

Grade: 6-8 | Time: 2-4 Hours

# PICK A PERMIT

Essential Question:

**How do permits and regulations guide mine development and regulation?**



## Overview

Students research to find basic information about a variety of permits required for mining, and simulate agencies devising rules and regulations for commercial use of a school resource.

## Vocabulary

- Royalty
- Artifact
- Profit
- Visual Impact
- Surface Right

## Assessment

Can students:

- Explain the importance and discuss the difficulties associated with natural resource regulations and permits?
- Identify the general responsibilities of government agencies that issue permits?

## Teacher Information and Procedure

**Prior knowledge for students:** Group cooperation skills, internet research skills.

**Source:** New (Graphics from Depositphotos.com)

### Materials needed

Internet access

### What to do in advance

Download and print the document that summarizes the Large Mine Permitting Process in Alaska from <http://www.dnr.state.ak.us/mlw/mining/largemine/index.htm>

Research and add names of permits issued by your local government to the “Permits for Mining” list, if desired.

## Alaska Standards Addressed

### Science GLEs

The student demonstrates an understanding

### Geography

D5) analyze how conflict and cooperation shape social, economic, and political use of space. F3) analyze resource management practices to assess their impact on future environmental quality;

### Government and Citizenship

C1) understand the various forms of the state’s local governments and the agencies and commissions that influence students’ lives and property; 7) understand the obligations that land and resource ownership place on the residents and government of the state

### Alaska English/Language Arts and Mathematics Standards (2012)

- RSL.6-8.1, RSL.6-8.4, RSL.6-8.7, RSL.6-8.8
- SL.6-8.1, SL.6-8.4

Cut up the “Permits for Mining” sheet into small pieces that can be drawn from a hat or box.

## Teaching the Lesson

### Gear-up

Make copies of the “Large Mine Permitting Process in Alaska” summary and the Agency List available to students. Have each student draw a permit name, find it on the summary list, and then research it (could be assigned as homework) to answer these questions:

- Who has to have this permit?
- What do they have to do or provide to get the permit?
- What is the reason for the permit? (protection of fish, water, property rights, etc.)

Some of the permit information may be difficult to find. If students are unable to answer the questions they should be ready to explain where they looked and get suggestions from the class for further searching.

## Explore

Ask students to report their research to the class, as follows. Ask the students “Who found out about a permit that helps to protect water?”, have each student tell about their permit. Follow with similar questions for: air, wildlife, fish, habitat, property rights, access, safety, visual resources, cultural resources, and “other” until all students have had a chance to report.

Ask students what they think about permits. Why do they exist? What are some of the pros and cons of permitting. Is it necessary to have so many permits? What if there were no permits? Are there other ways to control the impacts of mining?

Tell the students to imagine that there is a valuable blueberry patch on the school grounds that is owned equally by all of the students in the school. (Substitute another resource like gravel or Morrell mushrooms if there is one that’s more relevant!). The school’s ski club wants to pick and sell the blueberries so that they can make money for their trip to the state tournament.

It is up to your class to insure that any harvesting and selling of blueberries is done in a manner that protects the best interests of the whole school.

Divide the class into committees to make rules, using the “Class Agencies” handout.

Each committee will come up with rules and a list of tasks that any club needs to carry out before harvesting and selling the school’s blueberries, and present their rules, tasks, and processes to the class.

## Generalize

Compile a class list of all the rules and tasks. Are any

of the rules or tasks similar? Why would it benefit the school to let clubs harvest blueberries and how could you make it easier for them. As a class, or in small groups, come up with a single permit application for a club to fill out before they can sell blueberries. Decide who will review and approve the permit.

Discuss how your process compares to the process that mine developers must go through before they are allowed to mine.

## Assess

Ask each student to:

Write about the importance and the challenges of regulations, rules, and permits in managing natural resources. What are the important responsibilities of government agencies that manage resources?



Company Name \_\_\_\_\_

## PERMITS FOR MINING

Plans of Operation Approval.	DNR	Certificate of Reasonable Assurance for 402 and 404 Permits	ADEC
Reclamation Plan and Bond Approval.	DNR	Storm Water Discharge Pollution Prevention Plan	ADEC
Surface Coal Mine Permit.	DNR	Air Quality Permits.	ADEC
Right-of-Way for Access and Utilities.	DNR	Approval to Construct and Operate a Public Water Supply System.	ADEC
Mill Site Lease.	DNR	Plan Review for Non-Domestic Wastewater Treatment System	ADEC
Title 41 Permit.	DNR	Plan Review and Construction Approval for Domestic Sewage System.	ADEC
Permit to Appropriate Water	DNR	Oil Discharge Prevention and Contingency Plan	ADEC
Dam Safety Certification	DNR	Special Areas Permit	ADF& G
Upland or Tideland Leases.	DNR	Scientific Collection Permit	ADF& G
Material Sale.	DNR	Section 402 NPDES Permit.	USEPA
Winter Travel Permits	DNR	Section 404 Permit	USACOE
Cultural Resource Protection	DNR	Section 10 Permit	USACOE
ACMP Consistency Review	DNR	Federal Landowner Approval	USFS, BLM
Waste Management Permit	ADEC	Section 7 Consultation	NMFS
Domestic and Non-Domestic Wastewater Disposal Permits	ADEC	Local Government Permits	

## Permitting Agencies

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- DNR ..... Alaska Department of Natural Resources, Division of Mining, Land, and Water  
<http://www.dnr.state.ak.us/mlw/mining/index.htm>
- ADEC ..... Alaska Department of Environmental Conservation  
<http://www.dec.state.ak.us/>
- ADF&G ..... Alaska Department of Fish and Game  
<http://www.adfg.state.ak.us>
- USEPA ..... United States Environmental Protection Agency  
<http://www.epa.gov/>
- USACOE ..... US Army Corps of Engineers  
<http://www.usace.army.mil/Pages/default.aspx>
- USFS ..... United States Forest Service  
<http://www.fs.fed.us/>  
<http://www.fs.fed.us/recreation/permits/forms.htm>
- BLM ..... Bureau of Land Management  
<http://www.blm.gov/nhp/index.htm>  
<http://www.fs.fed.us/recreation/permits/forms.htm>
- NMFS..... National Marine Fisheries Service  
<http://www.nmfs.noaa.gov/>

## Class Agencies

- The Financial Resource Protection Agency. Decides how to protect the school's financial interests and distribute profits from any blueberry sales. How much of the sales income will be paid as "royalties" to the school? How much can the harvesters keep, to pay for their harvesting expenses and their effort? How will you know how much profit they really are making? What will be the process for collecting money from harvesters?.

- The Competing Uses Agency. Decides how to protect the competing uses for the resource. How will you know if the resource is being used by wildlife and if it is, how will you protect the needs of the wildlife? How will you know if the resource is being used by students who like to pick blueberries for fun and recreation, or by students who like to have a blueberry snacks to supplement their lunch? How will you protect the needs of those users? How will you be sure that the blueberries will be available for future students at the school, and not be over picked. What rules will you have and what will the potential blueberry sellers need to find out and do before picking the berries.

- The Access and Property Rights Agency. Decides how to protect the rights of others who use the land where the blueberries are growing. How will you find out if students or other people walk through the area on their way to or from school? How will you find out if there are other planned or existing uses of the land. How will you insure that students who need it have access to the blueberry patch and the harvesters and sellers won't keep them out or get in their way? What happens when several groups want to pick and sell blueberries at the same time? How will you determine who gets to pick them, how much, and when?

- The Environmental Impacts Agency. Decides how to protect the air, water, visual resources, and cultural resources of the berry patch. How will you know if there are any water resources (streams, ponds, groundwater) that might be affected by blueberry picking? What are some of the things blueberry pickers could do to pollute the water or the air, and how will you prevent them from doing that? How do you know if the pickers will change the way the patch looks? How do you prevent them from turning it into an ugly eyesore. How will you know if there are any artifacts or gravesites among the blueberries that could be destroyed?