

**Make Your Own Project-Based Lesson Plan**  
*Develop an educational project that includes a specific outcome while teaching academic skills*



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Instructions based on the five-concept template created by Leecy Wise for Star School teachers, Cortez, CO, 2001-2002



## Topic: Make Your Own Project-Based Lesson Plan

Develop an educational project that includes a specific outcome while teaching academic skills.



### Identify Grade level or Group Here

An integrated lesson plan covering # sessions of approximately # hours each.

Your Name as Lesson Author Here

The following passage is included in all Integrated Learning lesson plans:

### Lesson-Planning Approach

***Students do not learn from what you do, but from what you have them do.***

This is a template for creating project-based lessons. Examples and important information are set in text boxes, while the rest of the text can be used as lesson template. Text and headings that are part of the “Integrated Learning” lesson format are printed in color bands or bold text. For other examples of our project-based lesson plans, refer to our website [www.integratelearning.org](http://www.integratelearning.org).

Some learners perceive their “world” as a whole, where all things are interconnected and dependent upon each other. These “integrated” students face major challenges in coping with our dominant educational, social, and economic systems, which tend to present information in a linear fashion without the necessity of integration into meaningful context. Integrated students are at-risk of failing as they attempt to grasp information in ways that do not match their experience. Among large populations of at-risk students are many from Native American and similar cultures who do not regard their world as a sum of parts but as a blend of all that they experience.

This lesson plan does include some traditional, linear approaches to delivering information (checklists, rules, analysis, problem solving and organization). In addition to the traditional, linear delivery of information, this lesson plan also includes some of the following strategies, designed to appeal to at-risk students as they learn academic/life skills:

Go through this list to insure that all or most of the skills are addressed in your lesson, and edit as necessary:

- ❖ Integration of technology
- ❖ Story telling/anecdotal information
- ❖ Non-competitive group and team work
- ❖ Performance-based assessment and rubrics
- ❖ Visual presentations and practice through technology and other means
- ❖ Project-based assignments that integrate family and community
- ❖ Activities appealing to multiple intelligences (Gardner)

## Lesson Overview

- ❖ First, think of an educational project where students can design, build, create, or otherwise use hands-on or production-oriented skills to make or do “something”. Students learn in project-based instruction by doing, creating, thinking, and making something *that has a meaningful outcome for them*. Academic skills (reading, writing, math, science, etc.) are then incorporated into making “something”. (For example, a Native American student **can learn** to read, write, and perform math and science while building a traditional oven, or scrolling a wood piece for a plaque, or creating a nature walk.)
- ❖ Created items can include anything made by hand: artwork, community service projects, publications, designs, games, science experiments and displays. Projects may also be developed out of relevant community or life events (the change of seasons, traditional ceremonies or rituals, building community playgrounds, rites of passage, working with animals). Projects that incorporate emotional connections for the student enhance the learning process and information retention. If projects related to traditional ceremonies or events native to a culture are developed, care must be taken to include native perspectives and sensitivities regarding the event.
- ❖ Second, briefly describe your project here in the Lesson Overview. What will the students be doing/making? What will they use to do/make it? What additional educational activities are included? What is the outcome and who is it for (self, family, community, office, school, etc)? Remember to *keep it simple* while you develop your project ideas. Projects that can be started and finished within a reasonable amount of time, with a definite outcome will be the most successful and positive for the student and teacher.

**Here are some examples of Lesson Overviews:** “Students can create a travel game using a common road map of the state or area of their choice. The students will be able to interpret map symbols, calculate mileages and scales, use creative writing, and develop map interpretation skills using a fun and creative approach. The game may also be applied to other maps (country or world maps) once the basic game has been created.”

**OR**

“Students will make a poster describing how to activate 911 and give emergency directions from the local emergency response center to a community center or public place. Students calculate mileage, record distances, evaluate most effective and alternate routes, and describe notable landmarks. Students use a word processing program and graphics to design the poster. The lesson also includes reading instructions on handling emergency situations and making emergency calls.”

## **Lesson Objectives**

**Name of Project:** State the **Name of the Project** here. (Examples: Make a Quilt, Make a School Newsletter, Design a Flower Garden for a Community Center, Design and Create flying objects, study and write poetry or other creative writing...)

**Project Objectives: When students complete this project, they will be able to...**

(Use action words here to itemize the skills and abilities that students will develop to complete their project. Again, you may use ideas from [www.integratelearning.com](http://www.integratelearning.com) (and the other websites listed here) for inspiration on projects, activities, and outcomes).

- ❖ **Identify** project components and needs.
- ❖ **Interview** community members or people outside the school if necessary.
- ❖ **Locate** place where project is needed.
- ❖ **Measure and Calculate** all math and numbers needed for project.
- ❖ **Assemble** required materials.
- ❖ **Design and Create** the project itself.
- ❖ **Apply** scientific method where required.
- ❖ **Write** instructions, summaries, statements, findings, or creative writing.
- ❖ **Read and Research** relevant background materials.
- ❖ **Use technology** to research websites, make videos, tape recordings, or use computer programs.

**Here is an example:**

**Project: Create and play a travel game with common road maps.**

**Project Objectives: When students complete this session, they will be able to...**

- ❖ **Understand and Use** a road map.
- ❖ **Create** travel games using a common road map.
- ❖ **Work together** as a group to accomplish game creation and completion.
- ❖ **Research and Interpret** general map symbols and meanings.
- ❖ **Calculate** map mileage and scale.
- ❖ **Write** creative playing cards depicting game rules and travel events.
- ❖ **Use technology** to research maps and map interpretation.

**Include this next section to show the reader specifically how other academic skills will be incorporated into the project:**

**Integration of Other Functional/Academic Skills:** (Critical thinking is required throughout the lesson. Each one of these fundamental academic skills can be integrated with the other to produce a project-based outcome.) Students will be able to...

**Math:** Use math to make necessary calculations for measurements, numbers, or equivalents as necessary for project completion.

**Reading:** Read information on materials related to the project.

**Writing:** Write statements, steps, summaries, outlines, scientific procedures, etc for project. Writing outcomes can include reports, presentations, posters, computer-generated brochures or publications. There are endless possibilities for project-based reading and writing!

**Technology:** Use computers as part of project –based learning to give students hands-on opportunities with technology. Search the internet for relevant sites, use computers to write publications, brochures, design and make spreadsheets, or anything a computer can do to assist in a project outcome.

**Science** Apply scientific method/observation to experiments, procedures, observation, deductions, and conclusions.

## State/National Standards

Colorado State Standards are available on:

<http://www.cde.state.co.us/cdeassess/sci.htm#standards>

Take some time to go through your school or state standards and see which are met by your project. Many standards can be easily met with projects that are meaningful to the student, using academic and functional skills as part of project research and development. List those applicable standards here for use by teachers and administrators.

Here are examples from Colorado State Standards:

### Reading and Writing

1. Students read and understand a variety of materials.
2. Students read, select, and make use of relevant information from a variety of media, reference, and technological sources.

3. Students write and speak using conventional grammar, usage, sentence structure, punctuation, capitalization, and spelling.
4. Students apply thinking skills to their reading, writing, speaking, listening, and viewing.

### **Mathematics**

3. Students use data collection and analysis, statistics, and probability in problem-solving situations and communicate the reasoning used in solving these problems.
4. Students use a variety of tools and techniques to measure, apply the results in problem-solving situations, and communicate the reasoning used in solving these problems.

### **Science**

1. Students understand the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations.
3. Life science: Students know and understand the characteristics and structure of living things, the processes of their life, and how living things interact with each other and their environment.
5. Students know and understand interrelationships among science, technology, and human activity and how they affect the world.
6. Students understand that science involves a particular way of knowing and understand common connections among scientific disciplines.

### **Websites**

The purpose of this section is to provide internet resources for students and teachers to conduct research and acquire information online, and to familiarize students with technological resources. Choose websites and computer activities that are at an appropriate reading level for your students, and offer enough background information and links for researching the project. A handout of useful and interesting websites that focus on project-based and multiple-intelligence based education is presented as an attachment to this lesson.

#### **Required:**

List required websites here.

#### **Support:**

List websites that offer further reading, activities and information on your project.

### **Pre-requisites (Skills required to process project)**

**Include skills required to process and complete the project**

#### **Examples:**

Read at fifth grade level or above.

Possess basic computer skills to conduct word processing and search the web.

## Required Materials

List all materials needed for your project here. You may include any materials needed to build, make, or otherwise complete your project, as well as places, catalogs, or websites to acquire your materials.

## Handouts

Refer to your handouts throughout your lesson plan. Handouts can include science experiments, detailed instructions, project designs and templates, references, and any additional material to complete the lesson. Handouts are intended to complement and provide supplemental material for the actual lesson plan covered here. Remember to include all handouts. Examples include:

### Handouts for this Lesson:

**Handout One:** [Website Resources for Innovative Teaching and Learning](#) (end of this lesson)

**Handout Two:** Lesson Rubric (each lesson must have a rubric to assess project accomplishment and understanding)

## Required Equipment/Technology

List technological equipment here, such as network accessible computers, word processing, graphics, or spreadsheet programs and printer, additional programs, or video cameras, needed to complete the lesson.

## THE LESSON

Here is the nitty-gritty of the project development and instruction! The lesson format has been laid out in three major steps: *Preparation*, *Practice*, and *Performance*. This simple sequence provides learners with a way to approach, organize, and implement their project successfully. In this section, write out concise steps for both students and teachers to follow to develop their project. “Activity” refers to the specific activity for the students to perform, “Instructor Notes” are notes and references for teachers. “ET” stands for Estimated Time to complete each step of the project (not how many “aliens” it takes to complete each step

**Note: As you plan your lesson, REMBER: Students do not learn from what you do as much as from what you have them do. (ET= Estimated Time)**

### Preparation (Prepare for project here.)

As you design your lesson plan, include all handouts and references to handouts or supporting materials clearly so that other instructors can navigate your plan easily. For example, if you present students with a model (good idea!) of what you expect them to produce, include the model or replica or photo of it in the lesson plan, referring to its use in the preparation section.

Activity	Instructor Notes	ET
1. Discuss the topic of your project. Think about what you already know about the subject and why it is important. How can this project be meaningful for <u>you</u> ? Ask yourself “How can I do this?” “What do I need to do this?”	<b>Introduce the project to your group. This is the time to introduce and discuss the main concepts behind your project (i.e. teamwork, health, community improvement). Establish prior knowledge of the subject with your group. The goal here is to make this project personally meaningful to the student. Point out ways that the outcome of the project will relate to <u>them</u>. A great way to capture interest is to include a joke, fable, or storytelling related to the topic. <u>Many students begin to relate to the lesson ONLY when they are engaged in group discussion, story-telling or other conversational devices.</u></b>	<b>Take about 20 minutes to an hour.</b>
2. Discuss lesson rubric.	<b>Introduce the rubric at this point</b>	<b>10-15</b>

	to let the students know what is expected and important in the lesson. Use the rubric to explain specific assessments. (Rubrics are performance-based assessment devices that judge progress on performance, not isolated knowledge about the topic.)	minutes
3. Prepare for your project. Choose your place, people, things, or methods to complete it. <b>Outline or list the steps you or your group will need to take.</b> Remember to include people as helpful resources if you need them!	<b>You may divide your class into groups at this point if necessary. Assist the students in thinking through their preparations. Remember, students learn by doing: when you find they are at an impasse, ask them “How can we accomplish this step? How can we get this done?” Allow the students to experience self direction and construct their place in community involvement.</b>	<b>20 minutes; may need to extend into another session</b>

**Practice and Process (Preliminary information is gathered, background research tfor project is conducted.)**

<b>Activity</b>	<b>Instructor Notes</b>	<b>ET</b>
1. Review handouts as needed.	<b>Develop handouts to supplement the lesson plan. Handouts should include directions for activities such as laboratory work, steps to complete artwork, or other specific sequences for the students to follow. And remember, creativity and fun is a good ingredient to include for learning success!</b>	<b>As needed</b>
2. Research websites	<b>Incorporate website content into basic academic skills such as reading and writing assignments.</b>	<b>As needed</b>
3. Conduct additional activity to develop understanding and completion of project.	<b>You may have the students conduct brief activities that enhance understanding of the project such as a laboratory experiment, science activity, interviews, field trips, or other activities that allow the students</b>	<b>As needed</b>

	<b>to become familiar with the subject.</b>	
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### Performance (show end product)

Activity	Instructor Notes	ET
1. Put together the pieces of the project (build, write, develop, interview...whatever steps are needed to complete the project). Do the computer work and/or hands-on work.	<b>Review the steps needed to complete the project. Have the students organize all their material into a final format.</b>	<b>As needed</b>
2. Submit final project for first review, edits, and changes.	<b>Review all project materials for changes and improvements.</b>	<b>As needed.</b>
3. Make changes to project as needed.		
4. Present the completed project to class, school group, community or other involved group. Good job!		
4. Review Lesson rubric. Do self-assessment.	<b>Review lesson rubric</b>	<b>As needed</b>

### Lesson Assessment Strategy

**These are general questions to use in assessment of your lesson. If your lesson is to be used by other teachers,**  
Preparation, Presentation and Overall Implementation (Instructor)

1. Are the instructions and expectations for the class clear from the beginning?
2. Am I spending sufficient time on modeling the skills I want students to acquire?
3. Is there enough variety in the lesson to appeal to most learning preferences?
4. How many learning intelligences am I addressing?
5. Are students “connecting” to lesson objectives? How?
6. How is this lesson “integrated”?

### Performance and Practice (Student)

1. Do all students have the skills to follow instructions? If not, what measures am I taking to address the challenge?
2. Are all students participating in the activities either by active observation or by voicing their thoughts?
3. Am I identifying the strengths of each student and pairing/grouping people accordingly? What results am I getting?

4. How are students performing? Are all of them able meeting 80% of the lesson objectives? If not, what am I doing to help them achieve more?

## Technology

1. Is the technology working?
2. How are students reacting to the technology, and what do I need to remember when I teach this lesson again?  
How are students applying or wanting to apply their technical skills in other areas?

### Activity Checklist

a. Discuss the topic of your project.
b. Discuss rubric, goals, and expectations.
c. Outline steps needed to complete project.
d. Get permission if needed.
e. Review handouts.
f. Read websites.
g. Do activity if included.
h. Build/do/make/project.
i. Review/edit your project.
j. Present project.
k. Review lesson rubric. Perform assessments.

Congratulations! You have just reviewed your first project-based lesson plan. We hope this will help you in developing projects for the health, happiness, and learning for your own students! To contact us, make suggestions, and find out more about project-based experiential learning, visit us at [www.integratelearning.org](http://www.integratelearning.org) ! See you there!

## Handout One: Related websites

Web Site URL	Description/Notes
<a href="http://www.lausd.k12.ca.us/Lincoln_HS/Burleson/Lessons/wind/">http://www.lausd.k12.ca.us/Lincoln_HS/Burleson/Lessons/wind/</a>	Webquest
<a href="http://www.aag.org/ARGUS/ARGUS.html">http://www.aag.org/ARGUS/ARGUS.html</a>	Geography
<a href="http://www.geology.usgs.gov/index.shtml">http://www.geology.usgs.gov/index.shtml</a>	US Government site including geology projects
<a href="http://www.internet4classrooms.com/lesson.htm#misc">http://www.internet4classrooms.com/lesson.htm#misc</a>	A must! Find out about great resources for teachers
<a href="http://www.yourhomework.com/">http://www.yourhomework.com/</a>	Post assignments and enhance teacher-parent-student communication
<a href="http://wwwpsychwww.com/mtsite/index.html">http://wwwpsychwww.com/mtsite/index.html</a>	Mind tools to help you think excellently
<a href="http://www.privatelessons.net/computer.asp">http://www.privatelessons.net/computer.asp</a>	Private lessons channel: learn computer technology and other courses online
<a href="http://www.geocities.com/robertcgalloway/pedagogymiller2.html">http://www.geocities.com/robertcgalloway/pedagogymiller2.html</a>	Bob Galloway's site has a summary of one of Miller's works
<a href="http://www.whole.org/">http://www.whole.org/</a>	Whole.Org is a good source of information
<a href="http://www.haven.net/edge/council/miller.htm">http://www.haven.net/edge/council/miller.htm</a>	Public Education, Alternative Schools and Democracy
<a href="http://www.neat.tas.edu.au/HENT/world/dds/freedom.htm">http://www.neat.tas.edu.au/HENT/world/dds/freedom.htm</a>	Freedom and Structure in Holistic Education
<a href="http://www.spinninglobe.net/chall1_4rev.htm">http://www.spinninglobe.net/chall1_4rev.htm</a>	Challenging the Giant
<a href="http://www.thecommunityschool.org/articles/AR_2000.pdf">http://www.thecommunityschool.org/articles/AR_2000.pdf</a>	The Community School
<a href="http://www.thecommunityschool.org/">http://www.thecommunityschool.org/</a>	This school is in Maine and appears to be very successful...school homepage
<a href="http://www.askeric.org/Virtual/Lessons/Guide.shtml">http://www.askeric.org/Virtual/Lessons/Guide.shtml</a>	Ask Eric Write a Lesson plan
<a href="http://www.lessonplanspage.com/WriteLessonPlan.htm">http://www.lessonplanspage.com/WriteLessonPlan.htm</a>	Lesson Plans Page: 10 steps to developing a quality lesson plan
<a href="http://www.proteacher.com/020001.shtml">http://www.proteacher.com/020001.shtml</a>	Pro Teacher lesson planning
<a href="http://www.thirteen.org/edonline/concept2class/month3/implementation.htm">http://www.thirteen.org/edonline/concept2class/month3/implementation.htm</a>	Teaching to academic standards
<a href="http://interactive2.usgs.gov/learningweb/teachers/lesson_plans.htm">http://interactive2.usgs.gov/learningweb/teachers/lesson_plans.htm</a>	The USGS has some interesting interdisciplinary lesson plans
<a href="http://cuip.uchicago.edu/wit/2000/curriculum/homeroommodules/assessEdSites/lessrubric.htm">http://cuip.uchicago.edu/wit/2000/curriculum/homeroommodules/assessEdSites/lessrubric.htm</a>	This U. of Chicago has an interesting rubric
<a href="http://intranet.cps.k12.il.us/Lessons/StructuredCurriculumTOC/structuredcurriculumtoc.html">http://intranet.cps.k12.il.us/Lessons/StructuredCurriculumTOC/structuredcurriculumtoc.html</a>	Chicago Public School system has developed a series of handbooks
<a href="http://www.csum.edu/~vceed002/ref/plans/plans.html">http://www.csum.edu/~vceed002/ref/plans/plans.html</a>	Sourcebook for Teaching Science
<a href="http://www.tapestryweb.org">http://www.tapestryweb.org</a>	Institute for Philosophy, Religion, and Life Science: integrated knowing

# Handout Two: Lesson Rubric

**Name:**  
**Teacher:**  
**Date:**  
**Course:**

**Name of Your Project or Lesson Here**

(Describe here the task or performance that this rubric is designed to evaluate.)

	<b>Beginning</b>	<b>Developing</b>	<b>Accomplished</b>	<b>Exemplary</b>	<b>Score</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
Stated Objective or Performance	Description of identifiable performance characteristics reflecting a beginning level of performance.	Description of identifiable performance characteristics reflecting development and movement toward mastery of performance.	Description of identifiable performance characteristics reflecting mastery of performance.	Description of identifiable performance characteristics reflecting the highest level of performance.	
Stated Objective or Performance	Description of identifiable performance characteristics reflecting a beginning level of performance.	Description of identifiable performance characteristics reflecting development and movement toward mastery of performance.	Description of identifiable performance characteristics reflecting mastery of performance.	Description of identifiable performance characteristics reflecting the highest level of performance.	
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Stated Objective or Performance	Description of identifiable performance characteristics reflecting a beginning level of performance.	Description of identifiable performance characteristics reflecting development and movement toward mastery of performance.	Description of identifiable performance characteristics reflecting mastery of performance.	Description of identifiable performance characteristics reflecting the highest level of performance.	

Other rubric styles are available at [www.webquest.matrix](http://www.webquest.matrix), [www.integratelearning.org](http://www.integratelearning.org), and other sites listed in the above attachment.