book
read/study completed bids
go to an electrical supply store to price materials
consult photography guide books (most of the shots will be indoors using a flash, which I am not used to using)

PEOPLE

Who do you need to talk to or interview for your project? Who at school and the workplace can help you with your project?

Mr. Reese
electrical supply store clerks
my science teacher, Mr. Takamura
my math teacher, Ms. Sweeney
my journalism teacher, Mr. Bowles

MATERIALS

What kinds of supplies, tools, and equipment will you need?

work clothes
camera (with flash) and film
notebook or album (for the final photo essay)
basic supplies (rubber cement, pencils, ruler, markers, etc.)
notebook and tape recorder
code book
completed bids
computer (to create professional-quality captions and copy)

STOP If you don't have the necessary resources, you will need to modify your products.

NWREL • CONNECTIONS: Linking Work and Learning 21

integrate

Students might be disappointed if they have to revise the vision for their product(s). It is important to remind them that to realize their goals they must be both creative and flexible, striking a balance between what they want to do and what their resources will allow them to do.

- **Step 7: Connections** asks students to describe how their projects will link learning at school to learning at the workplace. Although students' interests are the catalyst for the planning process, the main purpose of the project is to integrate their experiences in the classroom with those at work.

  Encourage students to think creatively about how their academic classes relate to their projects. For example, a student making a paper recycling center for the bank could use math to calculate the cost-effectiveness of reusing resources, science to explain potential long-term effects of drastically reduced forests, social studies to explain public attitudes to change, history to research trends in wood products consumption, science to explain how post-consumer waste is processed, and art to design a practical and attractive recycling unit(s) that meets the needs of bank staff.

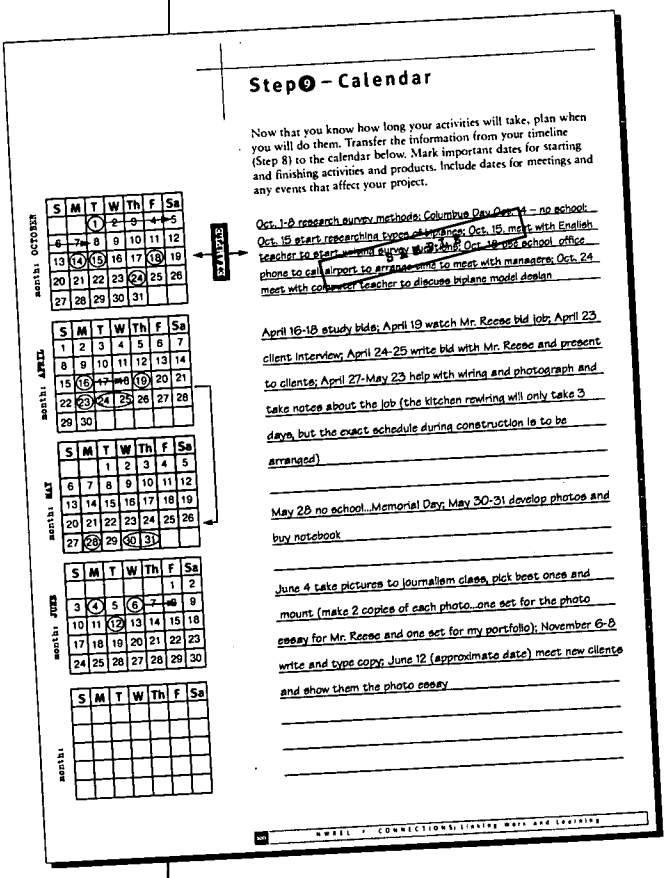
  To make connections between their project topics and the workplace, students should talk to their employer partners. With their familiarity with the workplace and industry, employers offer students a unique perspective on how school and work are linked. Students can also begin to understand these connections for themselves by using sources of information about the workplace such as annual reports, company newsletters, and journal articles, or tools like the *Learning Site Analysis Form*. (The *Learning Site Analysis Form* structures a conversation between school staff and employers regarding learning opportunities at the workplace. For an example of a completed LSAF, see page 29.)

- **Step 8: Timeline** asks students to calculate how much time is required to accomplish their products and purposes. Working from the list of activities they generated in Steps 4 and 5, students plot their activities on the timeline and estimate how long each will take. They then figure out the total time required to complete their projects. Do they have that much time? If not, they may need to modify their list of products and/or purposes.

"The project didn't really start coming together for me until rehearsals started. Then I began to get a picture of the feelings immigrants had. The work I did in English and history helped me organize my thoughts and direct them to my performance. I also began to notice the similar feelings between any group coming to a new land and I noticed the pattern of America's fear, and as a result, people's cruelty."

—Student

In creating a timeline, students must be realistic about the amount of time they allocate to each task, including planning it, doing it, and following-up on it. Eight weeks can seem like a long time to students, plenty of time to do everything they have to do for the project. But how much of that eight weeks will be devoted to work in other classes, holidays, sick days, extracurricular activities, part-time jobs? Stress the importance of realistically calculating the amount of "project time" within a given period.



- Step 9: **Calendar** asks students to transpose the two timelines from the previous step onto a 12-month calendar. By combining the two timelines here, students can track when tasks for products are happening simultaneously and predict busy periods and lulls in their project work. Encourage students to include on their calendars other important items—such as tests in other classes, team sports, special family events—so they can create as complete a picture as possible of how their project work will fit in with the other obligations in their lives.

  Review the calendar with students to troubleshoot time periods that are congested with activity. Suggest that students shuffle tasks to avoid bottlenecks. It is also a good idea for students to schedule times on the calendar when they will check in with you, other teachers, and their employer partners. Regularly scheduled meetings can help students avoid missing deadlines, which can send their projects snowballing out of control. Students will need this time-management skill throughout their lives.

- Step 10: **Assessment** requires that you and the student discuss how the project will be assessed so the student can receive proper credit for the work. A myriad of assessment methods are available and it is important that you agree on the one(s) that will be used for the project. Keep in mind that an integrated workplace learning project is not just something a student does in addition to "real" classwork, but another way of exploring course content and acquiring skills and knowledge. Therefore, students should receive credit based on criteria you negotiate with them.

Being included in the discussion of assessment is a valuable learning experience for students. Part of the purpose of the project is for students to take more responsibility for their learning. For students to have a true sense of ownership for what they learn, they should be a part of the discussion of how their project will be assessed.

- **Step 11: Learning agreement** is the last step in the project planning process. Now that the plan is complete, the three partners who will be involved in the implementation of the work—student, employer, and teacher—need to sign an agreement acknowledging their individual roles and responsibilities.

"From my perspective grading was a truly pleasurable experience because of the variety of projects turned in and how high quality they were. Grading was not time consuming because of the guidelines for planning the work and because many projects were completed by groups. The scoring guides I created with input from the students made grading extremely clear."

—Teacher

integrated workplace
learning project

sample projects

Shannon Bryant is a high school senior with a part-time, after-school job at a local fast-food restaurant. Shannon was interested in doing a senior project, but she didn't think she had the time. At Shannon's school senior projects allow students to explore a topic of interest in depth by working with their teachers and employers in the community. Shannon, whose favorite subjects are science and math, wanted to volunteer at the women's health clinic to better understand the latest advances in detecting breast cancer. But Shannon didn't think she would be able to keep her job, stay up on her school work, *and* take on the project.

Because balancing responsibilities was important, Shannon's biology teacher, Ms. Thatcher, suggested Shannon do a project that involved her current job. That way Shannon would not have to spend time making contacts, getting familiar with a new setting, or traveling across town. Shannon agreed that with a few extra hours each week at her job she probably could complete a project, but she didn't think anything interesting related to science happened at the restaurant.

To help Shannon get some ideas, Ms. Thatcher completed a *Learning Site Analysis Form** with the shift manager of the restaurant. A *Learning Site Analysis Form* consists of a series of questions that structure a conversation between school staff and employers to identify learning opportunities at a workplace. Ms. Thatcher found out about a variety of academic, technical, and employability skills required at the restaurant. Reviewing the form, Shannon came up with an idea for a senior project that really interested her.

The following pages include the *Learning Site Analysis Form* completed by Ms. Thatcher as well as the project Shannon did related to food, nutrition, and health.

Note to the reader:

The master *Student Planning Guide* (following page 117) that your students will use includes examples to help them complete it. These examples are included on the following pages but are marked with the word SAMPLE so you can distinguish them from the project completed by Shannon Bryant.

* For more information on the *Learning Site Analysis Form*, see the inside back cover of this guide.

A

analyze

Learning Site Analysis Form

P.J. Rosen
Workplace contact

Restaurant Manager
Title

Fancy Fries Restaurant
Organization

Anywhere U.S.A.
Address

###-####
Phone

Pam Thatcher
School contact

October 10
Date

CONNECTIONS
LINKING WORK AND LEARNING

30

Tips for completing the Learning Site Analysis Form

The purpose of the *Learning Site Analysis Form (LSAF)* is to identify opportunities for students to learn at a workplace and to connect that experience with learning in school.

The *LSAF* is designed to facilitate a conversation between you (a teacher or other school staff member) and the employer or employee who will be working directly with students. Through the conversation you will gain a broad understanding of how and under what conditions that person does his or her job. And together you will begin to explore different ways students can become active learners both inside and outside the classroom.

Following are tips for making the *LSAF* process go smoothly:

- Let the employer or employee see a copy of the *LSAF* before your scheduled conversation. It will save time if he or she knows what kinds of questions to expect.
- Specify how much time you will need for the meeting before you begin.
- Explain the purpose of the *LSAF,* briefly describing the benefits of students learning at the workplace.
- Before asking questions, read to the employer the directions at the beginning of each section.
- Use the examples and cue words in the margins as prompts to help the conversation run smoothly.
- Remember, this is a conversation. It is a chance to meet new people in your community and exchange ideas about new ways for students to learn.

Part 1 — Your Job

Directions: The purpose of these questions is to paint a detailed picture of the skills and activities associated with the job.

1) Describe your work environment.

✔ FOR EXAMPLE:

- physical layout
- work atmosphere
- dress code
- number of staff
- stress level

We have 25 employees. There are usually four of us on the breakfast shift, 10 at lunch, and five or six at dinner. We all wear uniforms.

As far as the relationship between staff and guest, it's real comfortable. Many of our customers are "regulars" and we're on a first-name basis...we talk to them about their work, their family. As far as the staff, most of us get along pretty well. But we know when we're at work, it's work. And when we're off work, then it can get social.

There is always something to do around here. Help customers, wash dishes, check the dining area...the workplace is very demanding.

2) What is a typical day at work like?

PROBE QUESTIONS:

- What hours do you work?
- What kinds of tasks do you do on a daily basis?
- What kinds of decisions do you make regularly?
- Whom do you interact with on most days?
- Do you generally deal more with people or equipment?
- Do you work independently or as part of a team?
- Can you usually work uninterrupted by meetings, phone calls, or emergencies?
- What is the "rhythm" of your day? When are things busy and when do they slow down?

I usually put in 11 to 12 hours a day. That includes phone calls and the times I have to go back in to solve a problem. I interact mostly with people...both the public and my employees. I handle customer complaints and monitor the employees' performance while on shift. It's my job to make sure a worker is doing the job he or she is best suited to do.

Other things I do during a typical day include making sure employees follow safe food-handling practices and sanitation. This means I'm always checking pots and pans to see if they are properly cleaned before reuse and checking food to make sure it is used by the expiration date. I'm also responsible for scheduling employees and ordering food.

Team structure is extremely important around here, but I still make a lot of independent decisions. I have to be detail-oriented, yet flexible...the job is filled with constant interruptions.

A

analyze

Your Job cont.

3) What are the five most important responsibilities of your job?

Managing food costs

Managing labor (both the costs and behavior of employees)

Speed/quality of service

Bookkeeping (expenses, bank deposits, employee benefits)

Overseeing quality of the food

✔ FOR EXAMPLE:

- using tools (e.g., drill, microscope, camera)
- using information (e.g., data analysis, teaching)
- using technology (e.g., software design, word processing)

4) What technical skills do you need to do your job?

- Basic computer skills to take customers' orders, order food/supplies and track those costs
- Skills to operate food-service equipment (slicer, steamer, fryer, grill)
- Information-processing skills to analyze food costs, and interpret health and safety materials

✔ FOR EXAMPLE:

- listening to customers
- being a team player
- resolving conflict
- communicating clearly
- working with diverse people
- teaching others

5) What interpersonal skills do you need to do your job?

Customer-service skills are a must! When I'm dealing with customers it's three-parts listening to one-part negotiation. It's also a similar thing when I resolve conflicts between employees: listen, negotiate. I have to work with diversity, too, in my crew and with my customers. I also have to have teaching skills to train others in store policy and procedures, and how to use equipment.

✔ FOR EXAMPLE:

- helping others
- adapting to change
- allocating resources
- thinking creatively
- taking a leadership role
- improving systems
- time management
- supervising other people

6) What additional skills and/or personal qualities does your job require?

People skills/patience/dedication/adapting to change/dealing with prejudice/troubleshooting.

It's critical that I stay on top of things, and be willing to go the extra mile. If someone returns with a bag of food in their hand, I know there's a problem. I approach them first and smile. The whole time I'm thinking, "I know I can make this right."

Your Job cont.

7) How did you acquire the skills you just identified?

When I was in high school I worked part time in a fast-food restaurant after school. Back then it was just a job, but I guess it gave me a lot of background for what I'm doing now. I would also have to say I acquired skills through on-the-job training, safety classes, and definitely observation. Many of the skills I have were self-taught as well. But that really takes self-motivation, not to mention time. When you're trying to improve yourself...it's constant looking, listening, thinking.

✔ FOR EXAMPLE:

- college courses
- on-the-job training
- self-taught
- apprenticeship
- professional development
- trade journals
- observation
- vendor workshops

8) How could you help a student learn and practice the skills you identified as important to your job in questions #4 through #6?

A student could greet customers or take orders to practice customer service. Another big part of customer service is dealing with difficult customers. It wouldn't be right for a student to handle that kind of situation without proper training, but he or she could observe how we resolve such problems, and then maybe suggest alternative solutions. A student could work on teamwork skills by interacting with other employees. There are also some machines, like the register, that a student could learn to operate to pick up some of the technical skills.

PROBE QUESTIONS:

- A student cannot do your job, but what tasks (e.g., data entry, research, drafting a memo) could he or she do to help you in your work?
- What hands-on activities could a student do to get a flavor for your job?

9) Describe a recent problem on the job and how you solved it.

There was a customer with a complaint. It wasn't someone I had served, but I still had to handle it. The customer came through the drive-through and ordered 10 tacos. She then came into the store and said she paid for 16 but only received 10. She demanded a refund, and since her tacos were cold by that point, she also wanted 16 new tacos. Her receipt showed she paid for 10, but I refunded her money and remade the order for free (16 tacos). Around here "the customer is always right."

This type of thing happens about twice a month. I documented the incident while the situation was still fresh in my mind, because I didn't want it to appear to my managers that the employees were stealing.

PROBE QUESTIONS:

- How did you discover the problem?
- How did you handle it?
- Who else was involved in solving the problem?
- What was the outcome?
- How will you ensure the problem does not recur?

A

analyze

Your Job cont.

PROBE QUESTIONS:

- Is your job harder if other people don't do their jobs well?
- Do other people rely on your doing your work well?

10) How is your work interdependent with that of others in your organization?

My staff relies on me to supervise during peak hours so things run smoothly. I keep my eyes open to make sure safe food-handling procedures are being observed and I'm the one that "rights" the orders that turned out wrong.

My success is dependent on the efficiency of each member of the crew. One weak link makes it hard for everyone else, especially me.

✔ FOR EXAMPLE:

- customer opinions
- stock market trends
- world news
- new technologies
- sales figures

11) What kinds of information do you need to use, analyze, and/or stay up-to-date on to do your job effectively?

Oh, there are tons of laws I need to stay up-to-date on...food safety laws, child labor laws, immigration laws, corporate policy. And every month we do promotions, so I need to review and analyze employee performance evaluations. There are also the day-to-day issues I need to keep up on, like employees' personal safety, and making sure policies related to that are enforced.

✔ FOR EXAMPLE:

- resolving an issue in your field or business
- using different equipment
- rethinking a process
- getting more training

12) What would improve the efficiency of your job?

I would have to say developing and maintaining a "team" atmosphere. Right now we don't have regular meetings for staff...I think having meetings would definitely improve the efficiency.

A lot of young people who come to work in fast-food restaurants don't really know how to work hard. That hurts, at least slows down, business.

✔ FOR EXAMPLE:

- new technology introduced
- more education required
- new skills necessary
- greater competition in worldwide marketplace
- more opportunities with an expanded demand for products and services

13) How do you think your job will change over the next 10 years? Why?

I think everything will be more computerized and automated. For instance, now we don't "cook" food anymore, we "steam" it. In 10 years I don't think we'll even have knives in the kitchen... machines will chop vegetables.

Part 2 — The Workplace

A

analyze

Directions: The purpose of these questions is to find out about the workplace environment.

14) What are the health and safety issues at the workplace?

There is no smoking, we don't drug test, and child labor laws do apply. We wear uniforms and safety shoes. We have to wear hair restraints...only one ring per finger...you can only wear one pair of stud earrings...you have to use a band-aid from our first-aid kit for any kind of cut. There are lots of restrictions!

As far as safety, safe food handling is a big consideration. Making sure employees are using safe food-handling practices takes up a large part of my time. We really stress hand-washing around here. There are signs everywhere and we even have a video about it.

✔ FOR EXAMPLE:

- smoking policy
- drug testing
- labor law age restrictions
- special clothes (smock, uniform, safety shoes)
- special gear (gloves, goggles, hard hat)

15) What technology and special tools are used by you and others at the workplace?

cash register	heating cabinet
food timer	microwave oven
refrigerator/freezer	equipment monitor
heating & steam cabinets	
ten-key	
tomato slicer	

✔ FOR EXAMPLE:

- computers
- hand tools
- lasers
- scales
- fax machines
- marker boards/flip charts
- cellular phones
- photocopiers
- medical instruments
- calculators

16) What written materials are used at the workplace?

food order	orientation package
day-off request	
safety manual	
food prep guide	

All written materials are in both English and Spanish.

✔ FOR EXAMPLE:

- purchase orders
- contracts
- bilingual dictionaries
- maps
- training manuals
- equipment specifications
- federal, state, or local rules and regulations
- directories

The Workplace cont.

PROBE QUESTIONS:

- Who makes decisions about goals and does strategic planning?
- How are resources (e.g., time, money, materials) allocated?
- How are front-line workers involved in decisionmaking?
- How are workers' performances assessed?

17) How is the workplace managed to ensure that it is productive and financially sound?

The market managers set goals and do planning for the region. Then the general managers and the assistant managers carry out those plans. The front-line people really aren't involved in decisionmaking...it's a top-down thing.

It is the front-line workers' responsibility to make sure customers are happy and that they come back...so, I guess that helps to make sure the company is productive and makes money.

PROBE QUESTIONS:

- How does the workplace affect the local economy?
- What zoning laws apply?
- What environmental factors determine how the workplace operates?
- What civic activities is the workplace involved in?

18) What impact does the workplace have on the local and global communities?

Well, for starters, our company provides jobs for teenagers in the community. We also give charitable contributions. For instance, we'll provide free lunches to kids who come downtown for a field trip or we'll provide free food cards to non-profits who are fundraising.

Our company is worldwide, so I guess that means we influence eating habits everywhere.

Part 3 — Learning on Site

A

analyze

Directions: The purpose of these questions is to brainstorm ideas about the ways students can acquire and/or enhance job-related and academic skills at the workplace.

19) What academic skills do you need to do your job?

- Math to manage the budget and make projections
- Science skills regarding food safety (managing proper temperatures, disease prevention, and recognizing symptoms, etc.)
- English and Spanish for communication with customers and employees, reading workplace materials, writing orders by hand when the computer system goes down
- Geography for giving customers directions

✔ FOR EXAMPLE:

- English to write memos
- math to manage budgets
- chemistry to do lab tests
- geography to create maps

20) What are at least three ways a student could learn or apply mathematics at the workplace?

A student could:

- Count out proper change for a customer
- Do percentage discount on purchases
- Balance out the till
- Determine food quantities needed for peak periods
- Estimate costs for starting a new franchise across town

PROBE QUESTIONS:

- In what ways are basic computation (addition, subtraction, multiplication) and numerical concepts (fractions, decimals, percentages) a part of your job or the jobs of others at the workplace?
- Could a student use math skills to do tasks such as estimate, prepare graphs, help with inventory?

A

analyze

Learning on Site cont.

✔ FOR EXAMPLE:

- composing memos or letters
- editing documents
- public speaking
- synthesizing data
- greeting customers
- taking messages

21) What are at least three ways a student could learn or apply communication skills at the workplace?

A student could:

- Greet customers
- Take an order and communicate it to the cook
- Learn how to deal effectively with difficult customers
- Observe conflict resolutions between employees
- Write a memo to staff about the holiday schedule

✔ FOR EXAMPLE:

- A student at a veterinarian's office might investigate the effects of pet ownership on a person's health and sense of well-being.
- At a computer software design firm a student could research the impact of electronic communication on the printing industry.
- At a dairy farm a student might research the the impact health trends have had on milk consumption.
- At a carpentry shop a student could investigate how world markets are changing lumber specifications.

22) What are at least three ways a student could explore social issues at the workplace to understand important aspects of your job or industry?

A student could:

- Explore company history through our training manual and videotapes
- Investigate how people's lifestyles (working more, single parenting) influence how much fast food they consume
- Investigate if and how the American health-food craze has had an impact on the fast-food industry

Learning on Site cont.

23) What are at least three ways a student could learn or apply scientific principles or concepts underlying your work?

A student could:

- Study for and obtain a food-handler's card
- Explore food temperature/safety issues (fungus that can grow on food, E.coli, etc.)
- Investigate fat/protein/salt content of food in relation to what is healthy
- Study food poisoning issues/prevention/cure

✔ FOR EXAMPLE:

- A student at an office could study the health risks of prolonged use of computer keyboards.
- At an auto repair shop a student could examine car construction to establish which features are needed to protect passengers in side-impact accidents.
- A student at a fast-food restaurant could explore the chemical processes of the body that break down and store fat.

24) What opportunities are there for students to contribute to a creative or artistic process or product at the workplace?

They could come up with a promotional deal or design a child play area.

✔ FOR EXAMPLE:

- In a retail store a student could examine how presentation and lighting affect people's interest in shopping.
- At a day care center, a student could help produce a newsletter to parents.
- A student at a parts manufacturer could help create overheads for a presentation to potential clients.

A

analyze

Learning on Site cont.

✔ FOR EXAMPLE:

- In a doctor's office, where there is frequent turnover in receptionists, a student could develop a training manual to orient new staff to the computer and record-keeping system.
- At a bakery, a student could organize and oversee the donation of day-old bread and pastries to local homeless shelters.
- At a bookstore, a student could design and produce a flyer announcing a new lecture series.

25) If a student were at your workplace to help you, what kinds of projects could you involve him or her in?

A student could analyze the nutritional value of the menu items to determine which ones could be approved to wear the American Heart Association's healthy food symbol. They could then submit a proposal to the American Heart Association for the selected item to be approved.

A student could research E.coli causes and cures.

A student could research the history of franchises and write a flyer for people who are interested in starting one. People often walk in the door and ask about it and I don't have any information to give them.

Notes...

P.J. has worked at the restaurant for six years and began as a "crew person."

The LSAF was completed on very short notice at the restaurant. There were a couple of interruptions because we did the LSAF at the end of a rush.

NWREL
Education & Work Program
101 SW Main Street, Suite 500
Portland, OR 97204

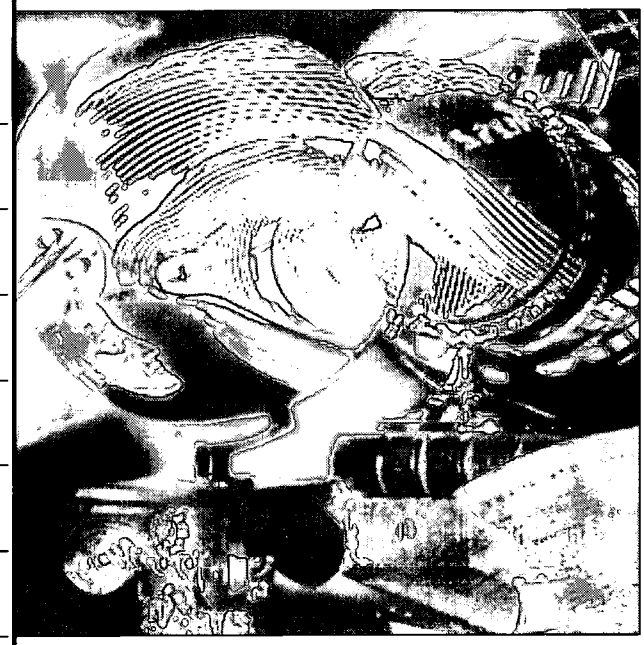
Phone: 503/275-9500
800/547-6339
Fax: 503/275-0443

Internet: http://www.nwrel.org

integrate

Integrated Workplace Learning Project

Student Planning Guide



LIGHTEN UP
Project title

Shannon Bryant
Student(s)

Ms. Thatcher, Ms. Davis, Mr. Diaz
Teacher(s)

P.J. Rosen
Employer/Employee(s)

Fancy Fries Restaurant
Workplace

September 30
Start date

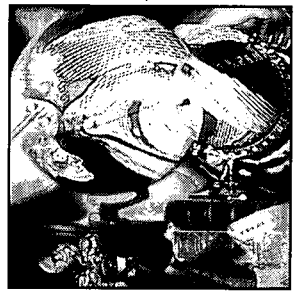
December 13
End date

CONNECTIONS
LINKING WORK AND LEARNING

44

What is this?

Are you getting ready to do an internship at a workplace and you aren't sure what to do when you get there? Would you like to get credit for the skills you use at your part-time job? In school, do you ever ask yourself "Why do I have to learn this?" If you answered "yes" to any of these questions, this planning guide is for you.



This guide helps you plan a project that connects your interests, what you do in school, and what is going on at a job in your community. Why do a project? Well, it's fun. It's challerging. It gets you out of the classroom to see how things work in the real world. It helps you use the skills you have and learn new ones. Projects also prepare you for the future by giving you the chance to learn and use skills and knowledge you need for college and careers.

Before you can start a project, you have to plan what you are going to do. That's what this guide is for. Working with one or several teachers, an employer or employee at the workplace, and possibly other students, you will use this guide to outline a project. Through your project you can produce things like videos, posters, models, reports, interview surveys, or plays. Then you take what you make and present it to teachers, employers, students, and members of the community to demonstrate what you have learned and teach other people new things.

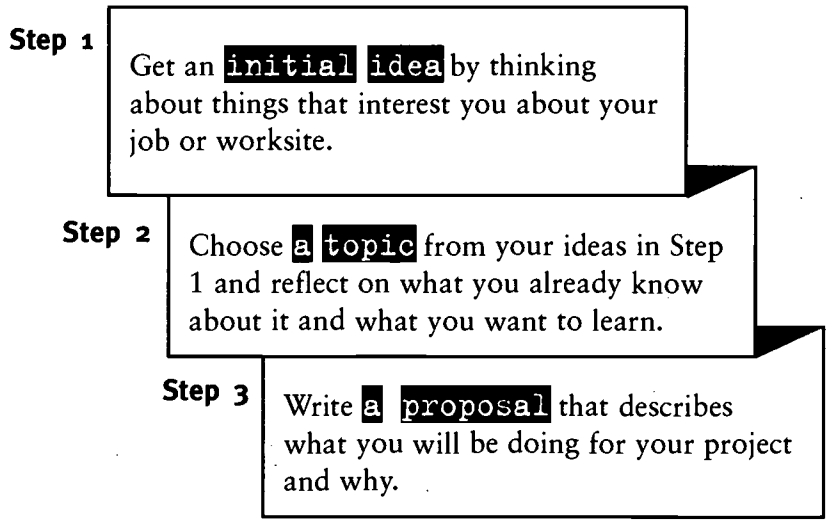
The purpose of projects is to help you learn skills that you will use for the rest of your life. But they are also meant to be enjoyable.

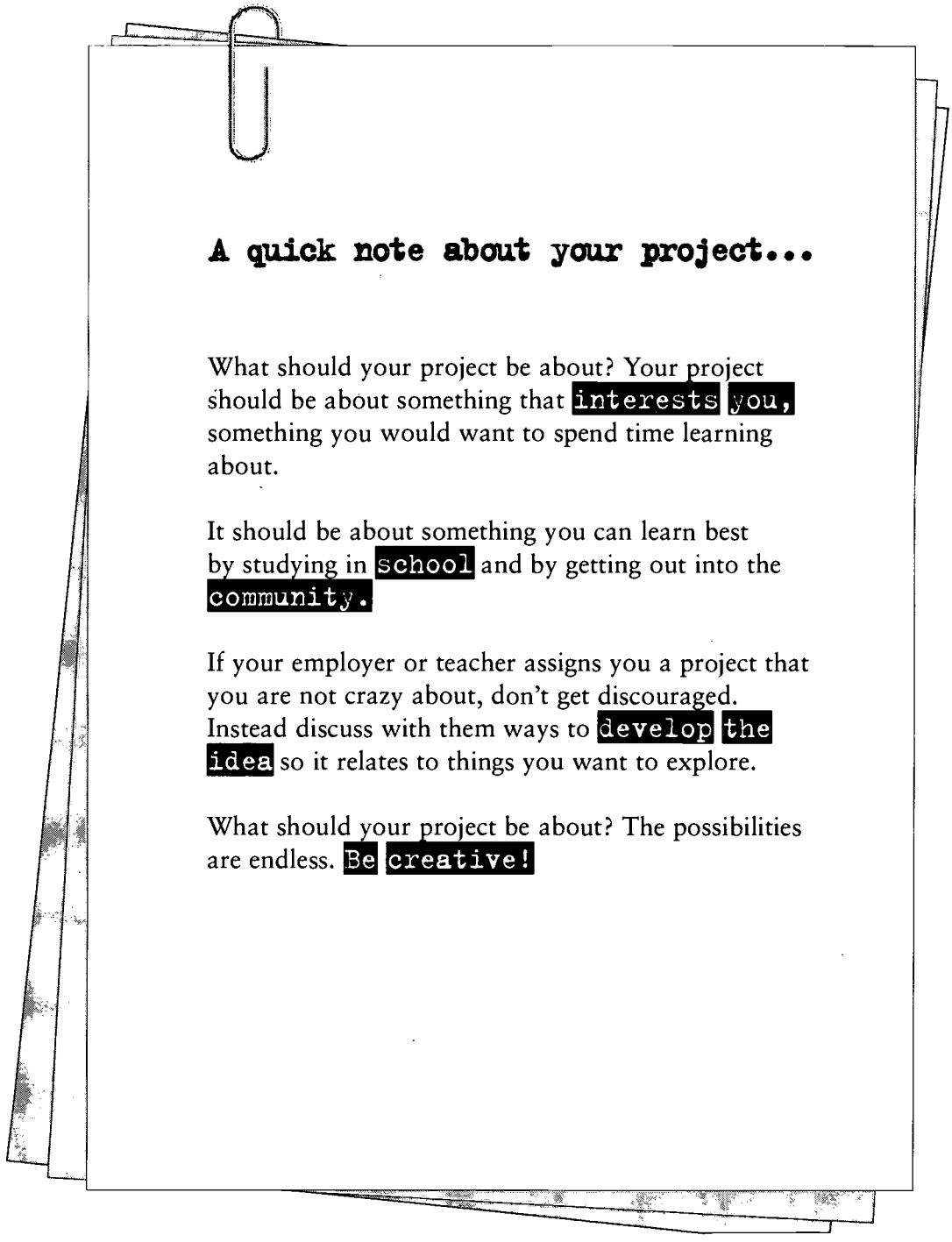
So, work hard and have fun!

Part One—
Developing a Proposal

A proposal describes what you want to do for your project and why you want to do it.

Developing a proposal requires thinking, more thinking, and rethinking. These steps will help you come up with an idea for your project:





A quick note about your project...

What should your project be about? Your project should be about something that interests you, something you would want to spend time learning about.

It should be about something you can learn best by studying in school and by getting out into the community.

If your employer or teacher assigns you a project that you are not crazy about, don't get discouraged. Instead discuss with them ways to develop the idea so it relates to things you want to explore.

What should your project be about? The possibilities are endless. Be creative!

Step 1 – Getting an idea

The first step in developing your proposal is to come up with an idea for your project.

In the blank space below, and on the back, jot down—using words, pictures, or diagrams—project ideas related to your workplace.

The questions in the margins are to help you brainstorm ideas. You don't need to answer them all, but think about them and discuss them with employers, teachers, friends, and family. Keep track of any project ideas that are interesting to you—even if they seem silly at first.

I work at Fancy Fries, a fast-food restaurant. Our customers often come in asking if any of our food is low in fat or sodium. I never know what to say, and neither do the other workers.

A lot of my friends like fast food because it is quick and easy. Some of them talk about going on diets, but I don't think they know much about what they are eating.

Sometimes it amazes me how many people eat fast food. During some of my shifts we get so busy. And we aren't the only restaurant in town. I bet they are all packed like we are at lunch and dinner times.

Compared to what's in the cafeteria at school, fast food tastes much better.

What did people do before fast food? How did it get to be so popular? I wonder how long it will stay that way?

I wonder how healthy the people in my community are?

What interesting social, political, artistic, or historical issues do you know about or have you heard about the workplace?

What things would you like to change in your community? Could your experience at the workplace help you design or create something the community needs?

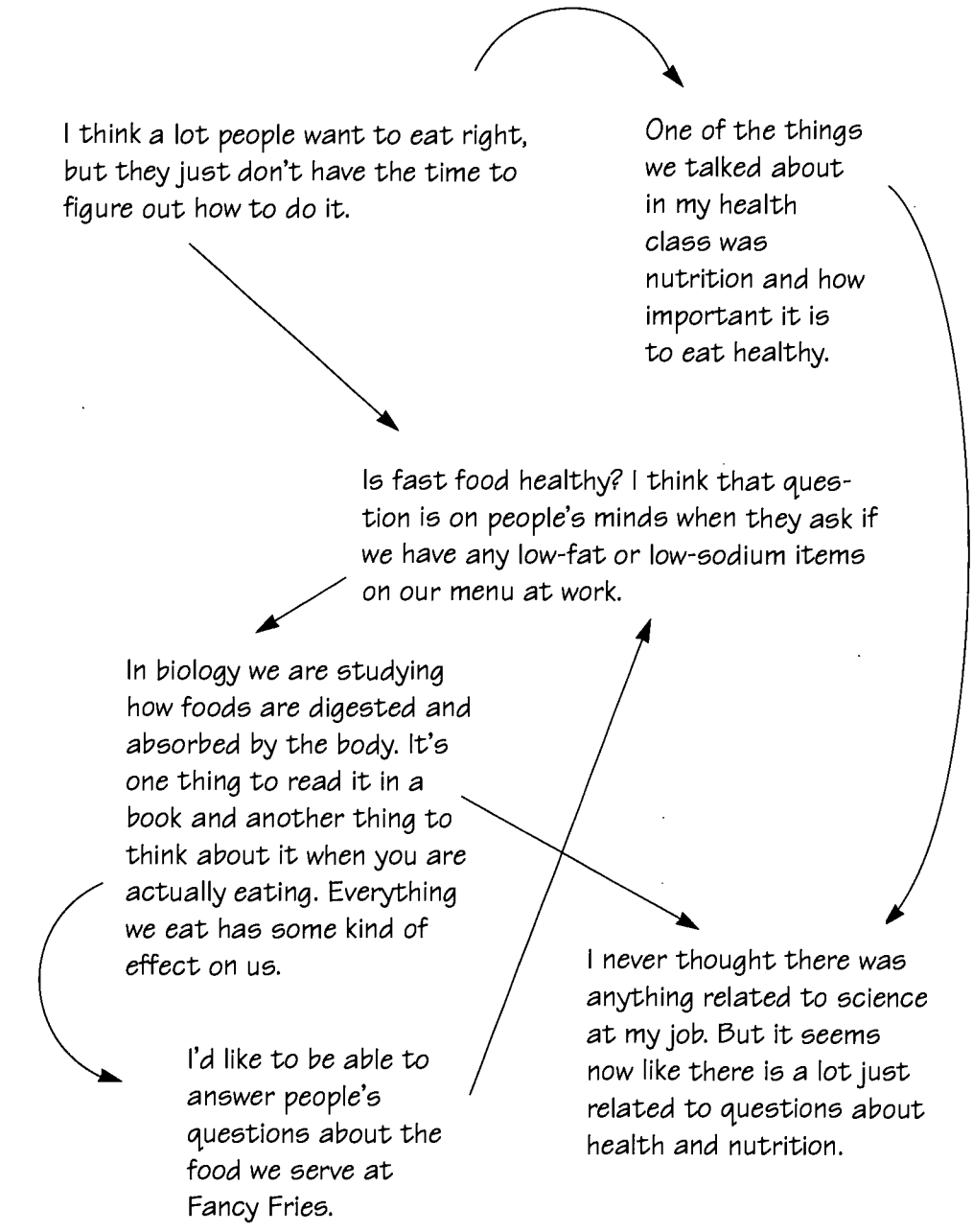
What do you think you will learn from the people at your workplace? What do you think you can teach them?

Step 1 – Getting an idea...cont.

How could you use skills you have now—like being a team captain, sculpting, or public speaking—to contribute to activities at the workplace?

Are there things you think people at the workplace need to know about—like AIDS prevention, recycling, gang violence—that you could teach them?

Is there an issue that has special, personal meaning for you that you think you could address through a project at the workplace?



STOP

As you think about your project ideas, consider whether you would want to work on your project alone or with a team of other students.

Step 2 – Choosing a topic

Your next step is to choose a topic for your project. Looking back at your ideas from Step 1, choose one that you would like to explore.

If you haven't already, discuss your topic with your teacher and the employer with whom you will be working to make sure it is doable.

The topic of my project is: Identifying healthy foods at my workplace, Fancy Fries Restaurant

Why did you choose this topic?

Customers at my job are always asking about healthy food. If I could learn more about this my co-workers and I could respond to their questions better. Plus, I think a lot of kids my age eat a lot of fast-food and I wonder if that is the healthiest choice all the time because we are still growing.

What do you already know about your topic?

I know some foods are healthier than others and that you shouldn't eat too much of any one thing. I know the ingredients of the foods we prepare fresh at the restaurant—like salsa and salads. I can find out the ingredients of other foods we don't make fresh—like rolls, sauces, and salad dressings.

What do you want to learn about your topic?

I want to learn what it means for something to be called "healthy." I want to learn the fat, salt, and nutrient contents of the items on our menu. I want to compare the food at my job to the current recommendations for diet.

How can this topic combine learning at school with learning at the workplace?

Biology and health classes to understand the effects of fat and sodium on the body. Math to calculate the fat grams and milligrams of sodium, and to create nutrient-content tables. English to write a flyer about my findings.

Step❸ – Writing a proposal

Congratulations! You are now ready to write a proposal. Your proposal will include:

- The title of your project
- The goals of your project
- The skills and information you will learn at school and the workplace
- The way your project will benefit the community
- The timeframe for your project
- The partners involved with your project

Title What will you call your project? (Can you think of a catchy title?)

LIGHTEN UP

Goal(s) List the goals for your project.

1. I want to know what the standards are for calling something healthy.
2. I want to learn how to compute sodium and fat contents of foods.
3. I want to be able to tell customers and friends at school just what they are eating.
4. I want to make a flyer that tells people about good food choices at Fancy Fries and in general.

Skills and Information Describe the skills and types of information you want to learn. Indicate if you think you will learn them at the school or at the workplace.

- At school I want to learn: (1) about nutrition in my biology and health classes; (2) how to write formulas to calculate fat, sodium, and nutrient contents of different foods; and (3) how to design a flyer on the computer
- At work I want to learn: (1) the ingredients for the foods we serve; and (2) how to teach co-workers and customers about healthy options at the restaurant

Step 3 – Writing a proposal...cont.

Benefits Who in the community will benefit from your project? How will they benefit?

I think the biggest benefit will be to the customers at my restaurant and my friends at school. People seem to want to know how to eat better. The information I gather and put in the flyer will give them some ideas on how to do just that.

Timeframe

Project start date: September 30 Project end date: December 13

Partners

List the names of the teachers you will work with and their subject areas:

Ms. Thatcher (science) Ms. Davis (health)

Mr. Diaz (math)

List the names of the employers/employees you will work with:

P.J. Rosen (Fancy Fries Manager)

List the names of the other students (if any) you will work with:

none

Part Two—
Making a Workplan

A workplan explains exactly how you are going to do what you described in your project proposal.

These steps will help you develop your workplan:

Step 4 Create a list of **products** you will produce and describe how you will do it.

Step 5 List the **purposes** of each product and how you will make your products useful in the real world.

Step 6 Create a list of **resources** (including people, supplies, and research) you will need for your project.

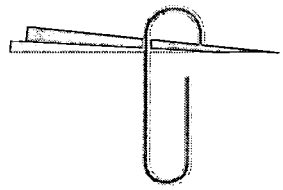
Step 7 Describe the **connections** your project will have with what you learn at school and the workplace.

Step 8 Make a **timeline** showing how long it will take you to complete your products and put them to use.

Step 9 Transfer your timeline to a **calendar** so you can keep track of your progress on your project.

Step 10 Negotiate the **assessment** method for evaluating your project.

Step 11 Sign a **learning agreement** that includes your roles and responsibilities and those of teacher(s), employer(s).



A quick note about the examples you see in Part Two...

The examples in Part Two are based on a project a student did during an internship at a small airport. The project, titled "From the Air," focused on how the airport's plans to expand its facilities and increase the number of flights would affect the community. Interested in becoming a pilot, the student also wanted to research the specifications of different kinds of biplanes.

The student's goals for the project were to understand community sentiments about the new airport, make the airport planning committee aware of these views, and learn more about aviation in general.

Step 4 – Products

Need some ideas? Want to see an example?

See next page.

Describe the product(s) you will produce for your project. Then list the steps required to make them.

Each product should: (1) relate to the project goals from Step 3, and (2) be tangible—something you can see, touch, taste, smell, or hear.

Product: Flyer on healthy eating habits, focusing on items from the restaurant where I work

To produce this product I need to:

1. Research information on healthy eating and eating trends
2. Choose 10 Fancy Fries menu items to analyze
3. Collect ingredient lists
4. Analyze the 10 food items
5. Design a flyer summarizing my research and analysis of the food
6. Meet with Ms. Davis to discuss the flyer and make arrangements for printing it

Product: Presentation on healthy eating

To produce this product I need to:

1. Find pictures of clogged arteries, healthy hearts, etc., and photograph them for slides
2. Outline main points of the presentation using the flyer as a guide
3. Review my slides and presentation outline with my biology and health teachers
4. Practice giving the presentation
5. Make the presentation
6.

Product:

To produce this product I need to:

1.
2.
3.
4.
5.
6.

EXAMPLE

Product: Public opinion survey on noise pollution

To produce this product I need to:

1. Research survey methods
2. Write survey questions
3. Pilot test the survey
4. Choose a group of people
5. Conduct the survey
6. Analyze the results

Product: Model biplane

To produce this product I need to:

1. Research biplane types
2. Design a unique model using a computer-aided drafting program at school
3. Discuss the design with a local FAA official
4. Buy building supplies
5. Build the model according to the computer design
6.

Can't think of any products to do for your project? Here are some ideas:

screenplay	slogan	transparencies
scale model	cake	editorial essay
interview	research report	dance
book	survey	debate
petition	collage	painting
advertisement	banner	catalog
diorama	mural	sculpture
map with legend	pamphlet	fable
music	greeting card	video
totem pole	slide show	posters
animation	logo	poem
speech	computer program	experiment

And these are just a few!

Step 5 – Purposes

Need some ideas? Want to see an example?

See next page.

There is no point in making products unless they have a purpose.

Describe each product's purpose and what you will do to accomplish it.

I will use my flyer **(product)** **to** tell co-workers about healthy items at Fancy Fries. **(purpose)**

To accomplish this purpose I need to:

1. Meet with the restaurant manager to explain the flyer and plan a presentation at a staff meeting
2. Distribute copies of the flyer to co-workers
3. Coach co-workers on answering customer questions when they have questions about menu items
4.
5.
6.

I will use my presentation **(product)** **to** inform students about healthy eating habits. **(purpose)**

To accomplish this purpose I need to:

1. Meet with the school principal to get permission to give my presentation at a school assembly
2. Make posters to interest students in the assembly
3. Put an announcement in the school bulletin
4. Make arrangements (date, time, equipment, place) for presentation
5. Find a student in the media center to help with the A/V equipment
6.

I will use my _____ **(product)** **to** _____ **(purpose)**

To accomplish this purpose I need to:

1.
2.
3.
4.
5.
6.

EXAMPLE

I will use my public opinion survey (product) to inform the airport planning managers what the public wants. (purpose)

To accomplish this purpose I need to:

1. Schedule a time to meet with all the managers
2. Prepare an agenda
3. Make transparencies highlighting key findings
4. Reserve a room and overhead projector
5. Give the presentation
6.

I will use my model biplane (product) to teach an elementary class about how planes fly. (purpose)

To accomplish this purpose I need to:

1. Recruit an elementary class
2. Discuss ideas with the teacher
3. Prepare a fun lesson on flying using the model
4. Teach the class
5.
6.

Here are some ideas for purposes of products:

give an artistic performance of...
make a presentation about...
teach a class on...
solve a problem regarding...
share information about...
analyze a situation for the purpose of...
organize an event to...
communicate the message that...
raise funds for...
supervise an activity to...
respond to the need for...
report on an issue in order to...
increase awareness of...
resolve a conflict about...

And these are just a few!

STOP Every product has to have a purpose. If you can't think of a purpose, ask your teacher or employer for advice.

58

Step 6 – Resources

Now that you know exactly how you will do your project, the next step in your workplan is to decide what resources you will need.

INFORMATION

What information do you need to complete your project? What research do you need to do?

To do my analysis of the food items, I need to get an expanded conversion chart for the fat, sodium, and nutrient contents in common foods. For my flyer I need USDA's Dietary Guidelines for Healthy American Adults. I also need articles, books, and pamphlets that compare the nutritional value of fast-food restaurant items.

PEOPLE

Who do you need to talk to or interview for your project? Who at school and the workplace can help you with your project?

At school: I need to talk with Mr. Diaz to come up with a formula for calculating the sodium and fat contents of foods. Ms. Thatcher and Ms. Davis can recommend books for me to read about my subject. I will also need help in the computer lab to use desk-top publishing software to create the flyer.

At work: P.J. Rosen can help me choose 10 foods to analyze and get their ingredient lists.

MATERIALS

What kinds of supplies, tools, and equipment will you need?

- computer (to write text and design flyer)
- Internet access (to look at sites like the American Heart Association, USDA Food and Nutritional Information Center)
- conversion charts (nutritive components of common foods)
- ingredient lists of foods from the restaurant
- books on diet and nutrition (I will start with my health textbook)
- articles (I will need to do a library search)
- copy stand, 35mm camera, film (to make slides)

If you don't have the necessary resources, you will need to modify your products.

Want to see an example?

See next page.

Step 7 – Connections

Describe how your project will connect with what you learn at school and the workplace.

What classes are you taking in school that will help you complete your project? How will they help you?

I am taking Health and Wellness for Life this semester. My teacher, Ms. Davis, covers a lot of issues about nutrition and diet. I am also taking biology this semester, which will give me a broader perspective on how foods affect the body. Math will help me come up with a formula for calculating the fat and sodium content of foods and make accurate charts.

What other classes or subject areas do you think would be helpful?

Social studies might help me learn more about how diet preferences have changed over time and why people seem to prefer fast food more and more.

A graphics class would be helpful in putting the design of the flyer together.

What other activities do you participate in at school that relate to your project? How do they connect?

I use the computers at school to type my reports. Even though I don't know how to use the school's desk-top publishing program very well, the fact that I am used to using a computer will be an advantage.

I work as a TA in the library and have made slides for teachers.

What can you observe workers doing to help you complete your project?

I can observe whether workers are consistent in how they prepare food. This could affect my analysis. I can also count the number of times customers ask for information on food items and observe how my co-workers handle their questions.

What skills can you learn and practice at the workplace to help you complete your project?

Math: I will definitely get lots of practice in this area, computing nutritional values.

Communication skills: I will need to be able to express myself clearly if I am going to train and coach my co-workers.

Customer service: making sure everyone at Fancy Fries can answer a customer's questions is an important service.

Step 7 – Connections...examples and ideas

What classes are you taking in school that will help you complete your project? How will they help you?

I am taking math and a computer-aided design class. That will help me do all the measurements and get the design for the model just right.

In social studies I can get information about how planes were invented and how to do a survey. Then I will need some help from my English teacher to make sure the questions on the survey are good ones.

What other classes or subject areas do you think would be helpful?

Physics would help me understand how planes fly.

Making oral reports would help me be less nervous about giving a presentation to all the people at the airport.

What other activities do you participate in at school that relate to your project? How do they connect?

I use a computer at the library to type my papers. I bet I could learn a program that would help me work on the transparencies for my presentation.

I also volunteer as a tutor, which would help me work with the kids.

What can you observe workers doing to help you complete your project?

I can take a tour of the airport to help me think of questions for the survey. I can also watch and listen to airport workers to learn the special vocabulary for flying.

What skills can you learn and practice at the workplace to help you complete your project?

I can watch mechanics repair airplanes, which will help me learn about their construction. If possible, I would like to learn how to use some of the tools they need to make repairs. I would also like to try to interview a pilot and ask what it feels like to fly.

Want to see an example of a timeline?

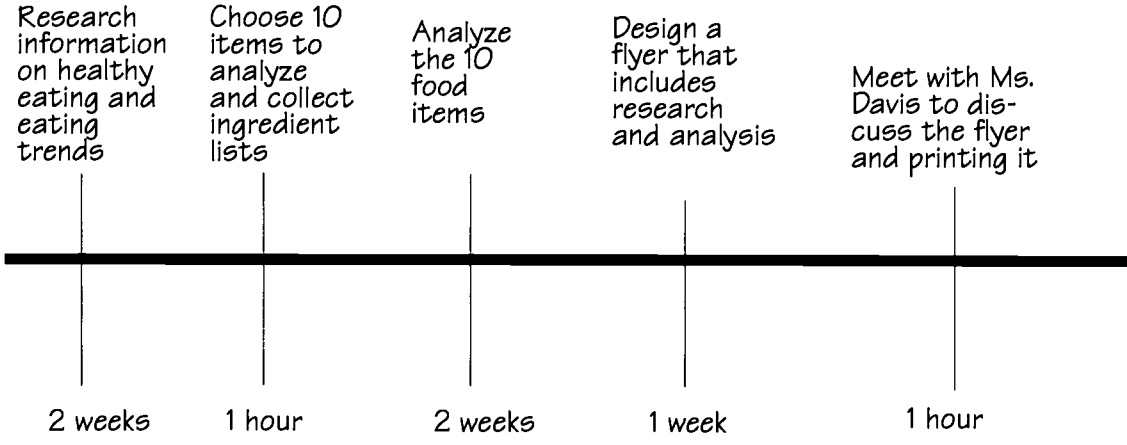
Turn the page.

Step 8 – Timeline

The next step in making your workplan is to figure out how much time you need for the project. Using the timeline below, write out everything you need to do and how long each activity will take. When you are done add up the total times.

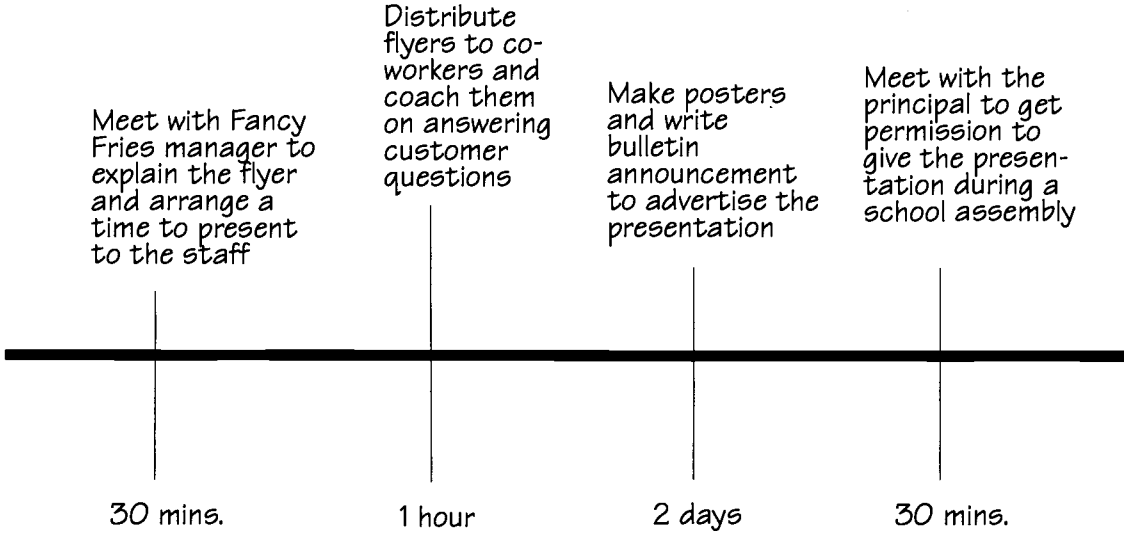
Above the line:
What do you need to do to produce your **product**(s)?(Step 5)

Below the line:
How long will it take?



Above the line:
What do you need to do to accomplish your **purpose**(s)?(Step 6)

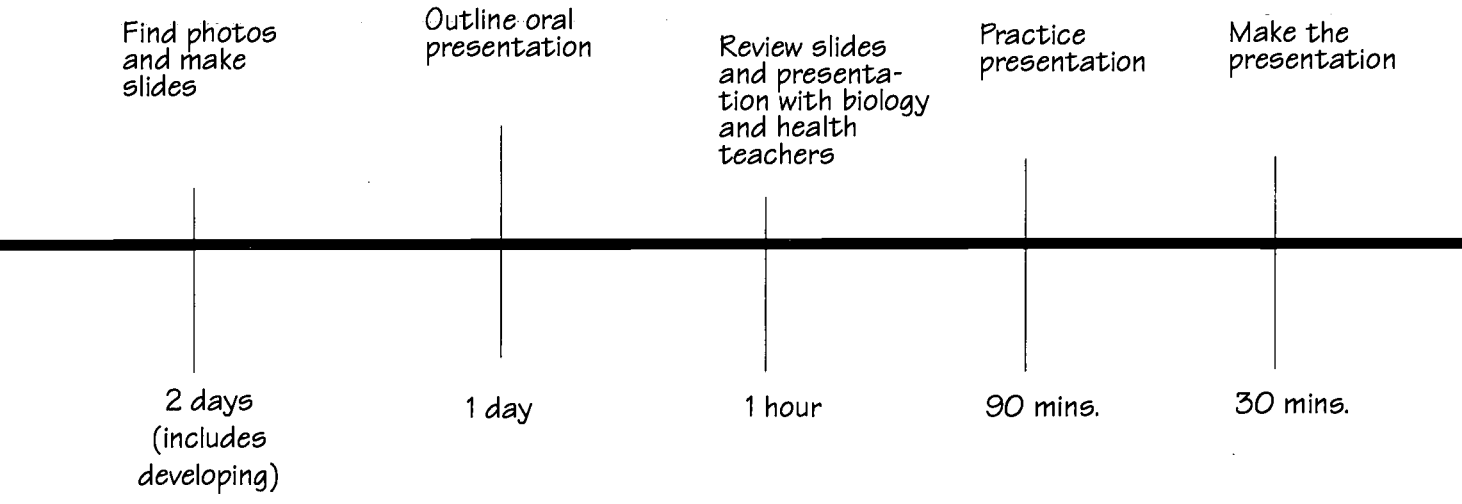
Below the line:
How long will it take?



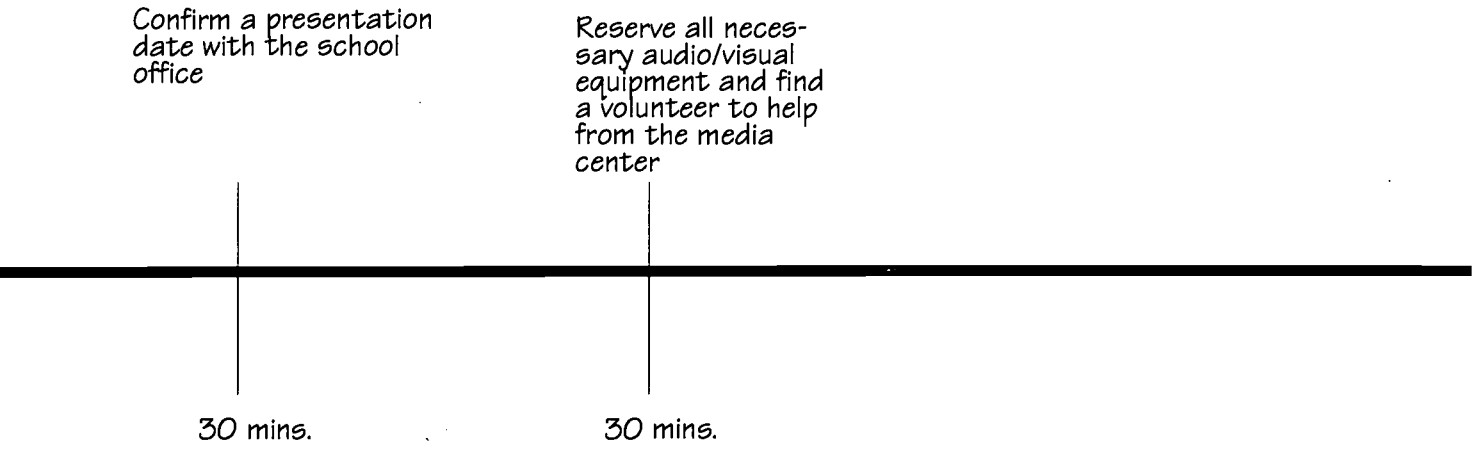
Step 8 – Timeline...cont.

Want to see an example of a timeline?

Turn the page.



total time: 38 days, 5 hours



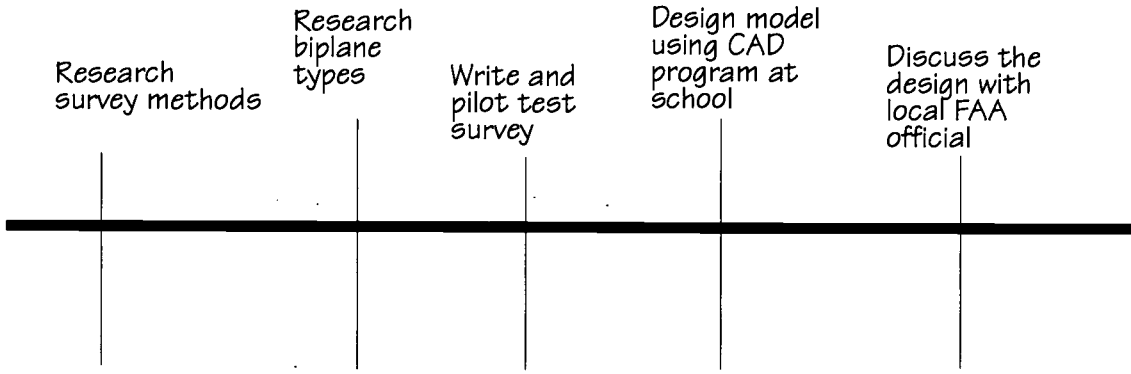
total time: 2 days, 3 hours

STOP Make sure you have enough time to complete all the activities for your project.

Step 8 – Timeline...example

EXAMPLE

Above the line:
What do you need to do to produce your **product(s)**? (Step 5)

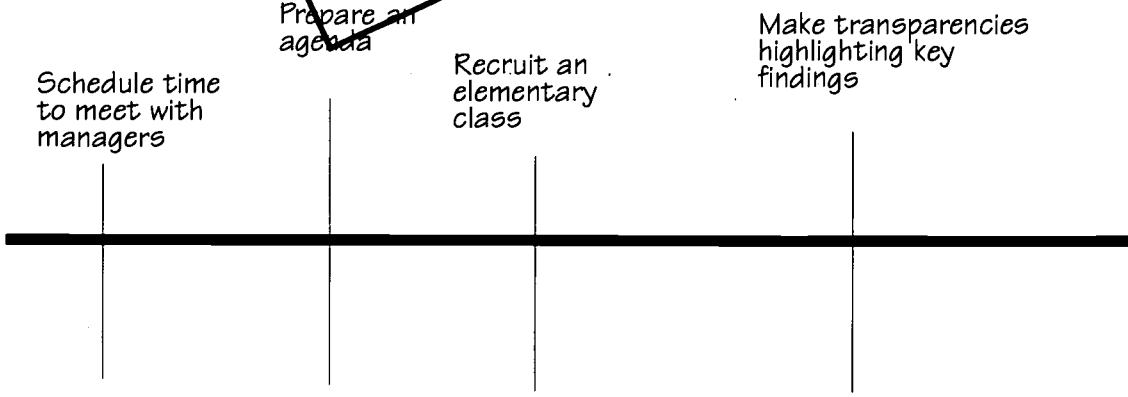


Below the line:
How long will it take?

1 week | 5 days | 2 days | 1 week | 2 days

SAMPLE

Above the line:
What do you need to do to accomplish your **purpose(s)**? (Step 6)

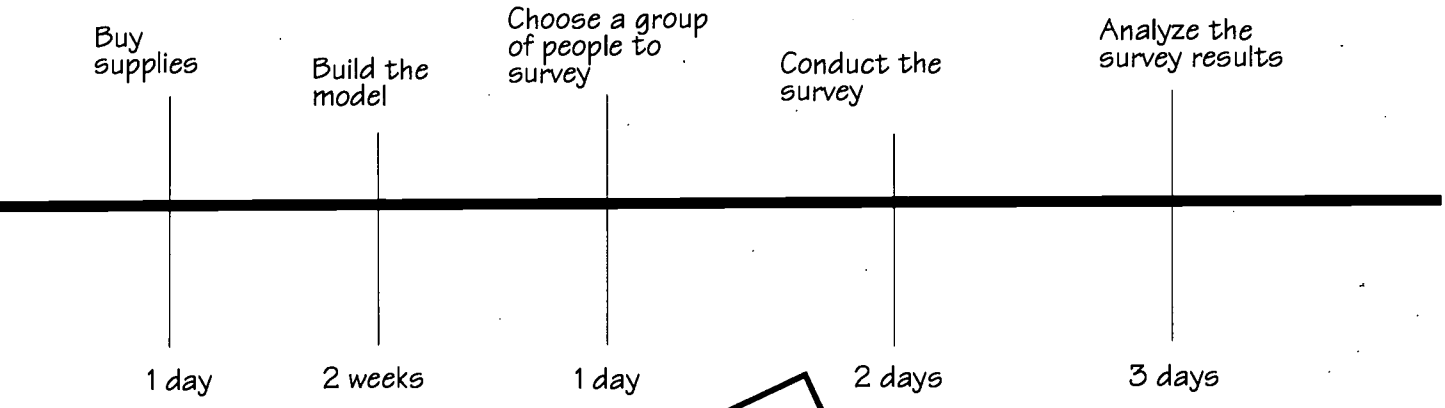


Below the line:
How long will it take?

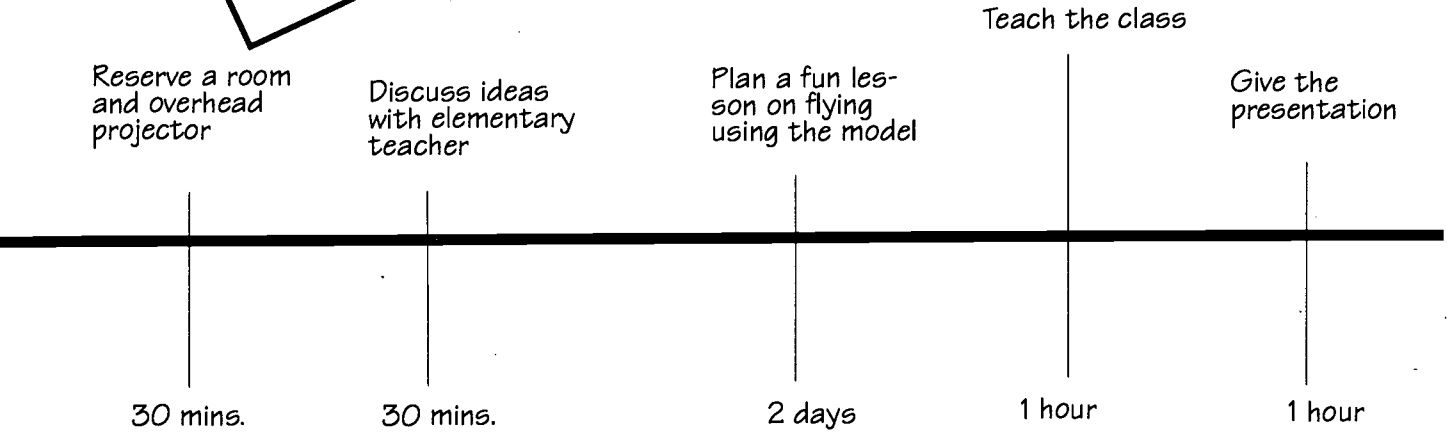
1 hour | 1 day | 1 week | 3 days

Step 8 – Timeline...example

EXAMPLE



total time: 44 days



total time: 13 days, 4 hours

Step 9 – Calendar

Now that you know how long your activities will take, plan when you will do them. Transfer the information from your timeline (Step 8) to the calendar below. Mark important dates for starting and finishing activities and products. Include dates for meetings and any events that affect your project.

month: OCTOBER

S	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

EXAMPLE

Oct. 1-8 research survey methods; Columbus Day Oct. 14 – no school; Oct. 15 start researching types of biplanes; Oct. 15. meet with English teacher to start writing survey questions; Oct. 18 use school office phone to call airport to arrange time to meet with managers; Oct. 24 meet with computer teacher to discuss biplane model design

SAMPLE

month: SEPTEMBER

S	M	T	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Sept. 30-Oct. 12 research healthy eating and eating trends; Oct. 14 no school (Columbus Day); Oct. 15 meet with P.J. Rosen to choose 10 items to analyze from Fancy Fries menu; Oct. 21-Nov. 5 analyze food items; Oct. 23 meet with principal for permission to present during assembly; Oct. 24 meet with Ms. Davis to discuss the flyer and printing it; Oct. 24 meet with P.J. Rosen to arrange a time to coach co-workers on answering customer questions; Oct. 30 go to school office to reserve time during an assembly to make the presentation; Oct. 31 help hang Halloween decorations in gym for school party

month: OCTOBER

S	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

month: NOVEMBER

S	M	T	W	Th	F	Sa
					1	2
3	4	5	24	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Nov. 10-16 design flyer; Nov. 18 & 19 make slides; Nov. 20 outline presentation; Nov. 21 review slides and presentation with biology and health teachers; Nov. 25-27 mid-semester exams in English, math, and biology; Nov. 28-Dec. 1 Thanksgiving break; Dec. 4 pass out flyers and train Fancy Fries workers on answering customers' questions; Dec. 6 reserve audio/visual equipment; Dec. 9-10 advertise the presentation; Dec. 12 practice presentation; Dec. 13 give presentation

month: DECEMBER

S	M	T	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Step 9 – Calendar...cont.

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

Step 10 – Assessment

You have now successfully planned all the elements of your project. The next step is to negotiate with your teacher how your work will be assessed.

The following are some assessment methods you can discuss with your teacher. Put a check by the one(s) you both decide to use. Also, write down the terms for your receiving credit.

- ☐ **Student self-evaluation:** A formal, comprehensive evaluation (written or oral) of the project and the project process.
- ☒ **Teacher-based evaluation:** Teacher uses assessment tools such as rubrics, scoring guides, paper and pencil tests, research papers, seminars, content standards to evaluate student achievement through the project.
- ☐ **Portfolio:** Collect samples of your work throughout the project process to demonstrate mastery of specific skills.
- ☒ **Community members:** Participating employers and other interested members of the community evaluate the project from the perspective of the "real world" outside of school. A student can present the project to them in a variety of ways such as presentation, demonstration, or written report.
- ☐ **Other (specify):** _____

_____

_____

Will the successful completion of the project qualify me for credit? ☒ Yes ☐ No

If yes, specify amount and terms of the credit: I am doing this project for my health class instead of a research paper, and instead of two labs on the human digestive system in biology.

Step 11 – Learning agreement

The last step in your workplan is for you, your teacher(s), and the employer/employee(s) at your worksite to sign a learning agreement that spells out everyone's responsibilities.

STUDENT(S)

I recognize that completing this project is a demanding process that will require my serious attention. I realize that I am involving people in the community and that I need to respect their time. My responsibilities are to:

- Complete this planning guide with the help of my teacher(s) and worksite employer/employee(s)
- Meet all deadlines for activities and products indicated on the calendar in Step 9
- Meet with my teacher(s) on a scheduled basis to discuss the progress of the project
- Get approval for any modifications I make to my proposal or workplan as I carry out my project

Shannon Bryant _____ *9/25/XX* _____
Student signature Date

_____ _____
Student signature Date

_____ _____
Student signature Date

EMPLOYER/EMPLOYEE(S)

I understand that the student is undertaking a project that will integrate learning at school and the worksite. To assist the student in completing the project, my responsibilities are to:

- Review the project proposal and workplan and ensure it is reasonable given my time and resources at the worksite
- Provide the student access to resources appropriate for completing this project
- Enlist the involvement of other employees if they can be helpful to the student
- Serve as a mentor and guide for the student

P.J. Rosen _____ *9/26/XX* _____
Employer/employee Date

_____ _____
Employer/employee Date

TEACHER(S)

I have worked with the student(s) in preparing this project. I recognize that my responsibilities are to:

- Carefully review the student's proposal and workplan for the project
- Meet with the student on a scheduled basis to assess the progress of the project and suggest any modifications
- Serve as a facilitator and coach in the project process, allowing students to identify and solve problems on their own
- Negotiate with the student the conditions for assessing the completed project and granting credit

The student and I have agreed on the following methods of assessment:

Shannon will be graded on her ability to gather, apply, and present information in keeping with the same criteria used for research papers in this class (Health and Wellness for Life).

Shannon will be graded on her ability to acquire and present information, following the guidelines for all biology labs.

The student will X or will not____ be granted credit for this project. The conditions of the credit (amount, nature, etc.) are as follows:

Shannon will receive a maximum of 65 points toward her final grade in her Health and Wellness for Life class.

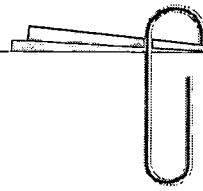
Shannon will receive credits for two labs in biology based on her presentation to the student body at assembly and the accuracy of the slides she uses.

C. Davis	9/27/XX
Teacher signature	Date
P. Thatcher	9/27/XX
Teacher signature	Date
Teacher signature	Date
Teacher signature	Date

Modifications

Very few things in life go exactly according to plan. As you are working on your project, you may decide to modify your proposal or workplan. Keep track of all the changes you make and get the signed permission of your teacher(s).

MODIFICATION	APPROVED BY
Once I had the first draft of my flyer ready, P.J. Rosen requested to review it.	*C. Davis*
P.J. suggested I include the sources for my data so people could get more information if they were interested. This seemed like a simple edit, but it took two days to reserve computer time and figure out a way to work the citations into the design of the flyer.	
I got permission from the principal to present at an assembly, but the school office secretary said all the assemblies were already scheduled for the year. Instead I made presentations in four of Ms. Davis' health classes. Ms. Thatcher arranged to watch one of my presentations. I had to get permission slips to miss some of my classes to make the presentations. Doing all four presentations made my project end date one week later than planned.	*P. Thatcher*



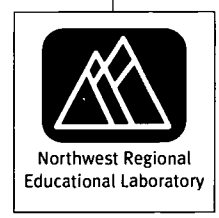
Congratulations!

You have successfully planned your project! Now it's time to get started. Are you ready?

If so, you should be able to answer the following questions. If you are unsure of anything, discuss it with your teacher or worksite contact person.

Do you know

- ... Why you are doing this project?
- ... What you need to do first?
- ... How your project connects school and work?
- ... How to check if your project is on track?
- ... How you will know when your project is finished?
- ... What your project's most important resources are?
- ... What will demand your most attention?
- ... What part of the project will require the most time?
- ... Where you think your performance will be the strongest? the weakest?



NWREL
Education & Work Program
101 SW Main Street, Suite 500
Portland, OR 97204

Phone: 503/275-9500
800/547-6339
Fax: 503/275-0443

Internet: http://www.nwrel.org

Rick Velasquez is a high school junior getting ready to do a two-month internship with Mr. Reese, a self-employed electrician. Rick's decision to do the internship was not random; he had completed several job shadows and career explorations* in a variety of fields during the ninth and tenth grades.

During a career exploration with Mr. Reese, Rick thought he would like to return and do a longer project with the electrician. When the opportunity arose to do an internship, Rick was excited, but didn't have any specific ideas for a project. He knew he wanted to learn more about wiring and the details of running a business, but he also wanted to include his other interests in writing and photography. Working with his teachers and Mr. Reese, Rick decided to document the step-by-step process of rewiring a kitchen in a home. Rick planned to work with Mr. Reese and his clients to learn the technical skills he was interested in while photographing and describing a job from start to finish. The pictures and copy would be presented as a professional-quality photo essay that Rick could include in a portfolio. Mr. Reese was very interested in the project because he felt he could use the photo essay to help educate his customers about what is involved—in terms of time, construction, and costs—in a rewiring job.

The following pages describe the project Rick designed for his internship.

Note to the reader:

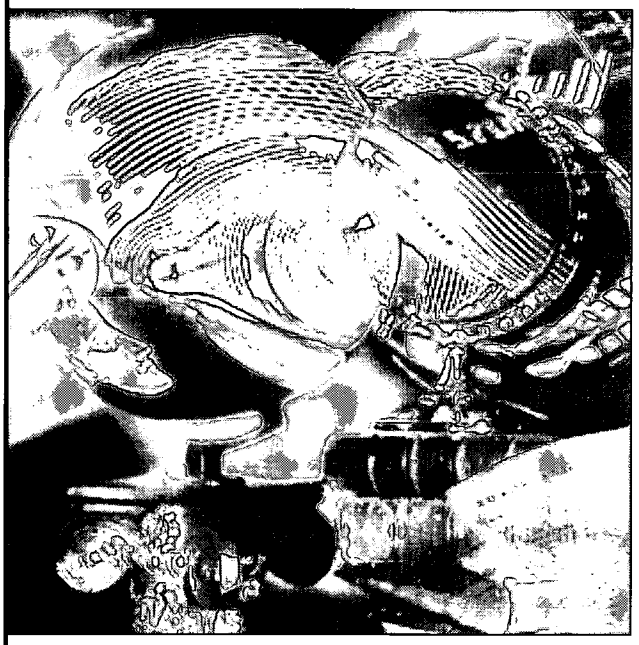
The master *Student Planning Guide* (following page 117) that your students will use includes examples to help them complete it. These examples are included on the following pages but are marked with the word SAMPLE so you can distinguish them from the project completed by Rick Velasquez.

* For more information on job shadows and career explorations, see the inside back cover of this guide.

integrate

Integrated Workplace Learning Project

Student Planning Guide



WIRED
Project title

Rick Velasquez
Student(s)

Ms. Sweeney, Mr. Takamura, Mr. Bowles
Teacher(s)

Martin Reese
Employer/Employee(s)

The Thompsons' Kitchen
Workplace

April 16
Start date

June 12
End date

CONNECTIONS
LINKING WORK AND LEARNING

What is this?

Are you getting ready to do an internship at a workplace and you aren't sure what to do when you get there? Would you like to get credit for the skills you use at your part-time job? In school, do you ever ask yourself "Why do I have to learn this?" If you answered "yes" to any of these questions, this planning guide is for you.

This guide helps you plan a project that connects your interests, what you do in school, and what is going on at a job in your community. Why do a project? Well, it's fun. It's challenging. It gets you out of the classroom to see how things work in the real world. It helps you use the skills you have and learn new ones. Projects also prepare you for the future by giving you the chance to learn and use skills and knowledge you need for college and careers.

Before you can start a project, you have to plan what you are going to do. That's what this guide is for. Working with one or several teachers, an employer or employee at the workplace, and possibly other students, you will use this guide to outline a project. Through your project you can produce things like videos, posters, models, reports, interview surveys, or plays. Then you take what you make and present it to teachers, employers, students, and members of the community to demonstrate what you have learned and teach other people new things.

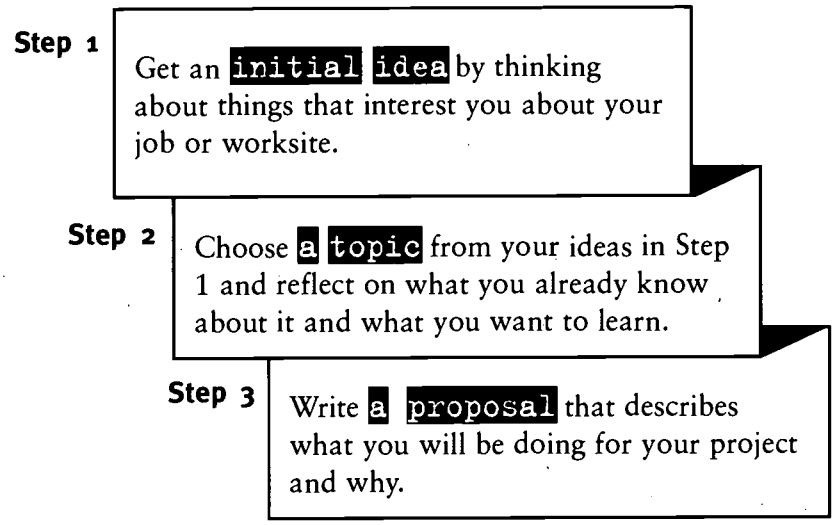
The purpose of projects is to help you learn skills that you will use for the rest of your life. But they are also meant to be enjoyable.

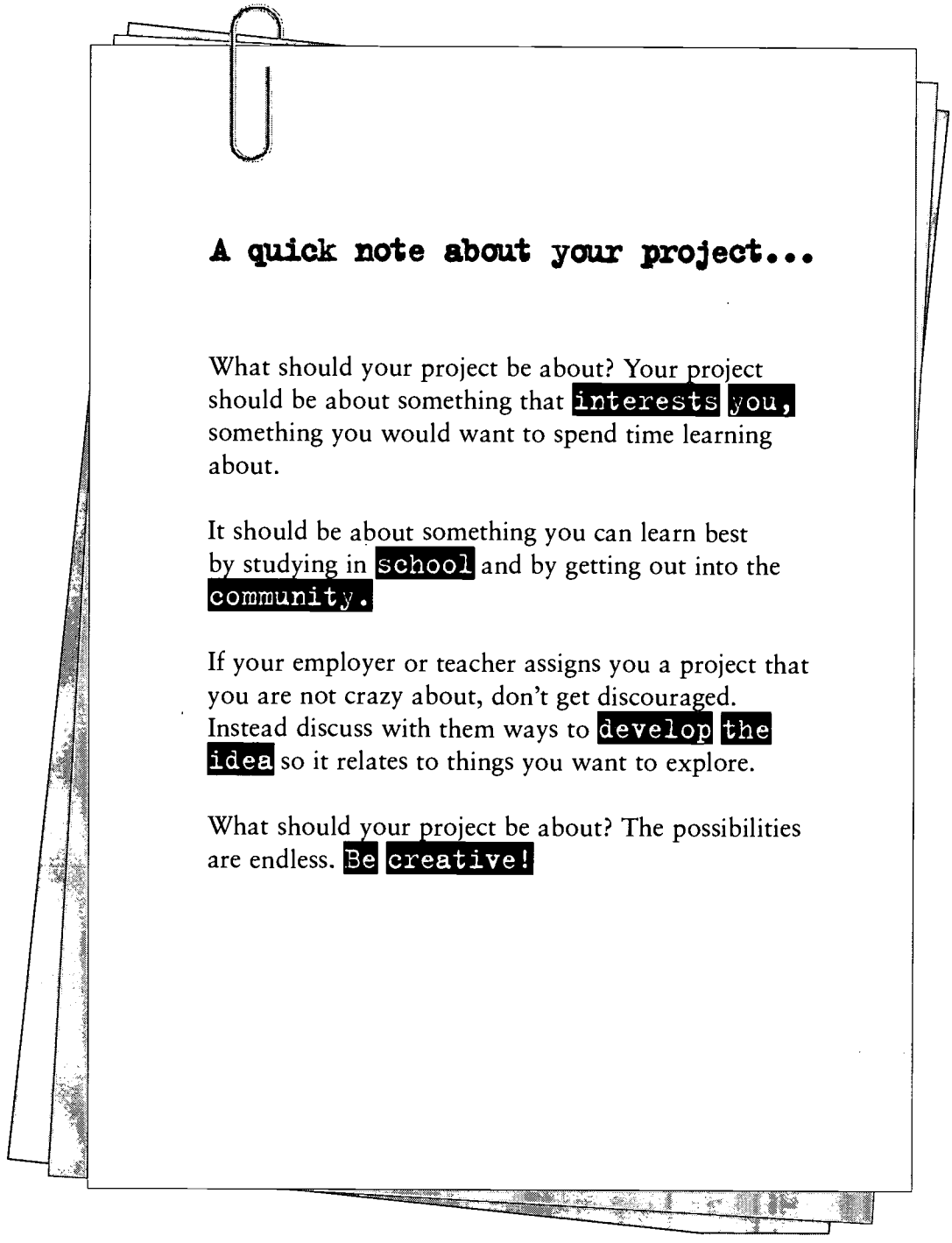
So, work hard and have fun!

Part One—
Developing a Proposal

A proposal describes what you want to do for your project and why you want to do it.

Developing a proposal requires thinking, more thinking, and rethinking. These steps will help you come up with an idea for your project:





A quick note about your project...

What should your project be about? Your project should be about something that interests you, something you would want to spend time learning about.

It should be about something you can learn best by studying in school and by getting out into the community.

If your employer or teacher assigns you a project that you are not crazy about, don't get discouraged. Instead discuss with them ways to develop the idea so it relates to things you want to explore.

What should your project be about? The possibilities are endless. Be creative!

Step 1 – Getting an idea

The first step in developing your proposal is to come up with an idea for your project.

In the blank space below, and on the back, jot down—using words, pictures, or diagrams—project ideas related to your workplace.

The questions in the margins are to help you brainstorm ideas. You don't need to answer them all, but think about them and discuss them with employers, teachers, friends, and family. Keep track of any project ideas that are interesting to you—even if they seem silly at first.

My grandfather was an electrician and I heard a lot of stories about when he worked on the courthouse. He's wired other places, too. I have seen pictures of some of them. He is really proud when he shows me the pictures and tells me all the stories. He has a lot of pride in his work.

We'd be lost without electricity. I mean, think about it. It's hard to imagine getting through the day without it. When there's a blackout in a town or city, everything comes to a stop.

What happens if the lights go out in a hospital during an operation?

When I did my job shadow with the electrician, I liked the idea of doing work that everybody needs.

What interesting social, political, artistic, or historical issues do you know about or have you heard about the workplace?

What things would you like to change in your community? Could your experience at the workplace help you design or create something the community needs?

What do you think you will learn from the people at your workplace? What do you think you can teach them?

Step 1 – Getting an idea...cont.

How could you use skills you have now—like being a team captain, sculpting, or public speaking—to contribute to activities at the workplace?

Are there things you think people at the workplace need to know about—like AIDS prevention, recycling, gang violence—that you could teach them?

Is there an issue that has special, personal meaning for you that you think you could address through a project at the workplace?

I think it's important to do things that matter to other people. My best friend's sister frames houses for a group called Habitat for Humanity. They build houses for people who can't afford to buy them. I think I would like to help with a project like that.

I write and take photos for the school paper and I think that's important to other students.

Once Nicki and I visited a house her sister was working on.

I know there are a lot of classes you have to take to be an electrician. But there are some things I have learned from my grandfather...like how to do simple wiring for sockets and fixtures.

I have gotten bad shocks. It's hard to imagine what it must be like to get struck by lightning, or step on a live wire.

I'd like to learn how things really work...all the technical and science aspects. It's when people don't know what they're doing that they get hurt.

My grandfather reuses everything. If it's not broken, he keeps it. I help him, or at least watch, so I know how to use all of his tools.

As you think about your project ideas, consider whether you would want to work on your project alone or with a team of other students.

Step ❷ – Choosing a topic

Your next step is to choose a topic for your project. Looking back at your ideas from Step 1, choose one that you would like to explore.

If you haven't already, discuss your topic with your teacher and the employer with whom you will be working to make sure it is doable.

The topic of my project is: *Doing a photo essay to document one complete job of the electrician (Mr. Reese) rewiring a kitchen*

Why did you choose this topic?

I chose this topic because I want to learn more about how an electrician works, from start to finish on a job. Also, my mentor Mr. Reese, said he could really use some examples of his work to show clients.

What do you already know about your topic?

I know how to do simple wiring. I know how to use most hand tools. I know what a code book looks like. And I have the writing and photography skills to document a job.

What do you want to learn about your topic?

I want to learn about more complex wiring, how to put in new circuits, how to plan for wiring in new or remodeled houses (like the ones for Habitat for Humanity). I want to know how to troubleshoot electrical problems so people (including me) never have to worry about electrocution. Plus, I want to learn how an electrician makes bids, and owns and runs a business.

How can this topic combine learning at school with learning at the workplace?

I can get help in math and science classes to understand the technical aspects of Mr. Reese's work and my project. My journalism class will help me put my ideas together for the photo essay.

Step ❸ – Writing a proposal

Congratulations! You are now ready to write a proposal. Your proposal will include:

- The title of your project
- The goals of your project
- The skills and information you will learn at school and the workplace
- The way your project will benefit the community
- The timeframe for your project
- The partners involved with your project

Title What will you call your project? (Can you think of a catchy title?)

WIRED

Goal(s) List the goals for your project.

1. I want to learn more about electricity and wiring.
2. I want to learn how an electrician runs a business, talks to clients, and makes bids.
3. I want to understand every step involved in estimating, planning, and completing a job.
4. I want to document all the steps of a job using photographs and descriptions.

Skills and Information Describe the skills and types of information you want to learn. Indicate if you think you will learn them at the school or at the workplace.

I will learn most of the electrical skills from Mr. Reese on the job. At school, Mr. Takamura, my science teacher, could help explain electrical theory. To write bids, Mr. Reese can show me how he does it and my math teacher, Ms. Sweeney, could help me do one on my own. For the writing and photography, I can get help from Mr. Bowles, my journalism teacher.

Step 3 – Writing a proposal...cont.

Benefits Who in the community will benefit from your project? How will they benefit?

The electrician's clients will benefit because they will have a sample of his work to help them make decisions about the quality of his work. They will also get an idea of what a rewiring job involves. The project will help them understand what they are paying for and what to expect during construction. The electrician will benefit because he will have a professional-looking document to show what he does and people will want to hire him.

Timeframe

Project start date: April 30 Project end date: June 12

Partners

List the names of the teachers you will work with and their subject areas:

Mr. Takamura (science) Ms. Sweeney (math)

Mr. Bowles (journalism)

List the names of the employers you will work with:

Mr. Reese (self-employed)

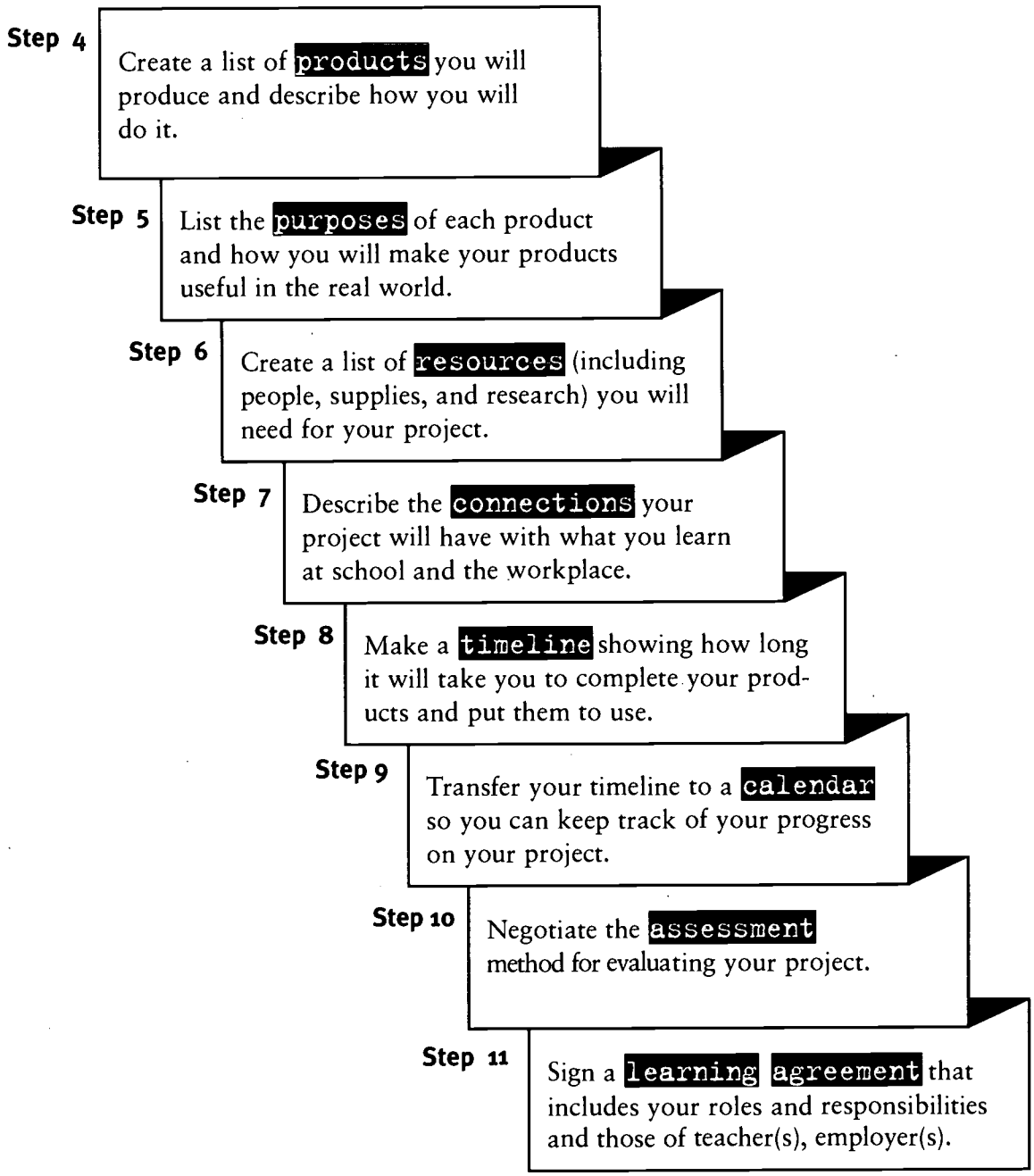
List the names of the other students (if any) you will work with:

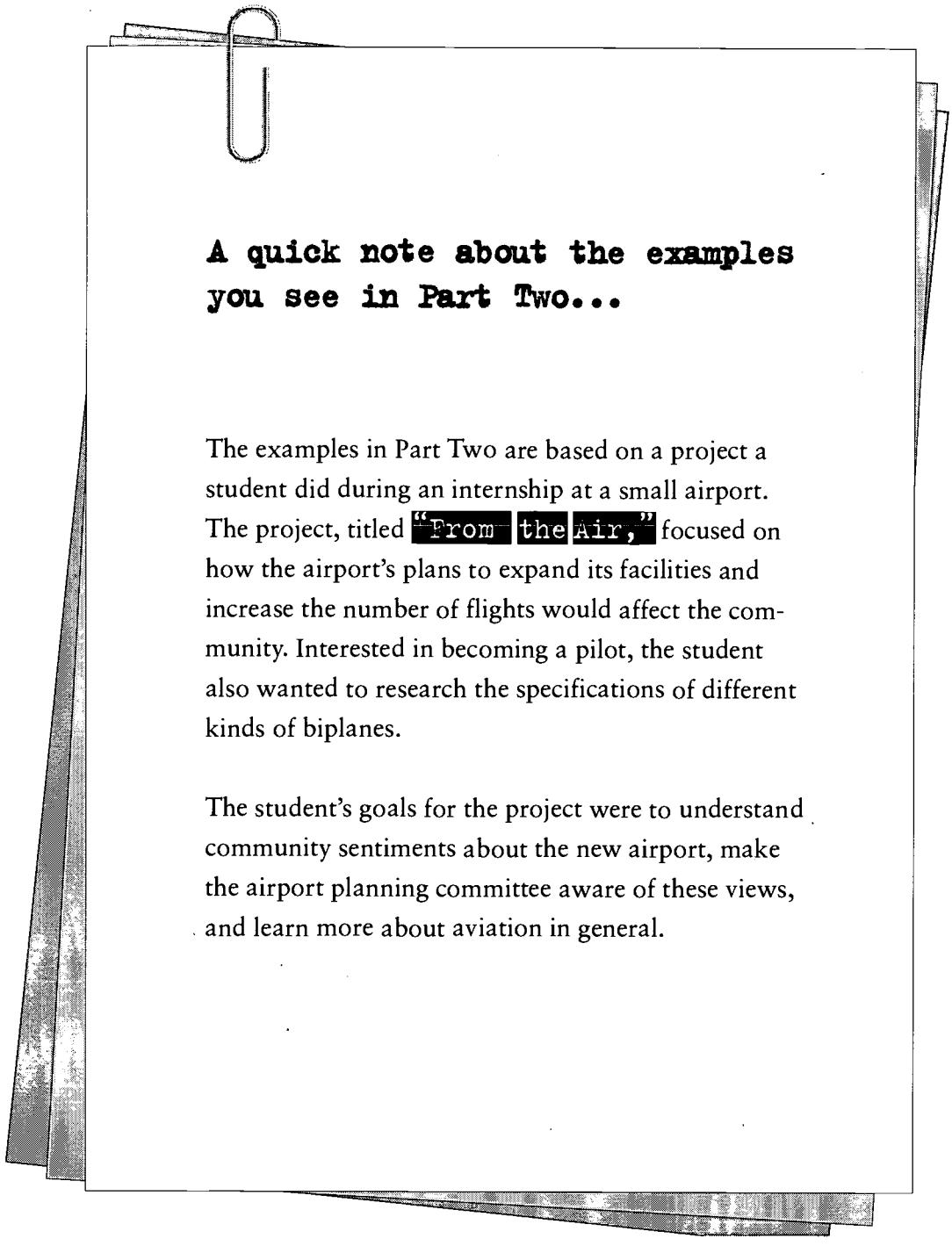
none

Part Two—
Making a Workplan

A workplan explains exactly how you are going to do what you described in your project proposal.

These steps will help you develop your workplan:





A quick note about the examples you see in Part Two...

The examples in Part Two are based on a project a student did during an internship at a small airport. The project, titled "From the Air," focused on how the airport's plans to expand its facilities and increase the number of flights would affect the community. Interested in becoming a pilot, the student also wanted to research the specifications of different kinds of biplanes.

The student's goals for the project were to understand community sentiments about the new airport, make the airport planning committee aware of these views, and learn more about aviation in general.

Step 4 – Products

Need some ideas? Want to see an example?

See next page.

Describe the product(s) you will produce for your project. Then list the steps required to make them.

Each product should: (1) relate to the project goals from Step 3, and (2) be tangible—something you can see, touch, taste, smell, or hear.

Product: A bid for an actual rewiring job

To produce this product I need to:

1. Read and study some of Mr. Reese's bids
2. Go to a job site with Mr. Reese and interview clients
3. Watch Mr. Reese estimate a job
4. List and price materials
5. Estimate time
6. Work with Mr. Reese to finalize the bid

Product: Photo essay of the process of rewiring a house

To produce this product I need to:

1. Photograph job site before work begins
2. Assist Mr. Reese on all steps of the job and photograph each step
3. Keep journal of the process
4. Develop pictures
5. Mount pictures
6. Write and type copy explaining the process

Product:

To produce this product I need to:

1.
2.
3.
4.
5.
6.

EXAMPLE

Product: Public opinion survey on noise pollution

To produce this product I need to:

1. Research survey methods
2. Write survey questions
3. Pilot test the survey
4. Choose a group of people
5. Conduct the survey
6. Analyze the results

Product: Model biplane

To produce this product I need to:

1. Research biplane types
2. Design a unique model using a computer-aided drafting program at school
3. Discuss the design with a local FAA official
4. Buy building supplies
5. Build the model according to the computer design
6.

Can't think of any products to do for your project? Here are some ideas:

screenplay	slogan	transparencies
scale model	cake	editorial essay
interview	research report	dance
book	survey	debate
petition	collage	painting
advertisement	banner	catalog
diorama	mural	sculpture
map with legend	pamphlet	fable
music	greeting card	video
totem pole	slide show	posters
animation	logo	poem
speech	computer program	experiment

And these are just a few!

Step 5 – Purposes

Need some ideas? Want to see an example?

See next page.

There is no point in making products unless they have a purpose.

Describe each product's purpose and what you will do to accomplish it.

I will use my bid (product) **to** explain to a client what his or her electrical job will cost. (purpose)

To accomplish this purpose I need to:

1. Practice my presentation skills with Mr. Reese
2. Schedule an appointment with the client
3. Present the bid with Mr. Reese
4.
5.
6.

I will use my photo essay (product) **to** educate prospective clients about the rewiring process. (purpose)

To accomplish this purpose I need to:

1. Practice my presentation skills with Mr. Reese
2. Accompany Mr. Reese to a consultation with clients
3. Show clients the photo essay and answer any questions they have
4.
5.
6.

I will use my _____ (product) **to** _____ (purpose)

To accomplish this purpose I need to:

1.
2.
3.
4.
5.
6.

Step 5 – Purposes ...examples and ideas

EXAMPLE

I will use my public opinion survey **to** inform the airport planning managers what the public wants.
(product) **(purpose)**

To accomplish this purpose I need to:

1. Schedule a time to meet with all the managers
2. Prepare an agenda
3. Make transparencies highlighting key findings
4. Reserve a room and overhead projector
5. Give the presentation
6.

I will use my model biplane **to** teach an elementary class about how planes fly.
(product) **(purpose)**

To accomplish this purpose I need to:

1. Recruit an elementary class
2. Discuss ideas with the teacher
3. Prepare a fun lesson on flying using the model
4. Teach the class
5.
6.

Here are some ideas for purposes of products:

give an artistic performance of...
make a presentation about...
teach a class on...
solve a problem regarding...
share information about...
analyze a situation for the purpose of...
organize an event to...
communicate the message that...
raise funds for...
supervise an activity to...
respond to the need for...
report on an issue in order to...
increase awareness of...
resolve a conflict about...

And these are just a few!

STOP **Every product has to have a purpose. If you can't think of a purpose, ask your teacher or employer for advice.**

Step 6 – Resources

Now that you know exactly how you will do your project, the next step in your workplan is to decide what resources you will need.

INFORMATION

What information do you need to complete your project? What research do you need to do?

read the code book
read/study completed bids
go to an electrical supply store to price materials
consult photography guide books (most of the shots will be indoors using a flash, which I am not used to using)

PEOPLE

Who do you need to talk to or interview for your project? Who at school and the workplace can help you with your project?

Mr. Reese
electrical supply store clerks
my science teacher, Mr. Takamura
my math teacher, Ms. Sweeney
my journalism teacher, Mr. Bowles

MATERIALS

What kinds of supplies, tools, and equipment will you need?

work clothes
camera (with flash) and film
notebook or album (for the final photo essay)
basic supplies (rubber cement, pencils, ruler, markers, etc.)
notebook and tape recorder
code book
completed bids
computer (to create professional-quality captions and copy)

If you don't have the necessary resources, you will need to modify your products.

Want to see an example?

See next page.

Step 7 – Connections

Describe how your project will connect with what you learn at school and the workplace.

What classes are you taking in school that will help you complete your project? How will they help you?

My math teacher, Ms. Sweeney, can help me understand the load calculations, formulas, and trigonometry that Mr. Reese uses in his work. I will need this to estimate the job and explain things to clients. In science I can study electrical current. This is a big part of knowing how to stay safe at a job site. I may want to explain some of this to clients in terms of the preparations necessary for a safe job.

What other classes or subject areas do you think would be helpful?

A business education class that teaches how to write invoices.

What other activities do you participate in at school that relate to your project? How do they connect?

My journalism class with Mr. Bowles is a good place for me to try out my photos and writing. The class can also help me choose the best pictures, edit my writing, and organize my presentation. I want the photo essay to look really professional, so that it is impressive to prospective clients of Mr. Reese. I can use all the computer equipment and printers that we use for the class.

What can you observe workers doing to help you complete your project?

I can watch Mr. Reese consult with clients and write a bid. I can watch Mr. Reese buy materials and complete a job.

What skills can you learn and practice at the workplace to help you complete your project?

I can learn pricing and estimating job time, writing bids, organizing tools, wiring. I can practice photography and writing. I can see the math and science I learn (like electrical theory and trigonometry) applied in the work Mr. Reese does and the work I help him with.

What classes are you taking in school that will help you complete your project? How will they help you?

I am taking math and a computer-aided design class. That will help me do all the measurements and get the design for the model just right.

In social studies I can get information about how planes were invented and how to do a survey. Then I will need some help from my English teacher to make sure the questions on the survey are good ones.

What other classes or subject areas do you think would be helpful?

Physics would help me understand how planes fly.

Making oral reports would help me be less nervous about giving a presentation to all the people at the airport.

What other activities do you participate in at school that relate to your project? How do they connect?

I use a computer at the library to type my papers. I bet I could learn a program that would help me work on the transparencies for my presentation.

I also volunteer as a tutor, which would help me work with the kids.

What can you observe workers doing to help you complete your project?

I can take a tour of the airport to help me think of questions for the survey. I can also watch and listen to airport workers to learn the special vocabulary for flying.

What skills can you learn and practice at the workplace to help you complete your project?

I can watch mechanics repair airplanes, which will help me learn about their construction. If possible, I would like to learn how to use some of the tools they need to make repairs. I would also like to try to interview a pilot and ask what it feels like to fly.

Want to see an example of a timeline?

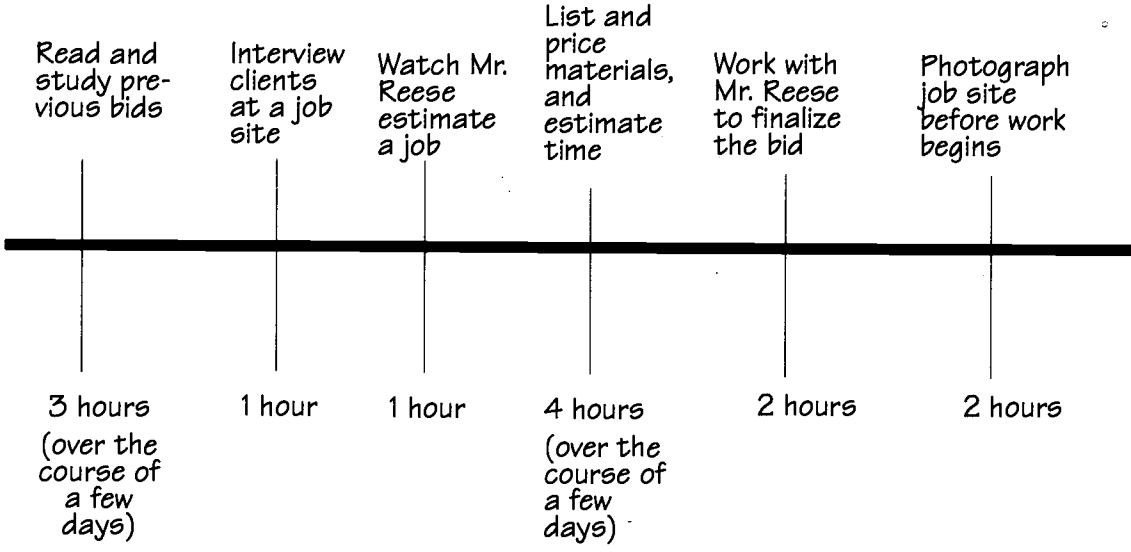
Turn the page.

Step 8 – Timeline

The next step in making your workplan is to figure out how much time you need for the project. Using the timeline below, write out everything you need to do and how long each activity will take. When you are done add up the total times.

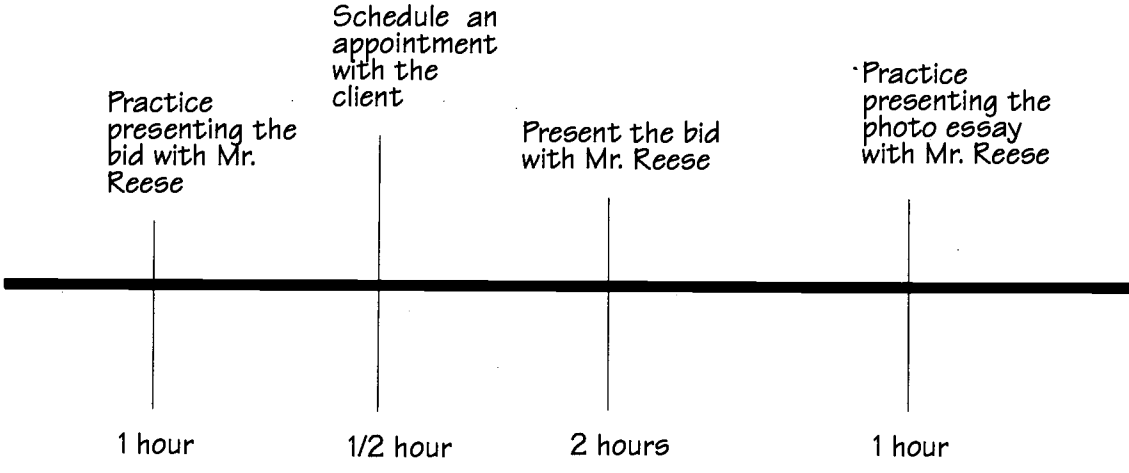
Above the line:
What do you need to do to produce your **product**(s)?(Step 5)

Below the line:
How long will it take?



Above the line:
What do you need to do to accomplish your **purpose**(s)?(Step 6)

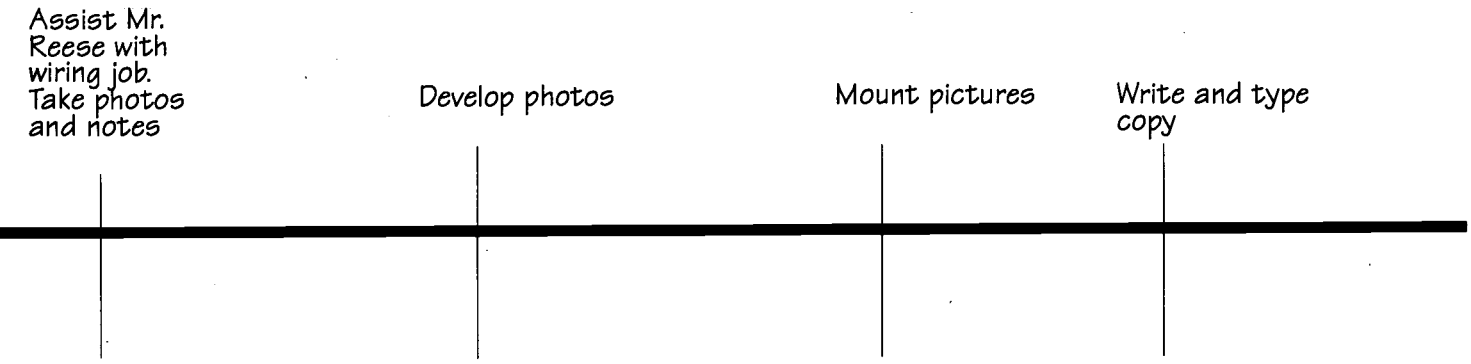
Below the line:
How long will it take?



Step 8 – Timeline...cont.

Want to see an example of a timeline?

Turn the page.



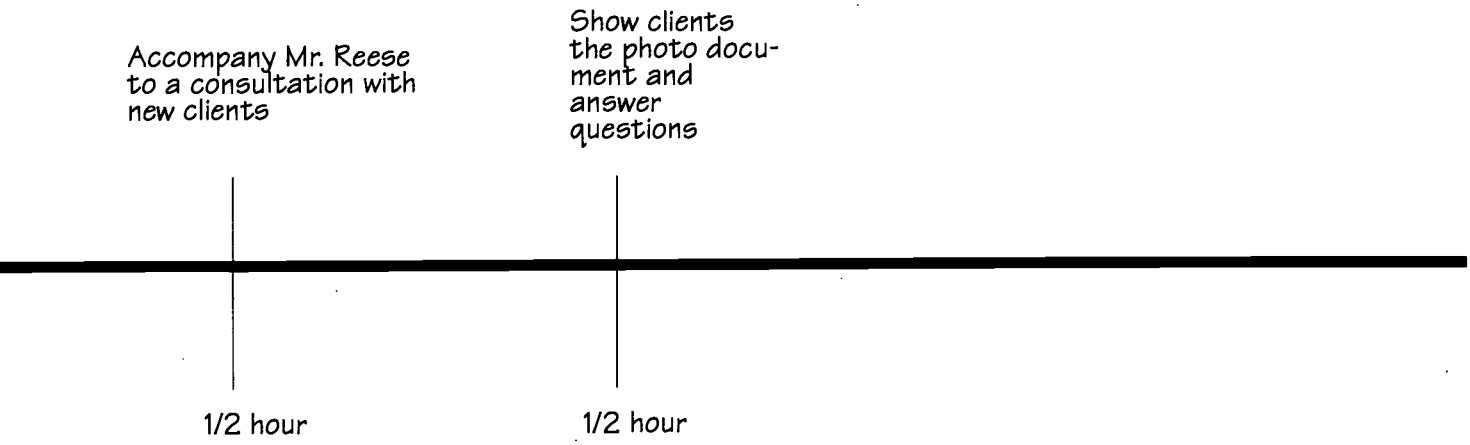
3 days (over the course of 4 weeks of construction in the kitchen)

2 days

1 day

3 days

total time: 9 days, 13 hours



1/2 hour

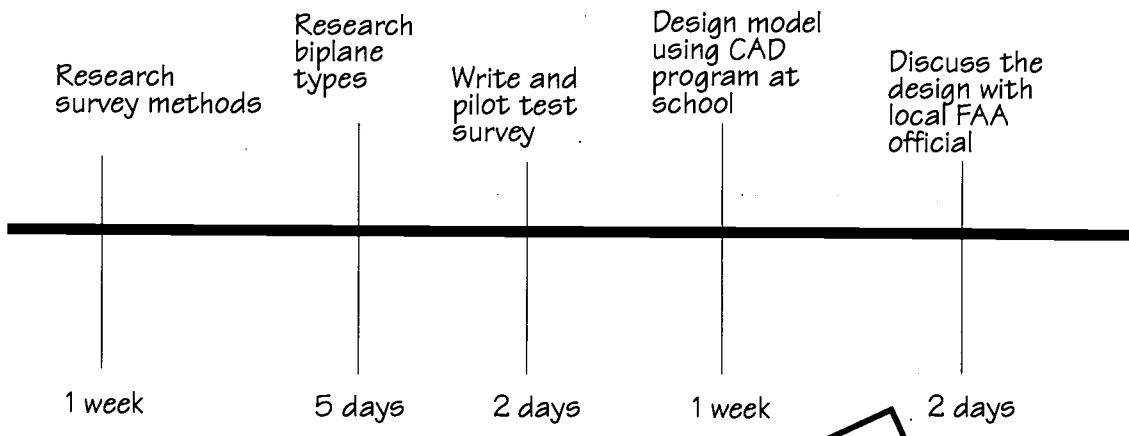
1/2 hour

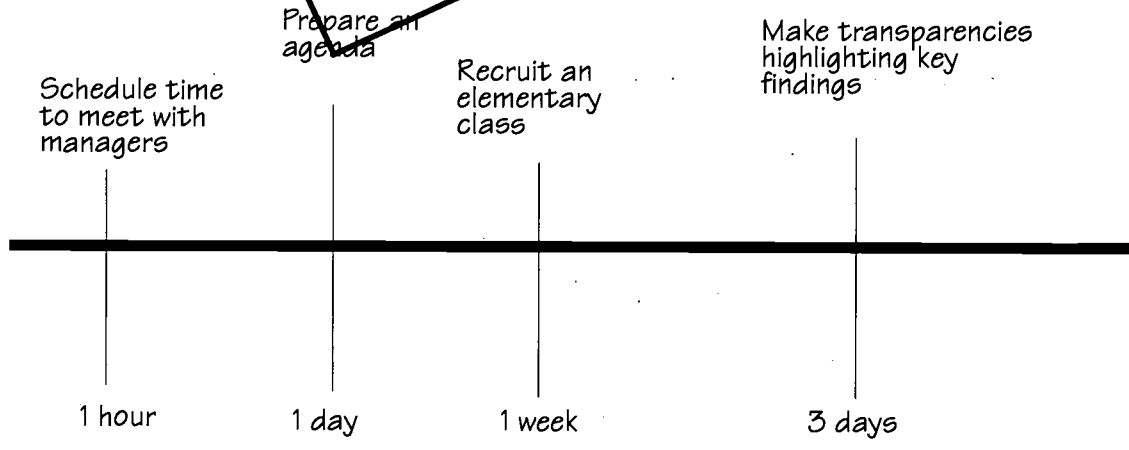
total time: 5 1/2 hours

STOP Make sure you have enough time to complete all the activities for your project.

Step 8 – Timeline...example

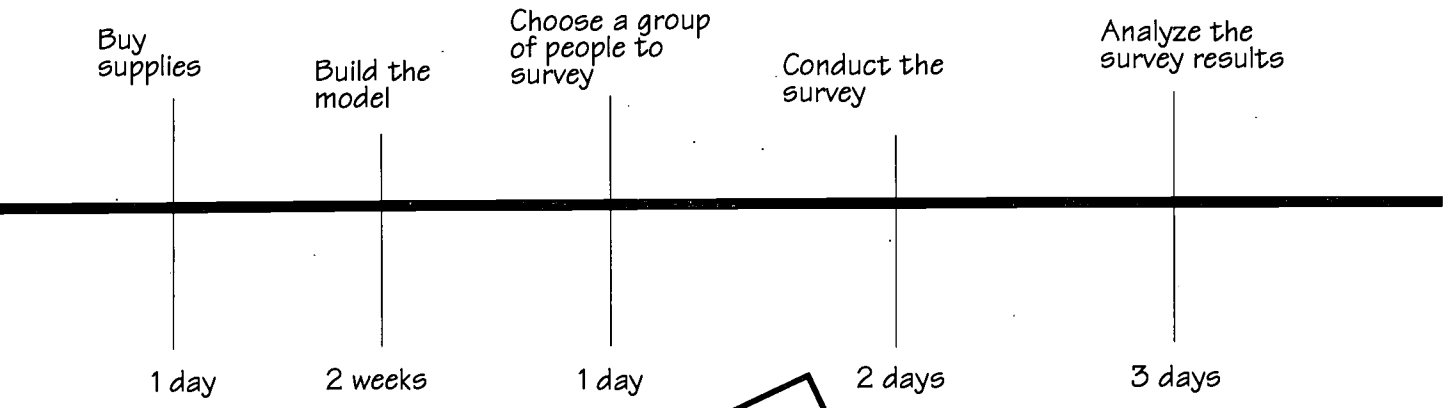
EXAMPLE



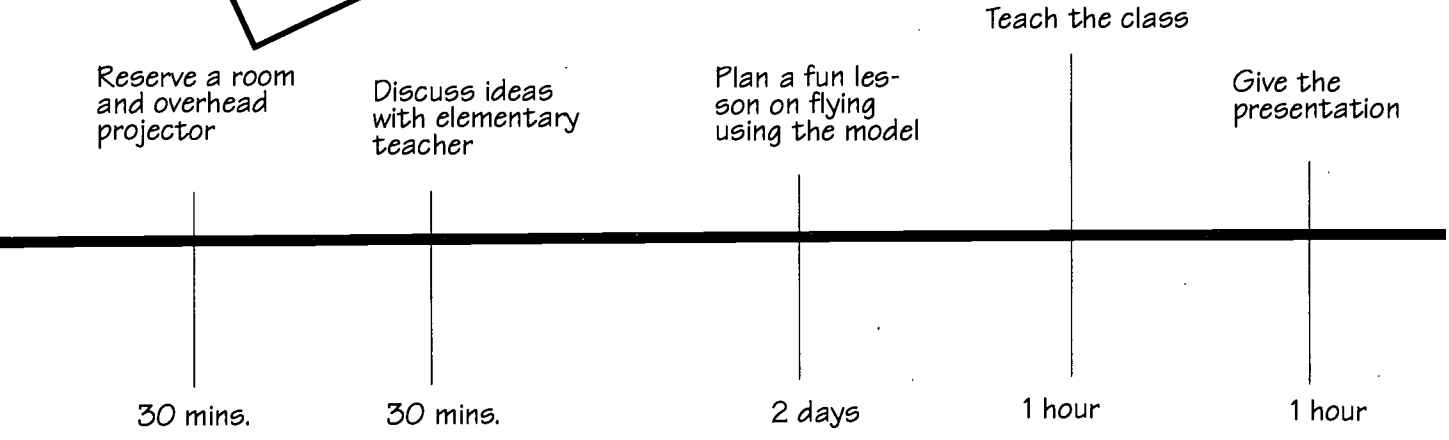


Step 8 – Timeline...example

EXAMPLE



total time: 44 days



total time: 13 days, 4 hours

Step 9 – Calendar

Now that you know how long your activities will take, plan when you will do them. Transfer the information from your timeline (Step 8) to the calendar below. Mark important dates for starting and finishing activities and products. Include dates for meetings and any events that affect your project.

month: OCTOBER

S	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

EXAMPLE

Oct. 1-8 research survey methods; Columbus Day Oct. 14 – no school; Oct. 15 start researching types of biplanes; Oct. 15. meet with English teacher to start writing survey questions; Oct. 18 use school office phone to call airport to arrange time to meet with managers; Oct. 24 meet with computer teacher to discuss biplane model design

SAMPLE

month: APRIL

S	M	T	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

April 16-18 study bids; April 19 watch Mr. Reese bid job; April 23 client interview; April 24-25 write bid with Mr. Reese and present to clients; April 27-May 23 help with wiring and photograph and take notes about the job (the kitchen rewiring will only take 3 days, but the exact schedule during construction is to be arranged)

month: MAY

S	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

May 28 no school...Memorial Day; May 30-31 develop photos and buy notebook

month: JUNE

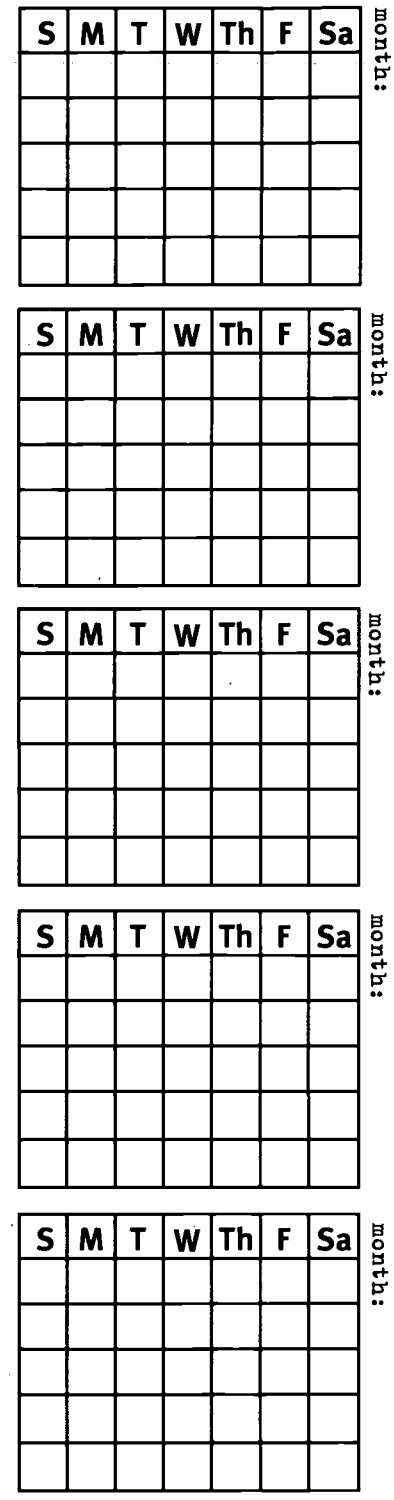
S	M	T	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

June 4 take pictures to journalism class, pick best ones and mount (make 2 copies of each photo...one set for the photo essay for Mr. Reese and one set for my portfolio); November 6-8 write and type copy; June 12 (approximate date) meet new clients and show them the photo essay

month:

S	M	T	W	Th	F	Sa

Step 9 – Calendar...cont.



Step 10 – Assessment

You have now successfully planned all the elements of your project. The next step is to negotiate with your teacher how your work will be assessed.

The following are some assessment methods you can discuss with your teacher. Put a check by the one(s) you both decide to use. Also, write down the terms for your receiving credit.

☒ **Student self-evaluation:** A formal, comprehensive evaluation (written or oral) of the project and the project process.

☐ **Teacher-based evaluation:** Teacher uses assessment tools such as rubrics, scoring guides, paper and pencil tests, research papers, seminars, content standards to evaluate student achievement through the project.

☒ Portfolio: Collect samples of your work throughout the project process to demonstrate mastery of specific skills.

☒ **Community members:** Participating employers and other interested members of the community evaluate the project from the perspective of the "real world" outside of school. A student can present the project to them in a variety of ways such as presentation, demonstration, or written report.

☐ **Other (specify):** _____

_____

_____

Will the successful completion of the project qualify me for credit? ☒ Yes ☐ No

If yes, specify amount and terms of the credit: Mr. Bowles will give me 1/4 credit for my photo essay. My photo essay, self-evaluation, and Mr. Reese's evaluation will become part of my portfolio for journalism class.

Step 11 – Learning agreement

The last step in your workplan is for you, your teacher(s), and the employer/employee(s) at your worksite to sign a learning agreement that spells out everyone's responsibilities.

STUDENT(S)

I recognize that completing this project is a demanding process that will require my serious attention. I realize that I am involving people in the community and that I need to respect their time. My responsibilities are to:

- Complete this planning guide with the help of my teacher(s) and worksite employer/employee(s)
- Meet all deadlines for activities and products indicated on the calendar in Step 9
- Meet with my teacher(s) on a scheduled basis to discuss the progress of the project
- Get approval for any modifications I make to my proposal or workplan as I carry out my project

Rick Velasquez _____ *4/13/XX* _____
Student signature Date

_____ _____
Student signature Date

_____ _____
Student signature Date

WORKSITE EMPLOYER/EMPLOYEE(S)

I understand that the student is undertaking a project that will integrate learning at school and the worksite. To assist the student in completing the project, my responsibilities are to:

- Review the project proposal and workplan and ensure it is reasonable given my time and resources at the worksite
- Provide the student access to resources appropriate for completing this project
- Enlist the involvement of other employees if they can be helpful to the student
- Serve as a mentor and guide for the student

M. Reese _____ *4/13/XX* _____
Worksite employer/employee Date

_____ _____
Worksite employer/employee Date

TEACHER(S)

I have worked with the student(s) in preparing this project. I recognize that my responsibilities are to:

- Carefully review the student's proposal and workplan for the project
- Meet with the student on a scheduled basis to assess the progress of the project and suggest any modifications
- Serve as a facilitator and coach in the project process, allowing students to identify and solve problems on their own
- Negotiate with the student the conditions for assessing the completed project and granting credit

The student and I have agreed on the following methods of assessment:

Rick will complete a written self-evaluation on a form that I will give him. He will ask Mr. Reese to evaluate his performance upon completion of the project. Both of these evaluations will become part of Rick's portfolio.

The student will X or will not____ be granted credit for this project. The conditions of the credit (amount, nature, etc.) are as follows:

Rick will receive a 1/4 credit for his journalism portfolio, which will include a professional-quality photo essay. Grading for the term project is explained in a criteria sheet given to the class at the start of the term.

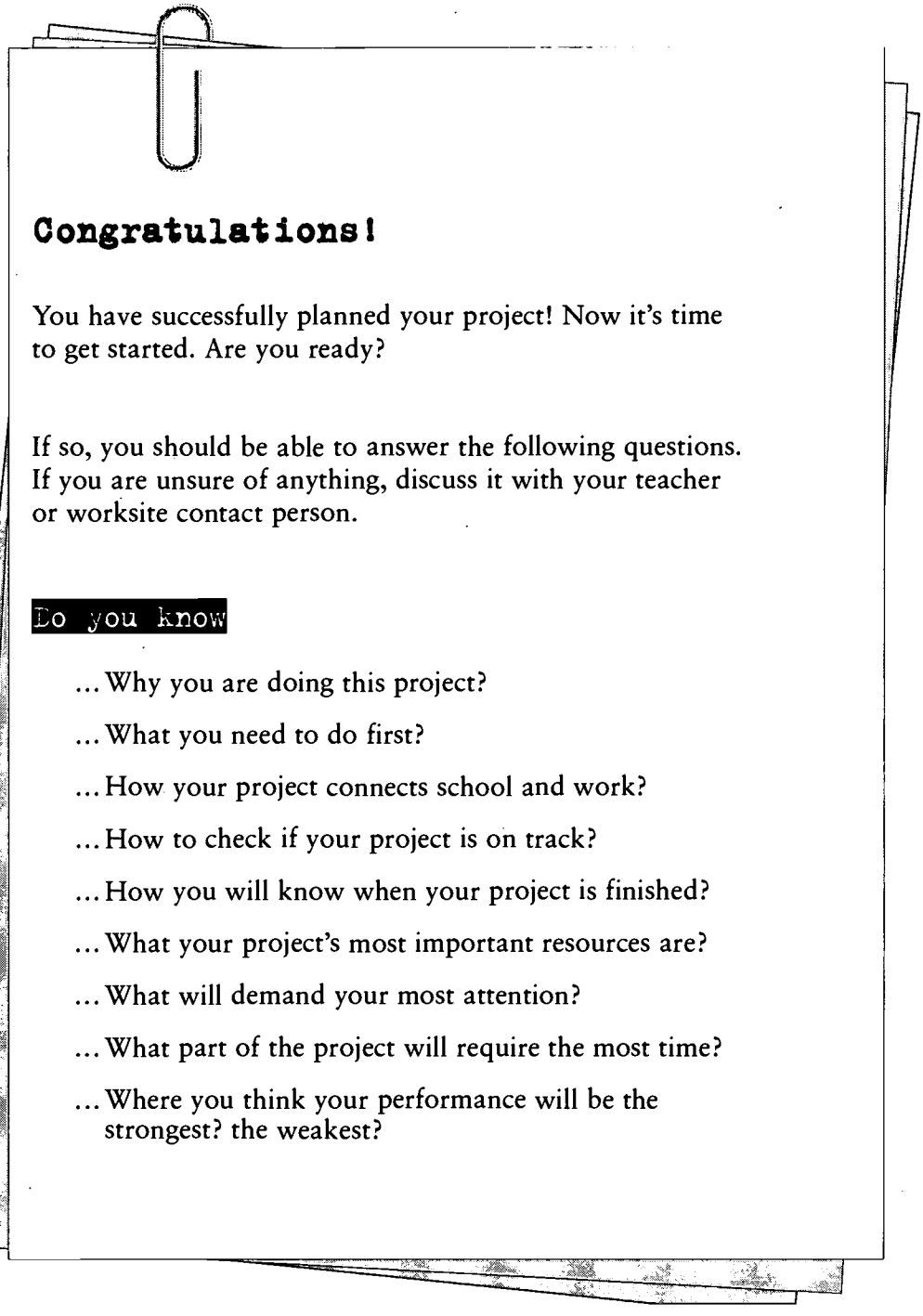
C. Bowles	4/15/XX
Teacher signature	Date
B. Sweeney	4/15/XX
Teacher signature	Date
L. Takamura	4/15/XX
Teacher signature	Date
Teacher signature	Date

101

Modifications

Very few things in life go exactly according to plan. As you are working on your project, you may decide to modify your proposal or workplan. Keep track of all the changes you make and get the signed permission of your teacher(s).

MODIFICATION	APPROVED BY
Plumbers, who were working on the same job as Mr. Reese, finished their work a week late. That meant Mr. Reese and I couldn't start on the electrical job until the last week in May.	C. Bowles
I was sick for two days in June, which delayed my writing the text and mounting the photos for the project.	C. Bowles



Congratulations!

You have successfully planned your project! Now it's time to get started. Are you ready?

If so, you should be able to answer the following questions. If you are unsure of anything, discuss it with your teacher or worksite contact person.

Do you know

... Why you are doing this project?

... What you need to do first?

... How your project connects school and work?

... How to check if your project is on track?

... How you will know when your project is finished?

... What your project's most important resources are?

... What will demand your most attention?

... What part of the project will require the most time?

... Where you think your performance will be the strongest? the weakest?

NWREL
Education & Work Program
101 SW Main Street, Suite 500
Portland, OR 97204

Phone: 503/275-9500
800/547-6339
Fax: 503/275-0443

Internet: http://www.nwrel.org

integrated workplace learning project

glossary

This glossary defines terms used in this guide, as well as others relevant to work-based learning. Use it to help build a common understanding of work-based learning among all the partners who make it happen—students, parents or guardians, teachers, program coordinators, school administrators, employers, employees, union representatives, and other active members of your community.

All aspects of the industry. An approach to work-based learning that emphasizes broad, transferable knowledge of the workplace rather than job-specific skills. As originally defined by the Carl D. Perkins Vocational and Applied Technology Act, all aspects of the industry includes these eight components common in every industry or enterprise: (1) planning, (2) management, (3) finance, (4) technical and production skills, (5) underlying principles of technology, (6) labor issues, (7) community issues, and (8) health, safety, and environmental issues. Some programs using this all-aspects framework have added additional components, such as ethics, history, and economics.

Career. A career is the lifelong intersection of education and employment, as opposed to a single job at one moment in time. Making decisions that result in a satisfying career depends on applying accurate information about the labor market to one's own interests and values.

Career education. Career education is a lifelong process of investigating employment options and exploring, developing, and refining one's career interests and skills.

Career exploration. A worksite experience (typically 10 to 30 hours over the course of several days or weeks) during which the student observes and interacts with workers, participates in hands-on activities, and completes written assignments to learn about the skills and knowledge required at the workplace.

Competency-based education. A curriculum and instructional approach based on the demonstration of knowledge and skills.

Cooperative education. A paid work experience arranged and supervised by a school, for which a student receives academic

credit and works toward an occupational goal.

Continuum of work-based learning. A progression of worksite experiences that range from field trip through extensive work-based learning. As the worksite experiences become increasingly complex, greater time and commitment are required from employers, teachers, and students.

Employability skills. Work habits, social skills, and attitudes valued by employers in any occupational area (e.g., responsibility, communication, initiative, teamwork, cooperation, attendance, organization, and flexibility).

Entry-level skills. The minimum education and skill qualifications necessary for obtaining and keeping a specific job; the starting point in a particular occupation or with a certain employer.

Extensive work-based learning. A worksite experience (typically three to 12 months) during which a student progresses through a planned sequence of increasingly demanding activities integrated with academic learning to (1) learn entry-level job skills and (2) receive skill certification and/or postsecondary school credits.

Fair Labor Standards Act (FLSA). A federal law, enacted in 1938, that includes rules and regulations regarding child labor. The FLSA is applicable in every state; however, there are variations in state and federal child labor laws. If state and federal rules and regulations conflict, the stricter one applies.

Field trip. A worksite experience (typically one to three hours) during which a group of students, escorted by school staff, tours a business and speaks with workers.

Integrated curriculum. A way of organizing curriculum content so that academic learning and hands-on worksite experiences are linked to complement and reinforce each other.

Industry skill standards. Employer-defined and accepted levels of performance required for success in a particular occupation. Standards set by industries typically define core competencies and the related knowledge and skills integral to specific jobs.

Internship. A worksite experience (typically three to 18 weeks)

during which a student completes a planned series of activities, set of learning objectives, or project(s) designed to give a broad understanding of a business or occupational area. An internship culminates in a demonstration (product or presentation) of learning jointly evaluated by school and worksite staff.

Job shadow. A worksite experience (typically three to six hours) during which a student spends time one-on-one with an employee, observing daily activities and asking questions about the job and workplace.

Mentor. A trusted, experienced, and interested individual who guides the development, education, and/or career of a younger or less experienced person. Many school districts recruit, train, and coordinate community volunteers to serve as both career and personal mentors for students.

Nontraditional occupations. Occupations in which representation of men or women has traditionally been less than 25 percent. For example, nontraditional occupations for women include auto mechanics and engineering; nontraditional occupations for men include nursing and secretarial work.

Occupational skills. The ability to perform tasks specific to a particular job. Occupational skills or job skills are sometimes contrasted with employability skills that are common to all jobs; for example, using a cash register is an occupational skill, while the ability to communicate well is an employability skill.

Occupational Safety and Health Administration (OSHA). A federal agency that develops and issues regulations concerning health and safety on the job; it conducts investigations and inspections to determine workplace compliance.

Portfolio. A collection of materials that documents and demonstrates a student's academic and work-based learning. Although there is no standard format for a portfolio, it typically includes many forms of information that exhibit the student's knowledge, skills, and interests. By building a portfolio, students can recognize their own growth and learn to take increased responsibility for their education. Teachers, mentors, and employers can use portfolios to record educational outcomes and for assessment purposes.

Reflection. Activities and assignments that are designed to encourage students to (1) analyze their learning experiences in the context of their interests, abilities, and values, (2) connect work with what they are learning in school, and (3) set meaningful personal and career goals. Reflection can be organized as group discussion, journal writing, role playing, or multi-media projects as well as any other activities which help students apply what they have learned to their own lives and future.

School-to-work transition. By restructuring education so that school-based learning is integrated with learning in the community, school-to-work (also called school-to-careers) increases opportunities for all students to identify and pursue their educational and career goals.

SCANS (Secretary's Commission on Achieving Necessary Skills). A 1991 federal report, *What Work Requires of Schools*, that identifies skills and competencies necessary for work readiness in any occupational area. The skills are divided into two categories: (1) foundation skills (basic skills, thinking skills, and personal qualities), and (2) workplace competencies (ability to productively use resources, interpersonal skills, information, systems, and technology).

Skill certification. Official confirmation that a student or worker can successfully perform a task to a set of accepted standards.

Transferable skills. Skills that are interchangeable among different jobs and workplaces. For example, the ability to handle cash is a skill transferable from restaurant cashier to bank teller; the ability to function well as a team member is transferable among most jobs and workplaces.

Work-based learning. A structured learning experience that integrates worksite experiences with classroom instruction. Through work-based learning students gain employability and occupational skills while applying and advancing their knowledge in academic areas.

Worksite contact person. The person at a worksite who coordinates work-based learning activities for students. This person's responsibilities may include (1) maintaining contact with school staff, (2) acting as a resource for other employees working with students, and (3) identifying the support necessary to provide a meaningful experience for students.

integrated workplace
learning project

student planning guide

This section includes a master copy of the Integrated Workplace Learning Project *Student Planning Guide*. The *Planning Guide* in this section can be photocopied for use in your program. In addition, an unbound, camera-ready copy is packaged separately to facilitate photocopying.

integrate

Integrated Workplace Learning Project

Student Planning Guide

Project title

Student(s)

Teacher(s)

Employer/Employee(s)

Workplace

Start date

End date

CONNECTIONS
LINKING WORK AND LEARNING

What is this?

Are you getting ready to do an internship at a workplace and you aren't sure what to do when you get there? Would you like to get credit for the skills you use at your part-time job? In school, do you ever ask yourself "Why do I have to learn this?" If you answered "yes" to any of these questions, this planning guide is for you.

This guide helps you plan a project that connects your interests, what you do in school, and what is going on at a job in your community. Why do a project? Well, it's fun. It's challergirg. It gets you out of the classroom to see how things work in the real world. It helps you use the skills you have and learn new ones. Projects also prepare you for the future by giving you the chance to learn and use skills and knowledge you need for college and careers.

Before you can start a project, you have to plan what you are going to do. That's what this guide is for. Working with one or several teachers, an employer or employee at the workplace, and possibly other students, you will use this guide to outline a project. Through your project you can produce things like videos, posters, models, reports, interview surveys, or plays. Then you take what you make and present it to teachers, employers, students, and members of the community to demonstrate what you have learned and teach other people new things.

The purpose of projects is to help you learn skills that you will use for the rest of your life. But they are also meant to be enjoyable.

So, work hard and have fun!

Part One—
Developing a Proposal

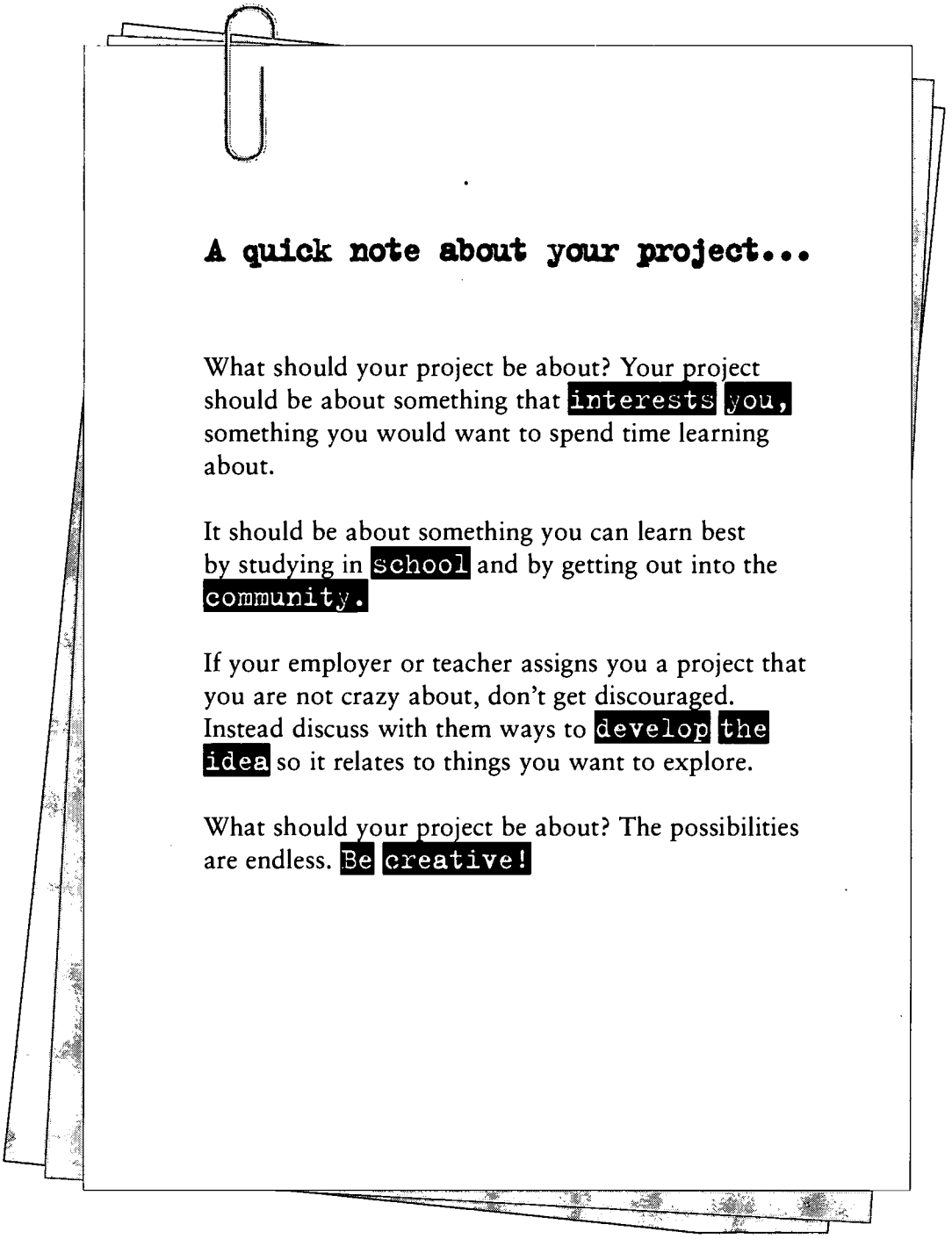
A proposal describes what you want to do for your project and why you want to do it.

Developing a proposal requires thinking, more thinking, and rethinking. These steps will help you come up with an idea for your project:

Step 1 Get an initial idea by thinking about things that interest you about your job or worksite.

Step 2 Choose a topic from your ideas in Step 1 and reflect on what you already know about it and what you want to learn.

Step 3 Write a proposal that describes what you will be doing for your project and why.



A quick note about your project...

What should your project be about? Your project should be about something that interests you, something you would want to spend time learning about.

It should be about something you can learn best by studying in school and by getting out into the community.

If your employer or teacher assigns you a project that you are not crazy about, don't get discouraged. Instead discuss with them ways to develop the idea so it relates to things you want to explore.

What should your project be about? The possibilities are endless. Be creative!

Step 1 – Getting an idea

The first step in developing your proposal is to come up with an idea for your project.

In the blank space below, and on the back, jot down—using words, pictures, or diagrams—project ideas related to your workplace.

The questions in the margins are to help you brainstorm ideas. You don't need to answer them all, but think about them and discuss them with employers, teachers, friends, and family. Keep track of any project ideas that are interesting to you—even if they seem silly at first.

What interesting social, political, artistic, or historical issues do you know about or have you heard about the workplace?

What things would you like to change in your community? Could your experience at the workplace help you design or create something the community needs?

What do you think you will learn from the people at your workplace? What do you think you can teach them?

Step 1 – Getting an idea...cont.

How could you use skills you have now—like being a team captain, sculpting, or public speaking—to contribute to activities at the workplace?

Are there things you think people at the workplace need to know about—like AIDS prevention, recycling, gang violence—that you could teach them?

Is there an issue that has special, personal meaning for you that you think you could address through a project at the workplace?

As you think about your project ideas, consider whether you would want to work on your project alone or with a team of other students.

Step ❷ – Choosing a topic

Your next step is to choose a topic for your project. Looking back at your ideas from Step 1, choose one that you would like to explore.

If you haven't already, discuss your topic with your teacher and the employer with whom you will be working to make sure it is doable.

The topic of my project is: _____

_____

Why did you choose this topic?

What do you already know about your topic?

What do you want to learn about your topic?

How can this topic combine learning at school with learning at the workplace?

Step❸ – Writing a proposal

Congratulations! You are now ready to write a proposal. Your proposal will include:

- The title of your project
- The goals of your project
- The skills and information you will learn at school and the workplace
- The way your project will benefit the community
- The timeframe for your project
- The partners involved with your project

Title What will you call your project? (Can you think of a catchy title?)

_____

Goal(s) List the goals for your project.

1. _____

2. _____

3. _____

4. _____

Skills and Information Describe the skills and types of information you want to learn. Indicate if you think you will learn them at the school or at the workplace.

_____

_____

_____

_____

Step 3 – Writing a proposal...cont.

Benefits Who in the community will benefit from your project? How will they benefit?

Timeframe

Project start date: _____ Project end date: _____

Partners

List the names of the teachers you will work with and their subject areas:

List the names of the employers you will work with:

List the names of the other students (if any) you will work with:

Part Two—
Making a Workplan

A workplan explains exactly how you are going to do what you described in your project proposal.

These steps will help you develop your workplan:

Step 4 Create a list of **products** you will produce and describe how you will do it.

Step 5 List the **purposes** of each product and how you will make your products useful in the real world.

Step 6 Create a list of **resources** (including people, supplies, and research) you will need for your project.

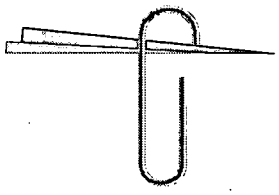
Step 7 Describe the **connections** your project will have with what you learn at school and the workplace.

Step 8 Make a **timeline** showing how long it will take you to complete your products and put them to use.

Step 9 Transfer your timeline to a **calendar** so you can keep track of your progress on your project.

Step 10 Negotiate the **assessment** method for evaluating your project.

Step 11 Sign a **learning agreement** that includes your roles and responsibilities and those of teacher(s), employer(s).



A quick note about the examples you see in Part Two...

The examples in Part Two are based on a project a student did during an internship at a small airport. The project, titled "From the Air," focused on how the airport's plans to expand its facilities and increase the number of flights would affect the community. Interested in becoming a pilot, the student also wanted to research the specifications of different kinds of biplanes.

The student's goals for the project were to understand community sentiments about the new airport, make the airport planning committee aware of these views, and learn more about aviation in general.

Step 4 – Products

Need some ideas? Want to see an example?

See next page.

Describe the product(s) you will produce for your project. Then list the steps required to make them.

Each product should: (1) relate to the project goals from Step 3, and (2) be tangible—something you can see, touch, taste, smell, or hear.

Product: _____

To produce this product I need to:

1. 4.
2. 5.
3. 6.

Product: _____

To produce this product I need to:

1. 4.
2. 5.
3. 6.

Product: _____

To produce this product I need to:

1. 4.
2. 5.
3. 6.

Step 4 – Products...examples and ideas

EXAMPLE

Product: Public opinion survey on noise pollution

To produce this product I need to:

1. Research survey methods
2. Write survey questions
3. Pilot test the survey
4. Choose a group of people
5. Conduct the survey
6. Analyze the results

Product: Model biplane

To produce this product I need to:

1. Research biplane types
2. Design a unique model using a computer-aided drafting program at school
3. Discuss the design with a local FAA official
4. Buy building supplies
5. Build the model according to the computer design
6.

Can't think of any products to do for your project? Here are some ideas:

screenplay	slogan	transparencies
scale model	cake	editorial essay
interview	research report	dance
book	survey	debate
petition	collage	painting
advertisement	banner	catalog
diorama	mural	sculpture
map with legend	pamphlet	fable
music	greeting card	video
totem pole	slide show	posters
animation	logo	poem
speech	computer program	experiment

And these are just a few!

Step 5 – Purposes

Need some ideas? Want to see an example?

See next page.

There is no point in making products unless they have a purpose.

Describe each product's purpose and what you will do to accomplish it.

I will use my _____ (product) to _____ (purpose)

To accomplish this purpose I need to:

1. 4.
2. 5.
3. 6.

I will use my _____ (product) to _____ (purpose)

To accomplish this purpose I need to:

1. 4.
2. 5.
3. 6.

I will use my _____ (product) to _____ (purpose)

To accomplish this purpose I need to:

1. 4.
2. 5.
3. 6.

Step 5 – Purposes...examples and ideas

EXAMPLE

I will use my public opinion survey (product) to inform the airport planning managers what the public wants. (purpose)

To accomplish this purpose I need to:

1. Schedule a time to meet with all the managers
2. Prepare an agenda
3. Make transparencies highlighting key findings
4. Reserve a room and overhead projector
5. Give the presentation
6.

I will use my model biplane (product) to teach an elementary class about how planes fly. (purpose)

To accomplish this purpose I need to:

1. Recruit an elementary class
2. Discuss ideas with the teacher
3. Prepare a fun lesson on flying using the model
4. Teach the class
5.
6.

Here are some ideas for purposes of products:

give an artistic performance of...
make a presentation about...
teach a class on...
solve a problem regarding...
share information about...
analyze a situation for the purpose of...
organize an event to...
communicate the message that...
raise funds for...
supervise an activity to...
respond to the need for...
report on an issue in order to...
increase awareness of...
resolve a conflict about...

And these are just a few!

STOP **Every product has to have a purpose. If you can't think of a purpose, ask your teacher or employer for advice.**

Step 6 – Resources

Now that you know exactly how you will do your project, the next step in your workplan is to decide what resources you will need.

INFORMATION

What information do you need to complete your project? What research do you need to do?

PEOPLE

Who do you need to talk to or interview for your project? Who at school and the workplace can help you with your project?

MATERIALS

What kinds of supplies, tools, and equipment will you need?

If you don't have the necessary resources, you will need to modify your products.

Want to see an example?

See next page.

Step 7 – Connections

Describe how your project will connect with what you learn at school and the workplace.

What classes are you taking in school that will help you complete your project? How will they help you?

What other classes or subject areas do you think would be helpful?

What other activities do you participate in at school that relate to your project? How do they connect?

What can you observe workers doing to help you complete your project?

What skills can you learn and practice at the workplace to help you complete your project?

Step 7 – Connections...examples and ideas

What classes are you taking in school that will help you complete your project? How will they help you?

I am taking math and a computer-aided design class. That will help me do all the measurements and get the design for the model just right.

In social studies I can get information about how planes were invented and how to do a survey. Then I will need some help from my English teacher to make sure the questions on the survey are good ones.

What other classes or subject areas do you think would be helpful?

Physics would help understand how planes fly.

Making oral reports would help me be less nervous about giving a presentation to all the people at the airport.

What other activities do you participate in at school that relate to your project? How do they connect?

I use a computer at the library to type my papers. I bet I could learn a program that would help me work on the transparencies for my presentation.

I also volunteer as a tutor, which would help me work with the kids.

What can you observe workers doing to help you complete your project?

I can take a tour of the airport to help me think of questions for the survey. I can also watch and listen to airport workers to learn the special vocabulary for flying.

What skills can you learn and practice at the workplace to help you complete your project?

I can watch mechanics repair airplanes, which will help me learn about their construction. If possible, I would like to learn how to use some of the tools they need to make repairs. I would also like to try to interview a pilot and ask what it feels like to fly.

EXAMPLE

Want to see an example of a timeline?

Turn the page.

Step 8 – Timeline

The next step in making your workplan is to figure out how much time you need for the project. Using the timeline below, write out everything you need to do and how long each activity will take. When you are done add up the total times.

Above the line:
What do you need to do to produce your **product**(s)?(Step 5)

Below the line:
How long will it take?

Above the line:
What do you need to do to accomplish your **purpose**(s)?(Step 6)

Below the line:
How long will it take?

Step 8 – Timeline...cont.

Want to see an example of a timeline?

Turn the page.

total time:

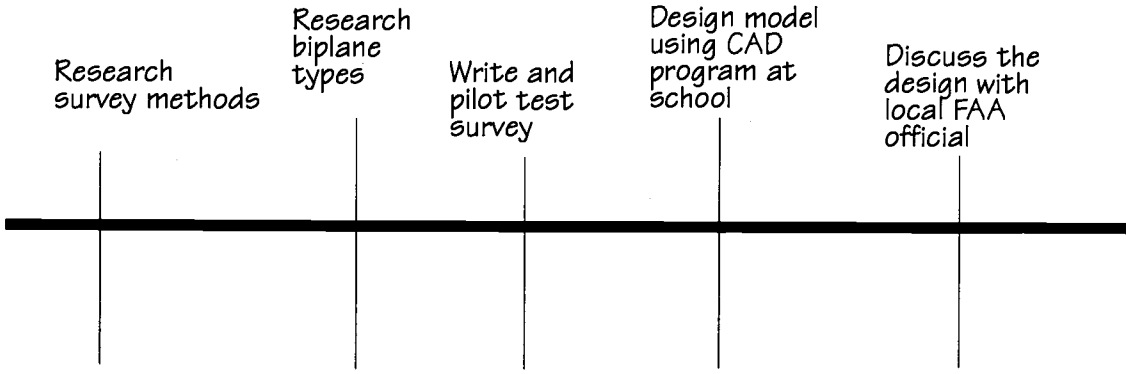
total time:

Make sure you have enough time to complete all the activities for your project.

Step 8 – Timeline...example

EXAMPLE

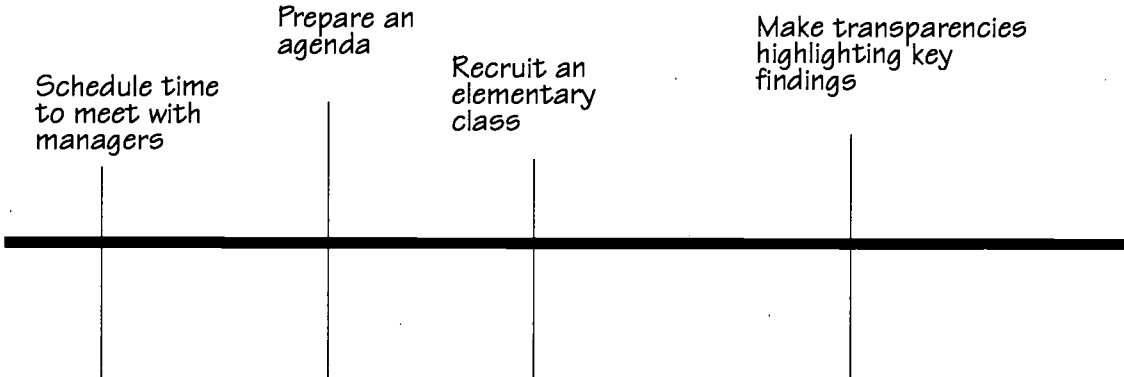
Above the line:
What do you need to do to produce your **product(s)**? (Step 5)



Below the line:
How long will it take?

1 week | 5 days | 2 days | 1 week | 2 days

Above the line:
What do you need to do to accomplish your **purpose(s)**? (Step 6)

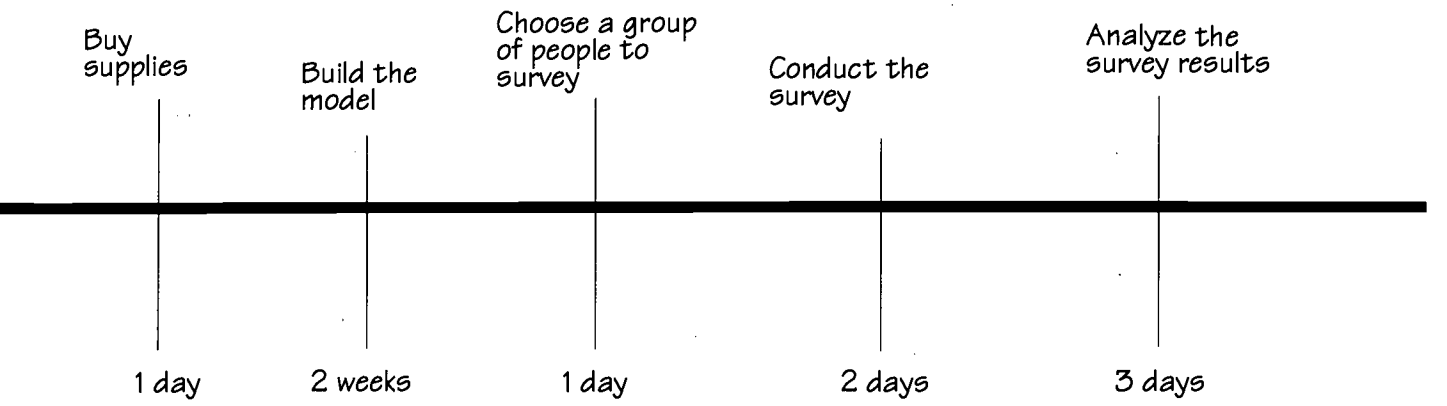


Below the line:
How long will it take?

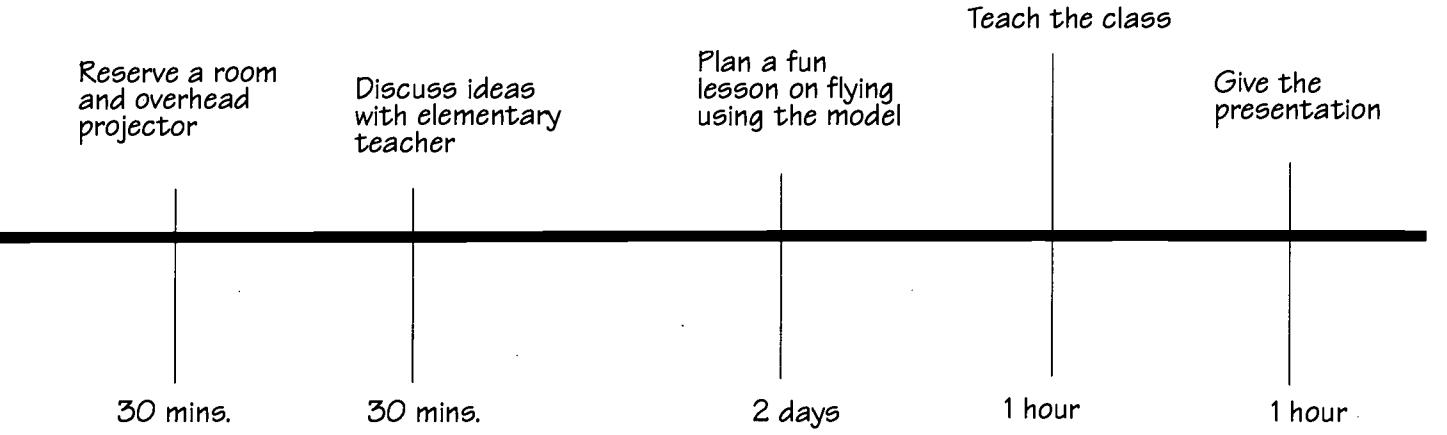
1 hour | 1 day | 1 week | 3 days

Step 8 – Timeline...example

EXAMPLE



total time: 44 days



total time: 13 days, 4 hours

Step 9 – Calendar

Now that you know how long your activities will take, plan when you will do them. Transfer the information from your timeline (Step 8) to the calendar below. Mark important dates for starting and finishing activities and products. Include dates for meetings and any events that affect your project.

EXAMPLE

month: OCTOBER

S	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Oct. 1-8 research survey methods; Columbus Day Oct. 14 – no school; Oct. 15 start researching types of biplanes; Oct. 15. meet with English teacher to start writing survey questions; Oct. 18 use school office phone to call airport to arrange time to meet with managers; Oct. 24 meet with computer teacher to discuss biplane model design

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

134

Step 9 – Calendar...cont.

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

month:

S	M	T	W	Th	F	Sa

Step 10 – Assessment

You have now successfully planned all the elements of your project. The next step is to negotiate with your teacher how your work will be assessed.

The following are some assessment methods you can discuss with your teacher. Put a check by the one(s) you both decide to use. Also, write down the terms for your receiving credit.

- ❑ **Student self-evaluation:** A formal, comprehensive evaluation (written or oral) of the project and the project process.

- ❑ **Teacher-based evaluation:** Teacher uses assessment tools such as rubrics, scoring guides, paper and pencil tests, research papers, seminars, content standards to evaluate student achievement through the project.

- ❑ **Portfolio:** Collect samples of your work throughout the project process to demonstrate mastery of specific skills.

- ❑ **Community members:** Participating employers and other interested members of the community evaluate the project from the perspective of the "real world" outside of school. A student can present the project to them in a variety of ways such as presentation, demonstration, or written report.

- ❑ **Other (specify):** _____

_____

_____

Will the successful completion of the project qualify me for credit? ❑ Yes ❑ No

If yes, specify amount and terms of the credit: _____

_____

_____

Step 11 – Learning agreement

The last step in your workplan is for you, your teacher(s), and the employer/employee(s) at your worksite to sign a learning agreement that spells out everyone's responsibilities.

STUDENT(S)

I recognize that completing this project is a demanding process that will require my serious attention. I realize that I am involving people in the community and that I need to respect their time. My responsibilities are to:

- Complete this planning guide with the help of my teacher(s) and worksite employer/employee(s)
- Meet all deadlines for activities and products indicated on the calendar in Step 9
- Meet with my teacher(s) on a scheduled basis to discuss the progress of the project
- Get approval for any modifications I make to my proposal or workplan as I carry out my project

_____ _____

Student signature Date

_____ _____

Student signature Date

_____ _____

Student signature Date

WORKSITE EMPLOYER/EMPLOYEE(S)

I understand that the student is undertaking a project that will integrate learning at school and the worksite. To assist the student in completing the project, my responsibilities are to:

- Review the project proposal and workplan and ensure it is reasonable given my time and resources at the worksite
- Provide the student access to resources appropriate for completing this project
- Enlist the involvement of other employees if they can be helpful to the student
- Serve as a mentor and guide for the student

_____ _____

Worksite employer/employee Date

_____ _____

Worksite employer/employee Date

TEACHER(S)

I have worked with the student(s) in preparing this project. I recognize that my responsibilities are to:

- Carefully review the student's proposal and workplan for the project
- Meet with the student on a scheduled basis to assess the progress of the project and suggest any modifications
- Serve as a facilitator and coach in the project process, allowing students to identify and solve problems on their own
- Negotiate with the student the conditions for assessing the completed project and granting credit

The student and I have agreed on the following methods of assessment:

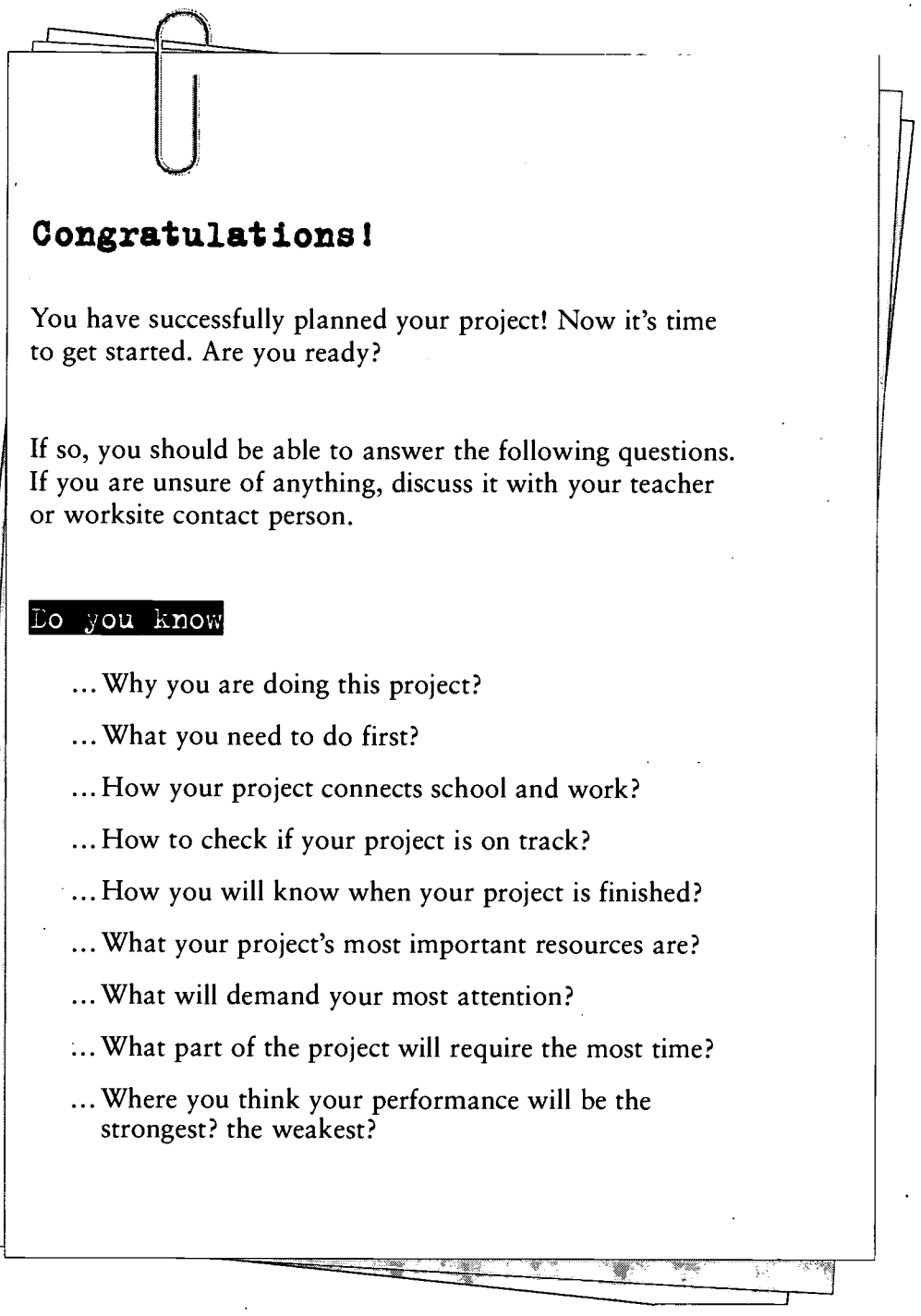
The student will____ or will not____ be granted credit for this project. The conditions of the credit (amount, nature, etc.) are as follows:

Teacher signature	Date
Teacher signature	Date
Teacher signature	Date
Teacher signature	Date

Modifications

Very few things in life go exactly according to plan. As you are working on your project, you may decide to modify your proposal or workplan. Keep track of all the changes you make and get the signed permission of your teacher(s).

MODIFICATION	APPROVED BY



Congratulations!

You have successfully planned your project! Now it's time to get started. Are you ready?

If so, you should be able to answer the following questions. If you are unsure of anything, discuss it with your teacher or worksite contact person.

Do you know

- ... Why you are doing this project?
- ... What you need to do first?
- ... How your project connects school and work?
- ... How to check if your project is on track?
- ... How you will know when your project is finished?
- ... What your project's most important resources are?
- ... What will demand your most attention?
- ... What part of the project will require the most time?
- ... Where you think your performance will be the strongest? the weakest?

NWREL
Education & Work Program
101 SW Main Street, Suite 500
Portland, OR 97204

Phone: 503 / 275-9500
800 / 547-6339
Fax: 503 / 275-0443

Internet: http: / / www.nwrel.org

Connections: Linking Work and Learning

This is a series of products designed to facilitate work-based learning so that youth make informed career choices and experience success in the world of work. Other products in the series include:

Employer Recruitment and Orientation Guide—Helps school staff develop and implement strategies to recruit and orient employers for providing work-based learning experiences for students. The guide includes 15 fact sheets, answering the questions most commonly asked by employers, that can be used for a variety of recruitment and orientation purposes.

Career Exploration Guide—Helps a student explore all aspects of a job/career over the course of several days at a worksite. A companion piece for staff outlines how to plan career explorations that are of maximum benefit to students.

Job Shadow Guide—Helps a student investigate a specific job during several hours at a worksite. A companion piece for staff outlines how to plan and implement effective job shadow experiences.

Learning Site Analysis Form—Used collaboratively by school and worksite staff, this tool helps identify and analyze the learning potential of a worksite.

Survival Skills Guide—Provides strategies for identifying and teaching survival skills essential for independent living.

Learning in the Community: From A to Z—Gives a tour of key concepts and strategies intrinsic to making the community an extension of the classroom.

To order materials in this series, contact NWREL Document Reproduction Service at (800) 547-6339, ext. 519

For information about related staff development workshops, contact NWREL Education and Work Program at (800) 547-6339, ext. 595 or (503) 275-9595.

NWREL
Education & Work Program
101 SW Main Street, Suite 500
Portland, OR 97204

Phone: 503 / 275-9500
800 / 547-6339
Fax: 503 / 275-0443

Internet: http: / / www.nwrel.org

EA028291

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

NOTICE

REPRODUCTION BASIS

☐ This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☑ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").