



El Dorado County Career Technical Partnership

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Title: Timber Harvest Plans (THP) the Good, the Bad, and the Ugly.		
Content Area: Economics	Grade: 12	Duration: 1Block Period
Career Technical Industry Sector:	X	Agriculture and Natural Resources
		Hospitality, Tourism, and Recreation
Standards and Benchmarks:	<p>Economics Content Standards for California Public Schools:</p> <p>12.1 Students understand common economic terms and concepts and economic reasoning.</p> <ol style="list-style-type: none"> 1. Examine the causal relationship between scarcity and the need for choices. 4. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources. <p>12.3 Students analyze the influence of the federal government on the American economy.</p> <ol style="list-style-type: none"> 1. Understand how the role of government in a market economy often includes providing for national defense, addressing environmental concerns, defining and enforcing property rights, attempting to make markets more competitive, and protecting consumers' rights. <p>Agriculture and Natural Resources Industry Sector</p> <p>Forestry and Natural Resources Pathway Standards:</p> <p>E12.0 Students understand the use, processing, and marketing of products from natural resource industries:</p> <p>E12.5 Know lumber manufacturing processes. E13.0 Students understand public and private land issues:</p> <p>E13.1 Understand the differences between publicly and privately held lands. E13.4 Understand the role of government in managing public and private property rights.</p> <p>SCANS Occupational Competencies:</p> <p>Information: Acquires and uses information.</p> <p style="text-align: center;">C5 Acquires and evaluates information. C6 Organizes and maintains information. C7 Interprets and communicates information</p> <p>SCANS Occupational Foundation Skills:</p>	



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	<p>Basic Skills: Reads, writes, performs arithmetic and mathematical operations, listens, and speaks.</p> <p>F1 Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.</p> <p>F2 Writing: Communicates thoughts, ideas, information, and messages in writing; creates documents such as letters, directions, manuals, reports, graphs, and flowcharts.</p> <p>F5 Listening: Receives, attends to, interprets, and responds to verbal messages and other cues.</p> <p>F6 Speaking: Organizes ideas and communicates orally.</p>
<p>Objectives:</p>	<ul style="list-style-type: none"> • Students will be able to identify in writing the multiple benefits of utilizing a (THP)-the Good. • Students will be able to express in writing the costs of a current (THP) in California-the Bad, and the Ugly.
<p>Resources and Materials:</p>	<p>Whiteboard and markers, Paper and pencil, Overhead projector,</p> <p>Handouts and/or transparencies:</p> <p>(1) 1997-2007 Timber Harvest Trends,</p> <p>(2) Biomass Energy,</p> <p>(3) 2000-2009 Closures,</p> <p>(4) (THP) Process,</p> <p>(5) California Timber Harvest Statistics,</p> <p>(6) Job Creation per \$1 Million Investment,</p> <p>(7) CA's Forest Products Industry and Timber Harvest, 2006,</p> <p>*(8) Balancing Climate Change</p> <p>*for advanced students.</p>



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	<p>Higher level students:</p> <p>Peer teaching (Higher level student working with an EL or resource student)</p> <p>Higher level student will assist with note-taking and organizing written product.</p> <p>Lower level students:</p> <p>Lower level students can be given more time for completion and/or the use of a computer for the production of finished product. For example: the lower level student may use a computer and turn in the assignment at the beginning of the following class period.</p>
<p>Preparing Students for the Lesson:</p> <ul style="list-style-type: none"> • Transitions • Expected Behaviors 	<p>Transitions:</p> <p>Prior to this lesson, students would have spent at least one class period studying the role of government in a market economy. Also, students would have read and discussed "Background Information- Forests: Issues and Answers" published by Project Learning Tree copyright 1998.</p> <p>Expected Behaviors:</p> <p>Students are expected to have their notebooks ready to produce notes. For example, many students utilize the Cornell Notes format. One student at a time will be at the whiteboard to model notes during the guided practice portion of the lesson plan. Teacher will ask questions and students are expected to answer these questions followed by a teacher guided discussion. Eventually, students will produce a document derived from their class notes and their interpretation of the classroom discussion.</p>
	<p>Motivation/Anticipatory Set:</p> <p>The management of our forests in California has far reaching consequences not only for those of us who live near these beautiful natural resources but also for the world. It is critical for our governments to balance the manifold needs that our forests can provide. We cannot afford to consider only one perspective on the use of our forest resources. We must include different points of view in order to reach the proper balance of the costs and benefits of managing our forests for today and tomorrow.</p> <p>Pre-Assessment/ Activating Background Knowledge:</p> <p>The recent fires that have devastated California and other western states are evidence that forest management in the last 100 years has not produced the desired effect of wildfire suppression. This failure has polluted our air, destroyed wildlife habitat, endangered watershed, and ruined recreation in some areas for a generation. Families in El Dorado county have suffered because of the recent closure of the SPI mill in Camino. These jobs have been lost primarily because of the lack of raw materials needed to keep the mill</p>



active. Although, the economic recession has also contributed to job loss.

Teacher Input, Modeling, & Checking for Understanding:

Note: Teacher input, modeling, and checking for understanding will continue through the guided practice part of this lesson.

When making an economic decision, it is important to consider all of the costs and benefits of that decision. Today, we will examine the benefits as well as the costs of (THP) in California. If executed properly and in a timely fashion, the (THP) should provide for recreation, watershed, wildlife, fisheries, regional economic vitality, employment, fire suppression, biomass energy, archeological preservation, raw materials for forest products, and aesthetic enjoyment.

Guided Practice:

Teacher asks- What products do you use that would be classified as timber products?

One student will write down class responses on the white board as all students add to their notebooks.

Example responses may include but not be limited to: lumber in their homes, paper, wood pencils, firewood, books, cardboard, newspapers and magazines, toilet paper and facial tissue, cork, cosmetics, paint, soap, etc.

Teacher asks- Besides the products that you use every day, what other benefits can you identify from a well managed forest?

Another student writes down responses on the white board as all other students add notes to their notebooks.

Teacher helps the class to organize their responses into the following categories:

- (1) Timber Products,
- (2) Jobs,
- (3) Wildlife Habitat (for mammals, fish, reptiles, birds, etc.),
- (4) Watershed (clean and abundant water supply),
- (5) Recreation,
- (6) Clean Air,
- (7) Renewable Energy (biomass energy),
- (8) Fire Suppression,



(9) Archeological Sites,

*(10) Sequestered Carbon

*advanced students only, such as AP

Teacher can explain and provide examples for 1-10 above. This is the Good.

Teacher asks- What are the costs of using a (THP)?

Another student writes down responses on the whiteboard while all students add to their notebooks.

When students have exhausted their responses the teacher will add the following.

The (THP) in California costs \$75,000. In Oregon and Washington (THP)'s cost \$7,500. In Canada, the Canadian government subsidizes the costs of timber production. This makes it very difficult for California companies to compete nationally and globally. This contradicts the government's goal of keeping markets competitive. This has been one of the reasons for the loss of infrastructure for wood products in California in general and in El Dorado county in particular. Increased production costs causes lower output or lower productivity. This translates into fewer jobs and higher unemployment.

Another problem associated with (THP) in California are the time delays in the process. In business, time is money. California government has had to cut back because of the recession. This means there are fewer people to execute the process. Something that should be checked and filed in 10 days is taking three weeks. The plan now requires from 60 to 200 pages. By law it should take 41 to 71 days, but in reality it is taking about one year.

Another problem concerns supply and demand. Demand for lumber closely tracks Housing Starts. During a slowdown in the economy, companies may not want to utilize their (THP)'s. But (THP)'s can expire and when they cost \$75,000 to produce, companies cannot afford to wait out an economic recession. This is the Bad and the Ugly.

Independent Practice:

After students and teacher have finished their discussion, students will be given the following prompt.

We have learned that there are costs and benefits associated with every economic decision. Requiring (THP)'s in California has benefits (the Good) and costs (the Bad and the Ugly). Using your notebooks and anything we discussed in class, please, identify as many benefits and costs of (THP)'s in California as you can. This should be done in your best written prose, a minimum of one sheet of notebook paper. Due today before you leave.

Closure:



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	<p>Nearly, 100 years ago the nation embarked on a plan to extinguish all forest fires in the United States. Some people refer to this as the "Smokey the Bear" plan. The result of this plan has been the creation of forests that are too densely populated with trees. When John Muir traversed the Sierra Nevada, there was an average of 100 trees per acre. Today, that average is 300 trees per acre. The result is a situation that has left our forests more vulnerable to catastrophic wildfires. The best of our modern science can now help us manage our forests more naturally. This scientific, well balanced approach to forest management gives us reason to hope that the future will bring thriving healthy forests.</p> <p>George E. Gruell's book, <i>Fire in Sierra Nevada Forests</i>, is an excellent photographic illustration to close this lesson.</p>
<p>Assessment:</p>	<p>(See attached rubric)</p>
<p>Notes & Reflections:</p>	

<p>Externship Sites:</p>	<p>Sierra Pacific Industries Lincoln Mill</p>	<p>The Forest Foundation Auburn, CA</p>	<p>Sierra Pacific Industries El Dorado Forest Land</p>
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