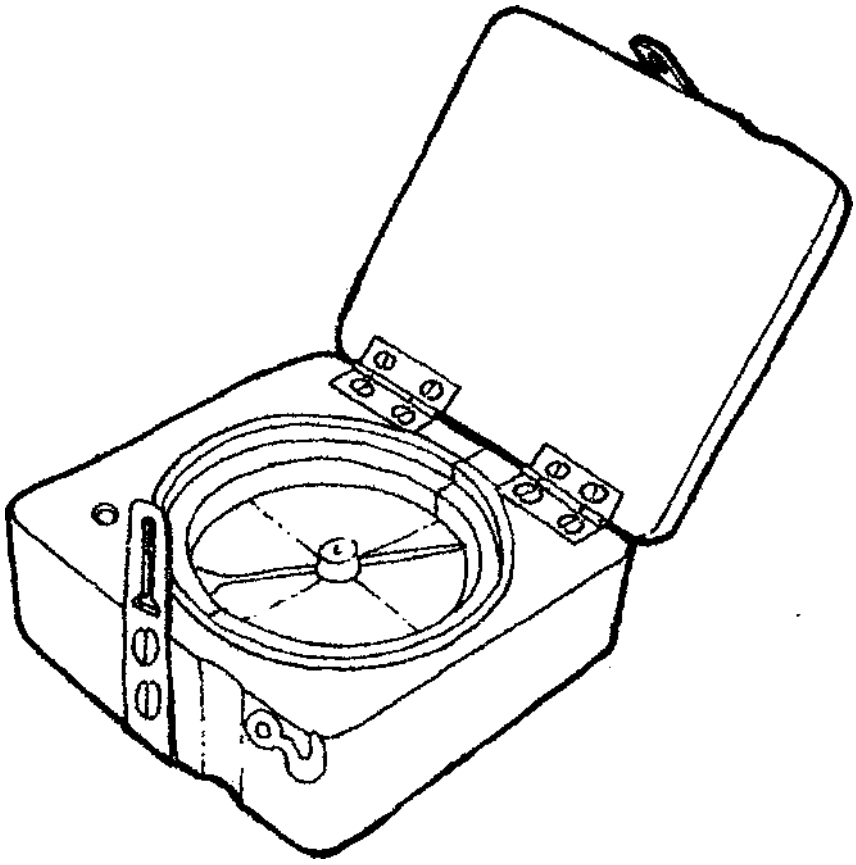
Explorers
of the
Pacific Northwest



An Education Resource Guide

Bureau of Land Management

National Historic Oregon Trail Interpretive Center

Baker City, Oregon

National Historic Oregon Trail Interpretive Center

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Bureau of Land Management
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National Historic Oregon Trail Interpretive Center

Trail Tenders, Inc.

Eastern Oregon University

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Content of this guide was developed by the Interpetive Staff at the National Historic Oregon Trail Interpretive Center, volunteers of Trail Tenders, Inc., and Eastern Oregon University students Michael Pace and Jim Dew. Artwork is by Tom Novak. Project co-ordination and layout by Sarah LeCompte. The Staff of the Interpretive Center and Trail Tenders would like to thank teachers from Baker City, Oregon 5J School District and North Powder, Oregon School District for their assistance in reviewing and test piloting materials in this guide.

Introduction to Using This Guide

This Education Resource Guide is designed for use by teachers and other educators who are teaching the history of the exploration of the Northwestern United States. Some activities are designed for the classroom while others are specific to the Interpretive Center and would necessitate a field trip to the site. This guide is designed for use by fourth grade teachers who traditionally teach Oregon history, but many activities can be adapted to younger or older students.

This guide can be used to help meet benchmark one, benchmark two, and common curriculum goals in U.S. History and Geography.

We encourage educators to use this guide to prepare students for a site visit to the Center.

Feel free to make copies of any portion of the guide for classroom use.

The Interpretive Center has a web site that may be of some assistance to you when working with your class. The address is oregontrail.blm.gov.

About Historical Quotes

Many of the historical quotes used in this education guide retain original spellings and grammar as written. Standardized spelling and grammar as we know it today developed after the era of the explorers. These discrepancies may need to be explained to students.

Visiting the National Historic Oregon Trail Interpretive Center

As you begin planning your visit to the Interpretive Center, please contact us to schedule a date and time. This ensures that your students have a productive and enjoyable visit and the Center is not overwhelmed with too many groups on a particular day. Please make arrangements as far in advance as possible; popular dates tend to fill up quickly. Call 541-523-1843 for more information about planning a visit.

Questions?

If you have any questions or suggestions concerning the Explorers Guide or your visit to the Interpretive Center, please contact the Education Coordinator at 541-523-1843. E-mail: Nhotic_Mail@or.blm.gov. Or write to: Education Coordinator, National Historic Oregon Trail Interpretive Center, P.O. Box 987, Baker City, Oregon 97814.

Table of Contents

Theme:

The rapid expansion of the United States between 1800 and 1850 presented the Euro-Americans with vast tracts of unexplored land that connected the east to the west. Exploration of this land was first fueled by profiteers in the fur trade, then by missionaries and finally settlers looking for land and gold. The United States government sponsored several military expeditions to explore and map newly acquired lands. Exploration initiated contact and relationships between Native Americans and Euro-Americans.

Objectives:

After students have completed the activities in the resource guide, the following will be accomplished:

1. Students will be able to explain the three primary reasons behind exploration of the Northwest.

2. Students will demonstrate basic map reading and compass reading skills.

3. Students will be able to list at least two effects that Euro-American exploration had on Native Americans.

4. Students will be able to identify at least two ways that the Euro-American explorers overcame the language barriers with the Native Americans.

Description of Units

History of the Explorers
Narrative overview of the Pacific Northwest explorations. This provides a review for instructors, and may be used as a reading exercise for more advanced students. Included is a time line and background information useful for preparing lessons about explorers to the Pacific Northwest.

Forward Into the Unknown
Students investigate the concept of exploring new un-charted lands. What do they expect? How will they get to where they are going? How will they know they have arrived? How will they get home?

A Clash of Cultures
Whenever two cultures meet there is likely to be a struggle between the two groups. Students will learn that there were effects on both Native Americans and Euro-Americans that changed their cultures forever. A difficult barrier to overcome when meeting new people is the differences in language. This unit also explores ways in which language barriers were surmounted by the Euro-Americans and Native Americans.

Site Visit Activities
These activities are designed to be completed at the Interpretive Center. These activities include Orienteering and Expectations Vs. Reality.

Pre-Visit and Post-Visit Activity Sheets
A variety of activity sheets to accompany a planned visit to the Interpretive Center.

Activities
These activity sheets are designed to help educators integrate the curriculum and further enrich student knowledge about Pacific Northwest exploration.

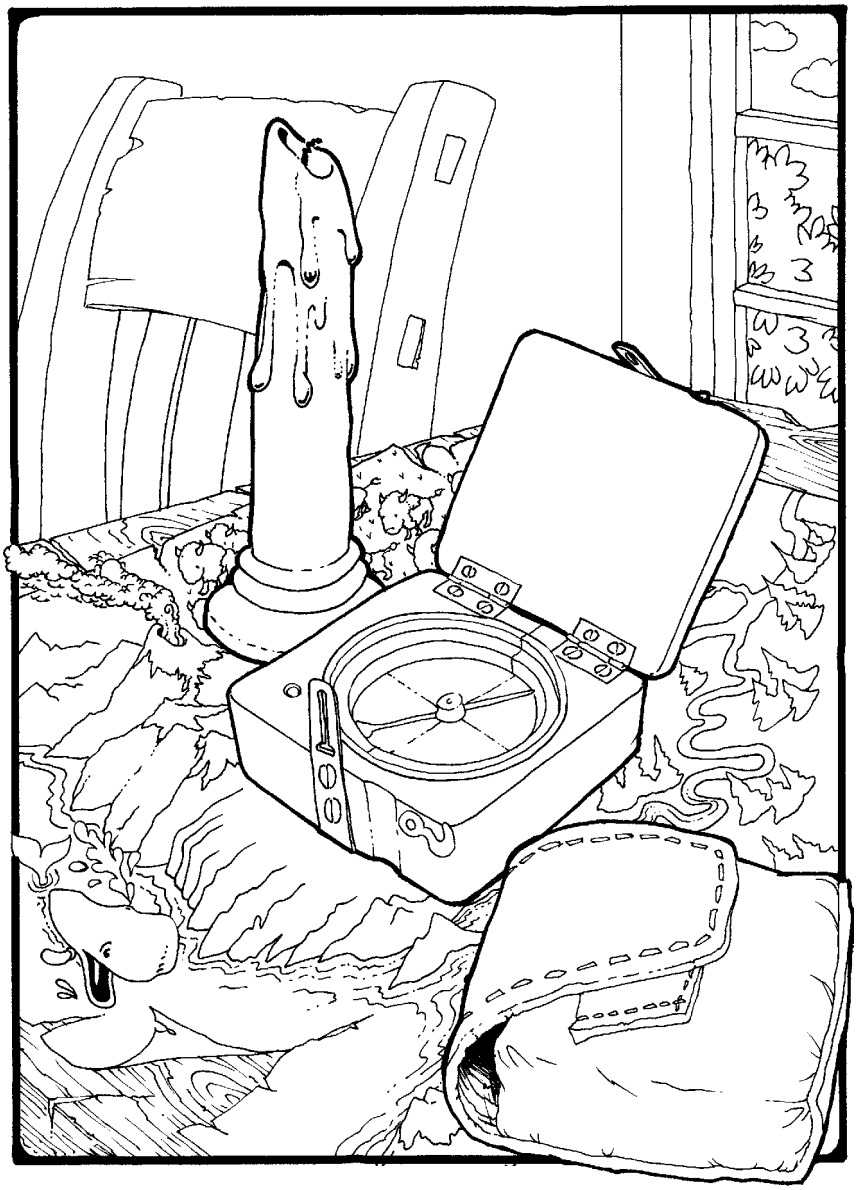
Answer Keys
Answer keys for the pre-visit, on-site, and post-visit activity sheets.

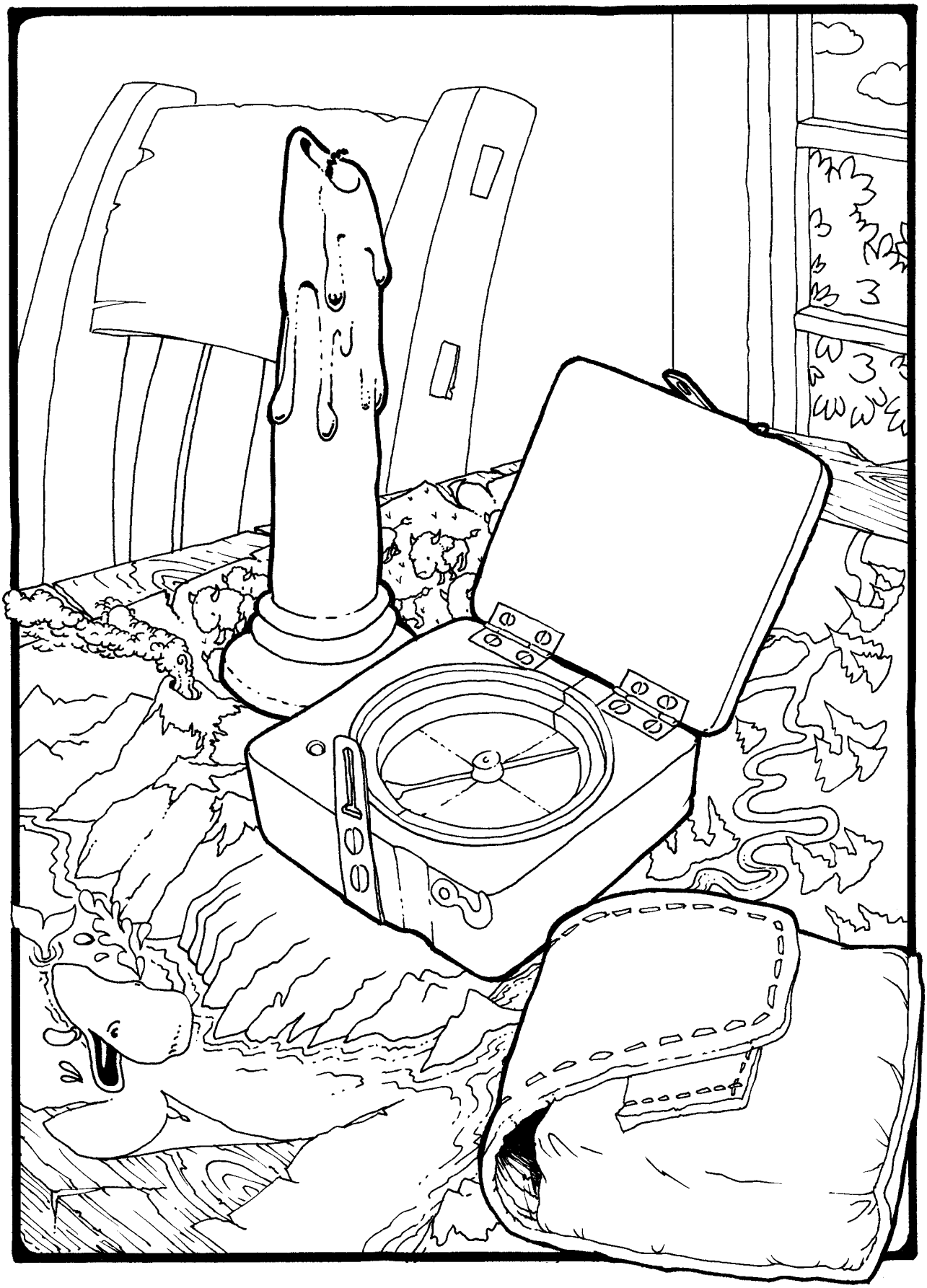
Additional Resources
Includes a glossary of key terms used throughout the guide, suggested reading for adults, a list of age appropriate books for student reading, and a list of historic sites and museums related to the exploration theme.

Explorers of the Pacific Northwest

Background History

*Exploration to the Pacific Northwest
*Time line
*Explorers by Association
*Maps





Background History - Exploration to the Pacific Northwest

Who discovered the Pacific Northwest? Why do we celebrate and study explorers? The Pacific Northwest has long been inhabited by people - theoretically descendants of a long ago migration from Asia. All people who have lived in the Pacific Northwest over the past 10,000 years have constantly made discoveries, large and small, about their environment, but the discoveries we study in history from our 21st century perspective are those that led to great change, and those that shaped the world we live in now. In that context, the westward explorations by European and early Americans in the 1700's and 1800's led to great changes. Resource based economic activities increased, political boundaries shifted, and populations flexed and changed as new settlers ultimately moved into traditional lands of native people. Scientific discoveries were recorded and put into written records, expanding mankind's worldwide knowledge of plants, animals, and geology. Map makers worked to define the huge area onto a piece of paper that could be held between two hands.

Early explorations of the North American continent were made during a time of conflict and warfare in Europe. Sixteenth Century explorers sought new trade routes to familiar markets in Asia. Motivated by economics, religion, and nationalism, explorers competed to secure the fastest shipping routes, to claim land and confiscate treasures for their countries, to convert non-Christian peoples to Christianity, and to increase power and dominance for their home countries.

Scientific and geographic discoveries occurred as a result of these explorations; new foods, plants and animals were introduced to Europe. Europeans became more familiar with the land, and while interest began to rise in utilizing land in the western hemisphere for resources, their ultimate goal was still to find an efficient way around it. They wanted to get to known populations and resources in Asia. Vasco Nunez Balboa crossed the Isthmus of Panama and saw the Pacific Ocean in September 1513. He made the important realization that this land mass blocked a direct water route westward to Asia. The idea was born that there must be a "Northwest Passage"...the "Straits of Anian". Some water route must be found, and this quest fueled most major sea explorations for the next 300 years.

Spanish explorers between 1542 and 1775 sailed along and mapped much of the western coast of North America, up to 55 degrees latitude. Although they did little exploring of the land, their search for harbors and passages led to "claims" which later became important as Spain attempted to exert its political influence in the region. The idea of claiming land has long held an interesting place in the human psyche...up to more recent claims such as planting an American flag on the moon in 1969. Though the idea is somewhat abstract, the claims Spanish sea explorers (Juan Perez in 1774 and Bruno Heceta in 1775) made on the coastline would extend to huge tracts of inland territory. Ultimately these claims came under debate as the United States of America, Great Britain, Russia and Spain negotiated over ownership of lands in the 1800s. For natives already living in the region, the landmark visit by Bruno Heceta, recognized as the first European to land on the coast of Washington State, became the beginning point of a long contest to challenge their claims to tribal territories.

Spanish sea explorers were soon followed by British and Americans. Englishman James Cook reached the Oregon coast in March 1778, again looking for the Northwest Passage. Though he attempted to find entrance into Puget Sound, he had no success; however, he did leave a lasting legacy in assigning European names to landmarks - Cape Perpetua and Cape Foulweather. John Meares followed Cook, but also failed in his mission to find the Northwest Passage. He left behind the name "Cape Disappointment" at the mouth of the Columbia River, which he mistakenly believed to be only an indentation in the coastline.

American Robert Gray commanded two different voyages to the Northwest coast. In 1791 he sighted the mouth of a great river, and tried for nine days to cross the sand bar before giving up and sailing north. He spent the winter at Clayoquot Harbor on Vancouver Island before returning in May of 1792 and successfully entering the long sought "Great River of the West". He named it the Columbia, after his ship. Sailing 25 miles up the river, Gray made a claim for the United States on this territory. That same spring of 1792, Englishmen George Vancouver and William Broughton were mapping the Pacific coastline. Meeting Robert Gray, Vancouver learned of his discovery of the mouth of the Columbia. Vancouver continued his search northward for the "Northwest Passage" but on his return voyage south, he sent Broughton with his smaller ship to explore the river. Broughton sailed 100 miles up the Columbia. He named landmarks including Mt. Hood, Walker Island, Tongue Point, and Gray's Bay.

The voyages of Gray and Vancouver resulted in detailed mapping of the coastline and brought an end to the era of sea exploration. The focus of exploring shifted to linking the western end of the Northwest Passage with an inland counterpart, and to locate overland routes to traverse the great continent.

Hudson's Bay Company and the Start of Overland Explorations

The era of overland exploration coincided with sea explorations. These explorations resulted in the mapping and recording of vast amounts of unknown territory, with little knowledge or coordination with sea explorations. The era of overland exploration began in 1658 when Pierre Esprit Radisson and Jean Baptiste Groseillers became the first white men to travel into the northwestern territories beyond the Great Lakes. They established a fort and fur post in the region between the Missouri River and the North Pole in 1661, and secured financial support from Prince Rupert of England to further explore the financial potential of the area. Their exploratory fur expedition was extremely profitable and led to the granting of a Royal Land Charter by King Charles II for "the Gentleman Adventurers Trading to Hudson's Bay". Granted in 1670, this led to the formation of the Hudson's Bay Company.

The gathering of furs, primarily beaver, had numerous requirements that resulted in the direct and indirect motivation for traders, trappers and explorers to scope out land in western North America. The formation of Hudson's Bay Company (HBC) proved the pivotal event of early overland exploration. HBC led the search for trade and water routes throughout the interior to link trappers and outlying posts with their headquarters. They sought a navigable route to Asian markets where demand for furs was high.

An early HBC explorer, Pierre Gaultier La Vernedrye, explored the territory of the Dakotas around 1743, including the upper Missouri River and the Mandan Villages. He established that the Missouri River was not the fabled Northwest Passage, and that the Pacific Ocean lay much further west.

Samuel Hearne was sent on an HBC mission to search for Arctic copper mines in 1769. On three different expeditions to the Arctic Ocean, he found copper mines, but found no major waterways running east to west south of the Arctic Ocean. This further "killed" the idea of a northwest passage. HBC explorer Peter Pond reached the Great Slave Lake region in western Canada and discovered Lake Athabasca, producing the first map of this area in 1785.

In 1779 several independent fur traders began partnerships which led to formation of the North West Company in 1784. The rivalry which would grow between the North West Company and Hudson's Bay Company increased exploration, as each company sought new sources for furs and faster routes to markets.

Alexander MacKenzie, a native of Scotland, was an important explorer and chief trader for the North West Company. Employees of this company were known as "Nor'westers". MacKenzie made expeditions of the area known as "New Caledonia", now British Columbia and the Northwest Territories of Canada, in 1789 and 1792. He followed the Fraser River to the Pacific Ocean, north of Vancouver Island, and is acknowledged as the first white man to cross the North American continent north of the Spanish possessions.

Simon Fraser, also of the North West Company, further explored the interior of New Caledonia and the Oregon Country, and added to knowledge of these areas. Nor'Wester David Thompson, a former Hudson's Bay Company employee, surveyed territory surrounding the upper Missouri River in the late 1790s. He then pushed trade into areas west of the continental divide. Building on previous work of MacKenzie, Lewis and Clark, and Fraser, David Thompson located the headwaters of the Columbia River and followed the river to the Pacific Ocean in 1811-1812. Although this route had already been traveled by Lewis and Clark, Thompson landed near present day Pasco, Washington in July 1811, and claimed the surrounding land for Great Britain and the North West Fur Company. From this expedition, Thompson mapped the first navigable water route from the Rocky Mountains to the Pacific Ocean - a route used for many decades by future travelers and establishing the Columbia River as the main route for travel through the Pacific Northwest. His claims became the foundation for boundary negotiations between Great Britain and the United States, with everything north and west of the Columbia River claimed by Great Britain.

American Explorers

During the late 1700s and early 1800s publications began to appear describing explorations. Jonathon Carver wrote a book published in 1778 titled "Travels Through the Interior Parts of North America" which raised interest in the search for the Northwest Passage, and was the first to apply the name "Oregon" which ultimately came to refer to the entire region. There are some disputes about the authenticity of Carver's writings related to his actual explorations, and accusations that he plagiarized the work of others; however publication of his book marked an important milestone in recognition, mapping, and naming of western lands by an American explorer.

Perhaps the most influential event in exploring and recording western territories was the expedition of the "Corps of Discovery" led by Meriwether Lewis and William Clark 1804-1806. Thomas Jefferson initiated this trip, planning the expedition before his presidency and the purchase of the Louisiana Territory. Jefferson's interest was to confirm his belief about suitability of western lands for farming and American expansion. Inspired, and threatened, by the publication of accounts by Alexander MacKenzie of his 1792-93 journey across western Canada, Jefferson feared Great Britain would monopolize the economic resources of the west and gain control of lands through trade and settlement. His plan to send a government sponsored scientific expedition into internationally occupied western territories would have been illegal and risky, but with purchase of the Louisiana Territory in 1803, Jefferson convinced Congress to appropriate funds for an official expedition. Jefferson selected Meriwether Lewis, who in turn requested William Clark to co-captain the journey.

The Corps had numerous goals to accomplish. They were to claim land through discovery for the United States, furthering Jefferson's aim to establish a transcontinental nation. They were to explore the Missouri River, find a route to the Pacific, establish trade with Indians along the way, observe routes of Canadian traders, and chart strategic military points. They were to note and map sources and courses of rivers and locations of lakes, collect natural history specimens, and list the natural resources of the country. An important aspect of their expedition was the care taken to preserve the lives of all members of the exploring party, thus preserving the personal knowledge of each member.

Planning for the expedition was well under way as the Louisiana Purchase treaty to exchange 600 million acres of land was negotiated. Signed April 30, 1803, the land was formally transferred to the United States on December 20, 1803. By that time, Lewis and Clark had already assembled supplies and a preliminary crew, embarking from Philadelphia on August 30, 1803. The two split up to recruit additional crew members and acquire supplies, before meeting up to spend the winter in St. Louis. On May 14, the 47 member expedition left St. Louis to journey up the Missouri River, reaching the Mandan villages by the end of October 1804. In the spring of 1805, a permanent party of 33 persons, including translator Toussaint Charbonneau, Sacagawea, and their infant son Jean Baptiste, started into territory never explored by white men. Surviving dangerous situations on the journey, and times of near starvation in the Bitterroot Mountains, the Corps finally reached the mouth of the Columbia River on November 7, 1805. Originally camping on the north side of the Columbia, they established a more secure camp at "Fort Clatsop" south of the Columbia. After spending a miserable winter at this tiny encampment, the Corps started back eastward on March 23, 1806, and reached St. Louis on September 28, 1806. Only one member of their party died.

The accomplishments of this expedition had a tremendous impact on ultimate settlement of western North America. They "discovered" and classified 120 animal species, over 175 plant species, and met twenty-four Indian tribes. They proved to Americans that a transcontinental route over the Rocky Mountains was possible, although their route was not the most direct for commercial trade or travel. They provided a solid foundation for U.S. possession of the Oregon Country during boundary negotiations with England and Spain. They opened the path for future fur traders, naturalists, mountain men and military expeditions who used reports of the Lewis and Clark expedition as a base for exploration and mapping. The publication of their journals, and the journals of member Patrick Gass, sparked the imagination of Americans. Interest in land west of the Rocky Mountains increased, leading to formation of fur companies and spurring settlement further west of the Mississippi River.

The groundbreaking work of the Corps of Discovery set the stage for more detailed forays into western territories, primarily by fur companies seeking to evaluate resources and locate trade routes. They would be followed by military and scientific expeditions.

The Pacific Fur Company of John Jacob Astor employed two explorers to establish a western fort and fur post on the mouth of the Columbia River. Wilson Price Hunt set out overland to seek a good transportation route, and planned to meet with Robert Stuart who sailed on the *Tonquin* with enough supplies to build and stock the proposed fort. Hunt set out in the summer of 1810, split into four groups, including one led by Donald MacKenzie, and one group which included Ramsey Crooks and John Day. They planned to take different routes to better explore the territory. Hunt followed the Missouri River into North Dakota, then traveled westward through southeastern Montana and central Wyoming. He followed the Snake River through southern Idaho and into Hell's Canyon. Treacherous waters dashed their plans for travel by boat. Backtracking out of the Canyon, Hunt and his party, which included translator Pierre Dorion and his wife Marie, traveled through northeastern Oregon towards the Columbia River. Marie Dorion gave birth to her third child near present day North Powder, Oregon. At Celilo Falls, the party used canoes to finish navigating their trip to the mouth of the Columbia. Though they did not find a useful route, their experiences added much knowledge about routes through this region. Their trip met with extreme hardship from difficult travel, severe weather, food shortages, altercations with natives, and rivalaries with other fur companies along the way. They arrived at Fort Astoria in February 1812, where two other overland groups had already arrived. The *Tonquin* had arrived in March 1811 and established Fort Astoria. The fourth group was believed to have perished, but Crooks and John Day arrived in May, having been set back by illness and misfortune of being robbed. The *Tonquin* was later destroyed at Clayoquot Harbor when, under attack from natives, one of the crew members blew up the ship. The adventures of Hunt's trek were glamorized in a popular book *Astoria* written by Washington Irving in 1836.

In late June, 1812, Robert Stuart led an overland trek back eastward. It proved a difficult journey, with the party becoming lost, traversing physically demanding land, and suffering privation. John Day had started back with this group, but began to suffer spells of insanity in the area of the river in Central Oregon which now bears his name, and was sent back to Astoria. Stuart covered much territory previously unknown to European and American explorers. A large portion of the route he used would eventually become the Oregon Trail. Stuart is credited with discovering South Pass, although this low pass through the Rocky Mountains was previously known to Indians in the area. His detailed journal and reports of the route which he furnished to President James Madison brought this route into common knowledge.

Exploration by Mountain Men

The various independent trappers and traders known as "Mountain Men" contributed to growing information about the west through their specialized knowledge of specific regions. When linked together, their experience with the terrain, people, wildlife and resources aided more organized exploring expeditions. John Colter left the Lewis and Clark expedition on their 1806 return trip. His experience west of the Mandan villages was valuable to fur traders needing a guide, and he became an employee of Manuel Lisa's Missouri Fur company. Between 1806 and 1810 Colter explored the Northern Rockies, and discovered many of the thermal hot springs in that region around present day Yellowstone Park.

William Henry Ashley founded the Rocky Mountain Fur company. He advertised for men to lead several assorted fur expeditions into the west, primarily along the Missouri, North and South Platte rivers. He became an employer to Jim Bridger, Jim Beckwourth, Jedediah Smith, and Thomas Fitzpatrick, among others. Ashley developed the annual Rendezvous in 1825, in which trappers and traders would meet to sell furs, purchase supplies, and celebrate. Jim Bridger joined Ashley's company in 1822, accompanying him on his first expedition to the Rocky Mountains. In early 1825, Bridger became possibly the first non-Indian man to see the Great Salt Lake. The knowledge he gained on his many expeditions through the Rocky Mountains in the 1820s and 1830's made him a valued guide well into the 1860s. He is credited with assisting numerous military and survey expeditions for the U.S. Government, for railroads and commercial enterprises, and for guiding settlers and emigrants. Although illiterate, his knowledge of western geography was vast and reliable and his willingness and ability to share this information contributed to his legendary status.

Jim Beckwourth, an ex-slave, also explored with Ashley's company. He discovered a route through the Sierra Nevada Range in present-day California which became a primary route for the California Trail. Jedediah Smith joined Ashley's company as a young man and explored extensively through the Dakotas and Wyoming. He "rediscovered" South Pass and further explored the trail blazed by Robert Stuart in 1812. He later toured to the Southwest, determining a route that ran from the northern Rocky Mountains through Salt Lake and onto the Colorado Plateau to California to become the first American to go overland through the Southwest. He later traveled northward to Oregon. His expeditions filled in many missing pieces in the growing knowledge of western geography and established additional travel routes to California and Oregon. Irish immigrant Thomas Fitzpatrick also started with Ashley as a young man, and accompanied Jed Smith on many of his expeditions. He became a knowledgeable guide, and led the first overland emigrant party, the Bidwell-Bartleson party, in 1841. Intelligent and well-educated, Fitzpatrick was not only valued for his knowledge of geography, but for his knowledge of Indian people in the west, and his ability to negotiate agreements and treaties.

Christopher "Kit" Carson gained legendary status as a mountain man, based on many exploits. His work in the fur trade starting in the late 1820s as a teenager took him throughout the west, from the Rocky Mountains to California, Arizona, and New Mexico. He accompanied John Fremont's survey expeditions of 1842-1846 as a guide.

In 1832 and later in 1834, former new England ice merchant Nathaniel Jarvis Wyeth led expeditions to the Oregon Country to attempt to establish a fur trade. On these trips he brought along naturalists Thomas Nuttall and John Kirk Townsend, and established Fort Hall. Although Wyeth's fur trade enterprise failed, his travels and explorations added to the knowledge of routes, and inspired settlers that these routes could be successfully traveled.

Canadian Peter Skene Ogden began his career with the North West Company in 1810, staying on after it merged with the Hudson's Bay Company. He made many exploring expeditions for the company, seeking new territory for furs. He explored and recorded much of the territory in northern Nevada and the Great Basin and through the years he explored nearly every valley in Oregon, Idaho, Montana, Nevada and Northern California. In the 1830s, he was commissioned to Chief Factor in charge of all business in New Caledonia, and continued to work in the fur business and also acted as a diplomat and negotiator in relations between Canada (Great Britain) and the U.S. The findings from his six major expeditions of the west were incorporated into many early maps of the American West published in Europe.

Benjamin Louis Eulalie de Bonneville had a rather strange career, and many of his credited accomplishments as an explorer have been questioned by historians. His name is associated with a great many landmarks in the West, probably because of fame achieved through a book by the popular 19th century author Washington Irving entitled *The Adventures of Captain Bonneville*, written in 1837. Bonneville was a captain in the U.S. Army who took a leave of absence to explore the geography of the Pacific Northwest. Many people speculated that this was a cover for a secret assignment to spy and collect data for the army, however, most historians have concluded that he was pursuing a personal agenda of seeking business opportunities in the fur trade under the guise of scientific exploration. Whatever the reason, Bonneville's expeditions led to occasional run-ins with established fur companies in the Pacific Northwest. After four years he returned to the army, and in 1837 published maps of the regions he had visited. The maps had many inaccuracies, and were misleading.

Military Survey Expeditions

Incomplete and inaccurate early maps of the west were gradually improved, primarily through the efforts of military explorers and surveyors. In 1838 the United States Corps of Topographical Engineers was created. Cartographers and surveyors served under the infantry and mounted regiments. Goals were to map and find routes west and survey lands. They marked boundaries of territories. Eventually, they would publish maps for emigrants and settlers. A great amount of work was aimed at the goal of locating a route for a transcontinental railway.

Zebulon Pike explored along the Mississippi and Missouri rivers in 1805 and into the southern portions of Louisiana Territory in 1806-1807. Stephen H. Long began a career in the army in the war of 1812, became a professor of mathematics at West Point, and eventually a major in the Corps of Topographical Engineers. On expeditions between 1817-1820 he led surveyors and explorers to mark and map the upper portions of the Mississippi River, the Missouri River and the Platte River into the Rocky Mountains. His mapping work was instrumental in the establishment of military posts and to informing settlers who would move west over the Oregon Trail.

Charles Wilkes was a naval officer who made an exploration by ship along the western coast in 1838-1841. He navigated up the Columbia and Willamette Rivers to report on the situation for potential settlement of U.S. citizens. His explorations resulted in over 180 maps and charts and the survey of 280 islands and 800 miles of Oregon coast. Unfortunately, his unpleasant personality and his unfavorable reports about Oregon to the government in Washington did not endear him to settlers in Oregon Territory. His unpopularity overshadowed the significance of the scientific reports he compiled.

John Charles Fremont achieved great fame as a western explorer based on his five western expeditions between 1842 - 1854. Fremont met Senator Thomas Hart Benton, an avid supporter of westward expansion, who arranged to send Fremont to survey land between the Missouri River and South Pass. The documentation and maps produced by this expedition became the most reliable information about the emigrant road into the west, which later became known as the "Oregon Trail". Fremont was sent on a second expedition to map the road from South Pass to The Dalles, Oregon. He then explored south through Central Oregon and across the Great Basin. He later made another expedition to California and Oregon, where he became caught up in the Californians' battle for independence from Mexico. In his later career, he became a US Senator and a candidate for president. Much of his fame and reputation is attributed to the talents of his wife, Jessie. The daughter of Senator Benton, Jessie was an exceptional writer, who organized and re-wrote Fremont's dry military data into detailed and interesting reports. Her writings excited the interest of government leaders and captivated potential settlers and businessmen into pursuing a journey to the west.

William Emory was probably more versatile and accomplished than Fremont, but did not receive nearly the recognition for his work in surveying and mapping the southwest. His work established the present day boundary between Mexico and the United States (excluding land acquired in the Gadsden Purchase of 1853). All the military explorers, however, had a certain level of fame and acclaim in their time. Their reports and maps were published and made accessible to the general public. The charismatic personalities needed to lead these expeditions made them media celebrities at the time. Their expeditions were admired not only for scientific and recording accomplishments, but as heroic adventures as well.

Scholarly Explorers

Another class of explorers had no motives for acquiring territory or exploiting resources, but pursued scientific knowledge of animals and plants and native culture. Their scholarly pursuits were sometimes undertaken to enhance their careers and prestige, but their findings, reports and artwork indirectly enhanced interest in the western territories among businesses and the general public. Generally, naturalists accompanied other organized expeditions. Thomas Nuttal and John Bradbury were English naturalists who spent much of their lives working in the United States. They explored along the Missouri River in the early 1830s. In 1834 Nuttal joined Nathaniel Wyeth's expedition along with ornithologist John Kirk Townsend. Nuttal was on the faculty of Harvard University, and collected a huge number of specimens which became the foundation for scholarly knowledge on plants of the Great Plains and Pacific Northwest. Townsend's report of his journey inspired many potential settlers with his descriptions of landscapes and experiences along what would become the Oregon Trail.

Artist George Catlin explored and recorded American Indian people living along the Missouri and Yellowstone Rivers. Between 1830 and 1836, Catlin made numerous trips and met 48 tribes, completing around 500 paintings recording their culture. He gained a great understanding about Indian issues, and later would become an advocate on behalf of Indian rights and negotiations with the government. Although he was not as successful in that pursuit, his artwork had a great impact on clarifying information about the life and culture of these tribes.

Scottish born naturalist David Douglas had a particularly great impact on scientific exploration of the Oregon Territory. In April 1825, he arrived at the mouth of the Columbia River and for two years made forays out of Fort Vancouver. With the help of the Hudson's Bay Company, he journeyed along the Columbia River gathering plant specimens. He gathered 499 different seeds and specimens. He returned in 1830 to explore along the Columbia and south along the Pacific Coast to the redwoods. His explorations through the Willamette Valley and the Coast resulted in identification of over 50 species of trees and more than 100 species of shrubs, ferns and other plants. Tragically, his career was cut short on an expedition in Hawaii where he died after falling into a bull pit trap.

Overall, the exploration of the North American Continent was a complicated series of events that eventually led to the formation of travel routes and modern day national and state boundaries. It involved hundreds of individuals and the overlapping of social and political events. Early exploration of the Pacific Northwest was spurred by the fur trade and the search for a "Northwest Passage." Later exploration aimed at finding new travel routes, and settlement and business opportunities within the "new" territories. Information gathered by explorers raised public interest and attention towards conquest of these lands. Explorers created and continuously updated maps and geographical reports. Through the publication and dissemination of information gathered by these explorers, the western wilderness became widely known. Settlers and businesses soon followed the explorers, governments were established and boundaries were set. Indian people were faced with rapid changes to their way of life. Within a few decades, the information recorded by explorers as new and unknown had become documentation of people, places, scenery, and wildlife that had changed forever.

TIMELINE

1513 Balboa becomes the first European to "discover" the Pacific Ocean.

1602 Sebastian Vizcaino maps the Pacific Coast as far as 42 degrees north and discovers Monterey Bay.

1658 Pierre Esprit Radisson and Jean Baptiste Grosseillers become the first white men to travel into the northwestern territories beyond the Great Lakes region.

1661 Radisson and Groseillers establish the first fort and fur post between the Missouri River and the North Pole.

1670 Radisson and Groseillers form the Hudson's Bay Company under the approval of a royal charter.

1743 Pierre Gaultier De La Verendryes explores the Dakotas and Upper Missouri River for the Hudson's Bay Company.

1769 Samuel Hearne begins his search for the fabled "Northwest Passage" and rich copper mines of the Arctic under orders from the Hudson's Bay Company.

1774 Spaniard Juan Perez sails north along the Pacific coastline to 55 degrees north latitude claiming possessions for Spain.

1775 Bruno Heceta becomes the first European to land on the Pacific Northwest coast (Washington).

1776 American Declaration of Independence and the beginning of the American Revolution.

1778 James Cook sails the Pacific Northwest searching for Juan de Fuca Strait and the Puget Sound.
Captain Jonathan Carver publishes his "Book of Travels."

1779 Independent fur traders begin combining efforts and resources.

1783 End of the American Revolution.
Formation of the North West Fur Company.

1792 Robert Gray discovers mouth of the Columbia River on his second voyage.
George Vancouver creates detailed map of the Northwest coast.
Lieutenant Broughton sails and explores 100 miles upstream on the Columbia River.

1793 Alexander Mackenzie crosses the continental divide.

1803 Meriwether Lewis and William Clark begin their "Voyage of Discovery." President Jefferson purchases the Louisiana Territory from France.

1806 John Colter, by leaving the Lewis and Clark expedition to guide trappers into the west, becomes one of the first mountain men.

1807 David Thompson begins exploration in the Northwest.

1808 Simon Fraser reaches the mouth of the Fraser River.
John Jacob Astor establishes the Pacific Fur Company.

1809 David Thompson establishes Kullyspell House.

1810 Peter Skene Ogden joins the North West Fur Company and begins a career of extensive exploration of the west.

1811 Fort Astoria is built on the banks of the Columbia River by Wilson Price Hunt and Robert Stuart to serve as a base for the Pacific Fur Company.
David Thompson arrives at the mouth of the Columbia River.

1812 War begins between United States and England.
Robert Stuart discovers South Pass as he leads the first Euro-American party west to east over what would become the Oregon Trail.

1813 Astor's Pacific Fur Company is taken over by the North West Company.
Fort Astoria renamed Fort George.

1817 Major Stephen H. Long begins expeditions to chart and map the upper Mississippi and Missouri Rivers, delineating a 600 mile wide swath of territory from Texas to Canada and as far west as the Rocky Mountains.

1818 Peter Skene Ogden reaches Astoria.
Treaty of Joint Occupation for the Oregon Country between Great Britain and the United States.

1820 Hall Jackson Kelley begins attempts to colonize the Oregon Country.

1821 Hudson's Bay Company and the North West Company are forced to merge.

1822 General William Ashley launches the first expedition of independent fur trappers up the Missouri River. These are the men who will become famous as the American Mountain Men. Jim Bridger becomes the first to give an eyewitness account of the Great Salt Lake.

1823 Ex-slave Jim Beckwourth helps discover the primary route through the Sierra Nevada Range.

1824 Fort Vancouver is built by Hudson's Bay Company, Dr. John McLaughlin named Chief Factor.
Jedediah Smith rediscovers South Pass.
Peter Skene Ogden takes over leadership of the Snake River Brigades.

1825 David Douglas arrives at the mouth of the Columbia River.
First rendezvous held to facilitate trade between Mountain Men, Indians, and the American fur companies.

1831 Captain Benjamin Bonneville's first expedition.

1832 Nathaniel Wyeth establishes his fur trading venture on the lower Columbia River.

1834 Jason Lee is the first Methodist missionary in the Northwest.
Fort Hall is constructed by Nathaniel Wyeth.
Old Fort Boise is built by the HBC.

1835 Samuel Parker and Marcus Whitman journey to the west.

1836 Narcissa Whitman and Eliza Spalding are the first white women to cross over the Rocky Mountains.
Whitmans establish a mission at Waiilatpu.
Spaldings establish a mission at Lapwai.

1838 First Catholic missions are established in the Northwest.

1840 Last mountain rendezvous is held.
The Jesuit priest, Pierre-Jean de Smet travels to Oregon Country to establish a mission.

1842 John Charles Fremont's first expedition explores and surveys the Oregon Trail as far west as South Pass. Kit Carson is hired by Fremont as a guide.

1843 John Charles Fremont's second expedition completes the survey of the Oregon Trail, exploring central Oregon and the Great Basin.
First large wagon train of emigrants embark on the Oregon Trail.
Joe Meek guides wagon train to Oregon, then serves as sheriff for the territory.
Establishment of the Oregon Provisional Government.

1846 Mexican-American War leads to Spanish cession of territory.
William Emory produces the first accurate maps of the Southwest.
Treaty between U.S. and Great Britain establishes the northern boundary between the two countries at the 49th parallel.

1847 Cayuse Indians massacre the Whitmans at Waiilatpu following a devastating measles outbreak.

1848 Oregon gains U.S. territorial status.

1853 The Gadsden Purchase completes the formation of the Continental United States, the "Lower 48."

Explorers by Association

Spain

- **Vasco Nunez De Balboa**: (1513) Crossing the Isthmus of Panama, he becomes the first European to discover the Pacific Ocean.
-**Juan Rodriguez Cabrillo**: (1542-1543) Sails north from Mexico along the Pacific coast, mapping the coastline.
-**Bartolome Ferrelo**: (1542-1543) Second-in-command to Cabrillo. Takes over expedition after death of Cabrillo and reaches Oregon.
-**Sebastian Vizcaino**: (160) Sails north along Pacific coast and discovers Monterey Bay.
-**Fernando del Bosque**: (1674) Leads several expeditions into Texas.
-**Pedro de Aguirre**: (1708) Explores through Texas to the Colorado River.
-**Juan Batista de Anza**: (1774-1779) Discovers several overland routes between Mexico, California and New Mexico.
-**Juan Perez**: (1774) Sails north along Pacific coast to the 55th parallel, claiming possessions for Spain.
-**Bruno Heceta**: (1775) Becomes first European to land on Pacific Northwest coast in Washington state.
-**Juan Francisco de la Bodega y Quadra**: (1775) Second-in-command to Bruno Heceta's west coast explorations.

England

-**Henry Hudson**: (1607-1611) Discovers Hudson's Bay while searching for the Northwest Passage.
-**William Baffin**: (1615-1616) While exploring for the N.W. Passage, he explores the northern portions of Hudson's Bay and maps Davis Strait and Baffin Bay.
-**James Cook**: (1778) Searches for Juan de Fuca Strait and the Puget Sound.
-**James Hanna**: (1785) The first man to sail the Pacific coast after James Cook.
-**John Meares**: (1789) Trades with native population along Northwest coast.
-**George Vancouver**: (1792) Provides first detailed map of the Pacific Northwest coast, yet fails to discover the Columbia River.
-**William Robert Broughton**: (1792) Under orders from George Vancouver, sails 100 miles up Columbia River and provides numerous place names.

Hudson's Bay Company

-**Pierre Esprit Radisson** and **Jean Baptiste Grosseillers**: (1658) First men to enter area northwest of the Great Lakes. Their activities led to the formation of the Hudson's Bay Company in 1670.
-**Pierre Gaultier De La Verendrye**: (1743) First white man to explore the area of the Dakotas (Upper Missouri River and Mandan Villages).
-**Samuel Hearne**: (1769-1771) While searching for Arctic copper mines, becomes first to claim that there is no Northwest Passage.
-**Peter Pond**: (1785) As one of first men to explore northwest Canada, produces first map of the Lake Athabasca region.

North West Fur Company

-**Alexander MacKenzie**: (1789) Discovers route to the Arctic Ocean (MacKenzie River) and becomes first European to cross the North American Continent north of Spanish possessions.
-**Simon Fraser**: (1805-1808) Explores New Caledonia region along the Peace and Fraser Rivers in search of the Northwest Passage.
-**David Thompson**: (1810-1811) Charts the entire Columbia River system from source to mouth.

United States

-**Jonathan Carver**: (1778) Publishes his "Book of Travels," raising interest in western exploration.
-**John Kendrick**: (1787-1788) Commander of Robert Gray's first voyage to the Northwest coast.
-**Robert Gray**: (1792) Discovers the Columbia River on his second voyage to the Northwest coast.
-**Meriwether Lewis** and **William Clark**: (1803-1806) Commanders of the "Corps of Discovery" that provided massive new information on the west and opened a path from the east to the west for future explorers.

Pacific Fur Company

-**Wilson Price Hunt**: (1810-1812) Overland expedition leader for John Jacob Astor's upstart fur company.
-**Robert Stuart**: (1810-1812) Man in charge of all Pacific Fur company operations at Fort Astor. Discovers the South pass in 1812.

Naturalists

-**John James Audubon**: (early 1800s) An important ornithologist who gathered massive data on North American birds.
-**David Douglas**: (1825-1832) Explores the west coast regions of North America gathering large collections of plant seeds and information.
-**Peter Custis**: (1806) The naturalist for Stephen Long's Red River expedition.
-**George Catlin**: (1830-1836) An artist, who made numerous voyages to the west painting the landscape and studying the native population.
-**John Bradbury**: (1832) Joins Thomas Nuttal to explore the Missouri River.
-**Thomas Nuttal**: (1832-1834) Explores Missour River with Bradbury before joining Nathaniel Wyeth expedition headed for Oregon.
-**John Kirk Townsend**: (1834) A member of the Wyeth expedition for a time, he assembled a valuable collection of birds used by Audubon in his book.

The Fur Trade (mountain men)

-**Jean-Baptiste Le Moyne, Sieur de Bienville**: (1697-1716) French fur trapper and explorer who explored the lower Mississippi and Red Rivers as well as founding New Orleans.
-**John Colter**: (1806) Member of the Lewis and Clark expedition that stayed in the wilderness to guide fur trappers and traders.
-**William Henry Ashley**: (1822-1830) Enlisted men for the rocky Mountain fur trade as well as starting the tradition of "rendezvous" and the independent fur trade.
-**Jim Beckwourth**: (1823-1830) A member of the Ashley expeditions, discovers Beckwourth Pass.
-**Jim Bridger**: (1824-1850) A member of the Ashley expeditions, he becomes the leader or guide for several Rocky Mountain expeditions. He established Fort Bridger and discovered Bridger Pass.
-**Thomas Fitzpatrick**: (1824-1843) A member of the Ashley expeditions, he later turned guide and worked for Fremont during his 1843 expedition.
-**Jedediah Smith**: (1824-1828) Circles the far west, blazing new trails.
-Nathaniel J. Wyeth: (1832-1834) Leads two expeditions to the Oregon Country, bringing with him naturalists and other men.
-**Joseph Walker**: (1833) Discovers Yosemite on his way to the Pacific Ocean.
-**Kit Carson**: (1842) After his years as a fur trapper, he is hired to guide Fremont's first expedition.

Other Mountain Men

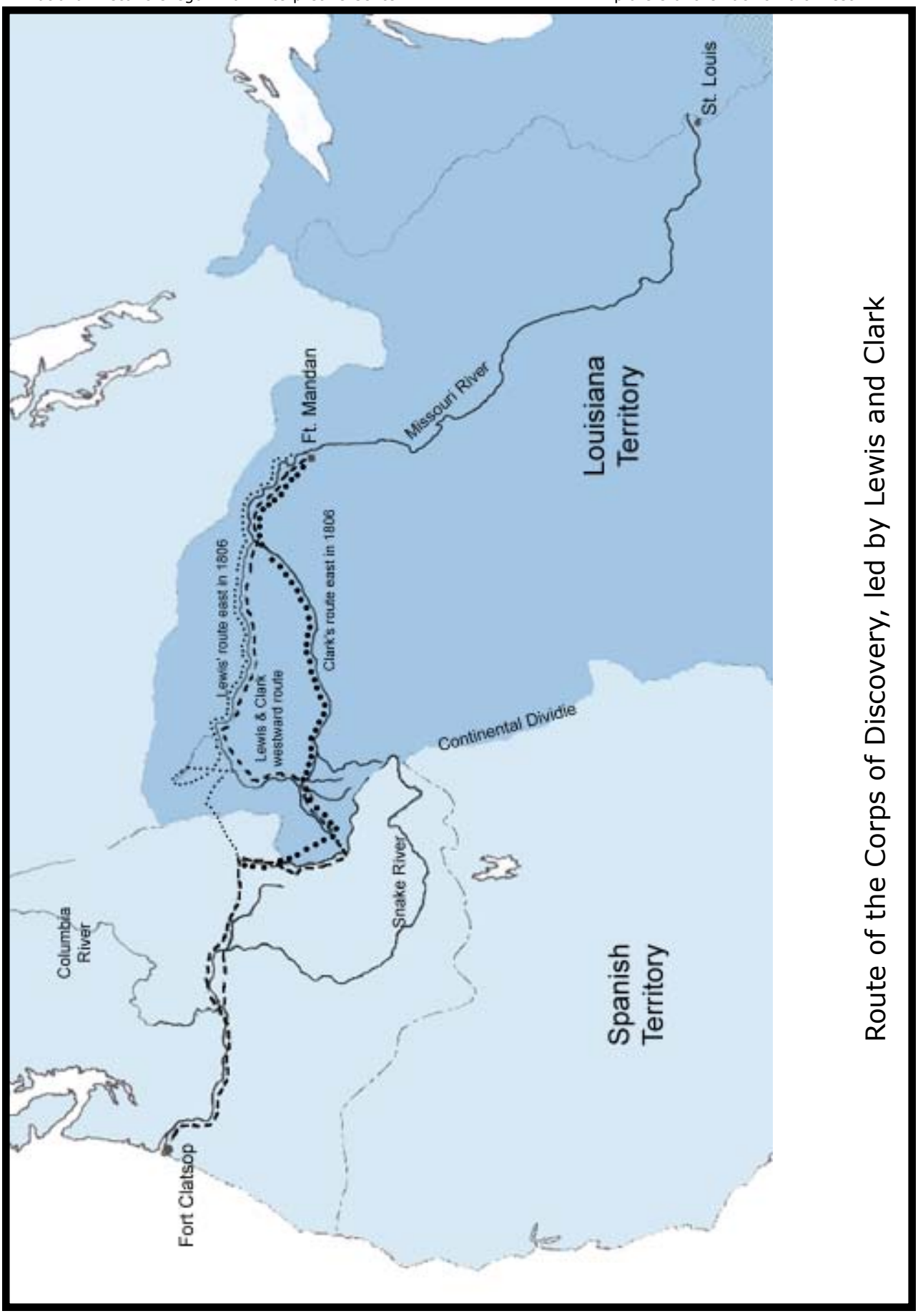
-Bill Williams
-**Edward Rose**
-Hugh Glass
-Jim Baker
-Joe Meek
-Manuel Lisa
-Albert Boone
-Andrew Henry
-William and Milton Sublette
-Etienne Provost

Military

-**Zebulon Montgomery Pike**: (1805-1807) Explores the Mississippi and Missouri Rivers and deep into the Louisiana Territory.
-**Stephen H. Long:** (1817-1820) Explores upper stretches of the Mississippi and Missouri Rivers. Opens the Platte River route in an attempt to find the source of the Red River.
-**Charles Wilkes**: (1838-1843) Commander of the U.S. Exploring Expedition that mapped over 800 miles of northwest coastline.
-**John Charles Fremont**: (1842-1854) Completes five expeditions into the American west surveying the Oregon country and providing documentation of its details.
-**William Emory**: (1844-1857) Surveys and maps the borders with Canada and Mexico.

Miscellaneous

-**Peter Skene Ogden**: (1810-1854) Began as a North West Fur Company trapper and continued on with the Hudson's Bay company. Eventually settled into a life of diplomacy between the British and U.S. governments.
-**Benjamin Bonneville**: (1832-1835) Takes leave of absence from the military to enter the fur trading business. Attempts two explorations into the Oregon County to trap furs, but fails both times. Returns to the military.

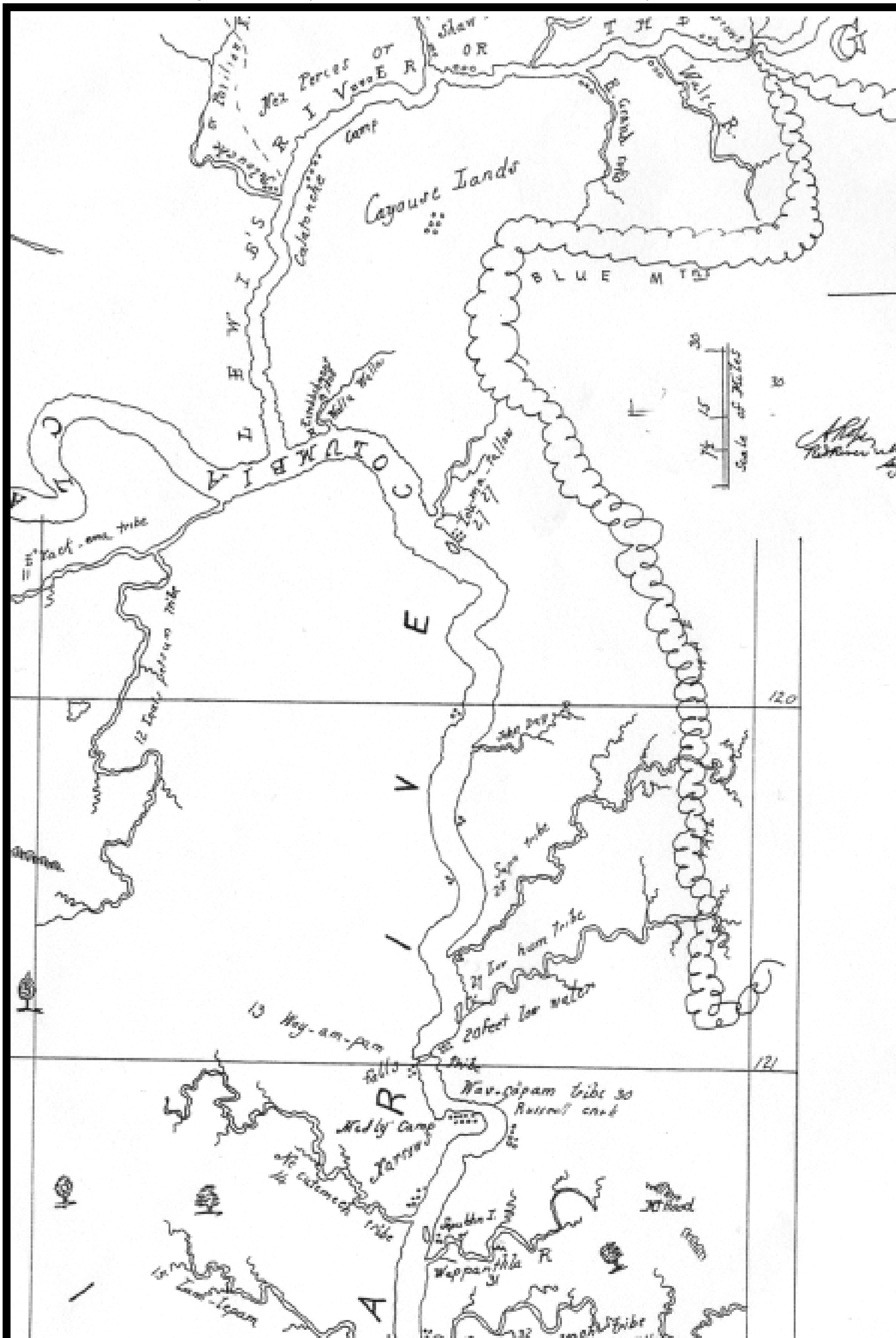


Route of the Corps of Discovery, led by Lewis and Clark

A Map of Lewis and Clark's Track Across the Western Portion of North America, 1804-5-6. Drawn by William Clark and engraver Samuel Lewis. *(Library of Congress collection).*

"A map exhibiting all the new discoveries in the interior parts of North America: inscribed by permission to the honourable governor and company of adventurers of England trading into Hudsons Bay in testimony of their liberal communications to their most obedient and very humble servant A. Arrowsmith, January 1st, 1795." *(Library of Congress collection)*

A detail from the Hudson's Bay map by Aaron Arrowsmith published in London in 1795. Notice how only areas along the coast line are mapped and the interior is designated "open country". A note reads "the Indians say they sleep 8 nights in descending this river to the sea"...the only information the map makers had to determine distance between these points. The Cascade Range of mountains is not designated...apparently many believed the Rocky Mountains were the range they were viewing form the coast.



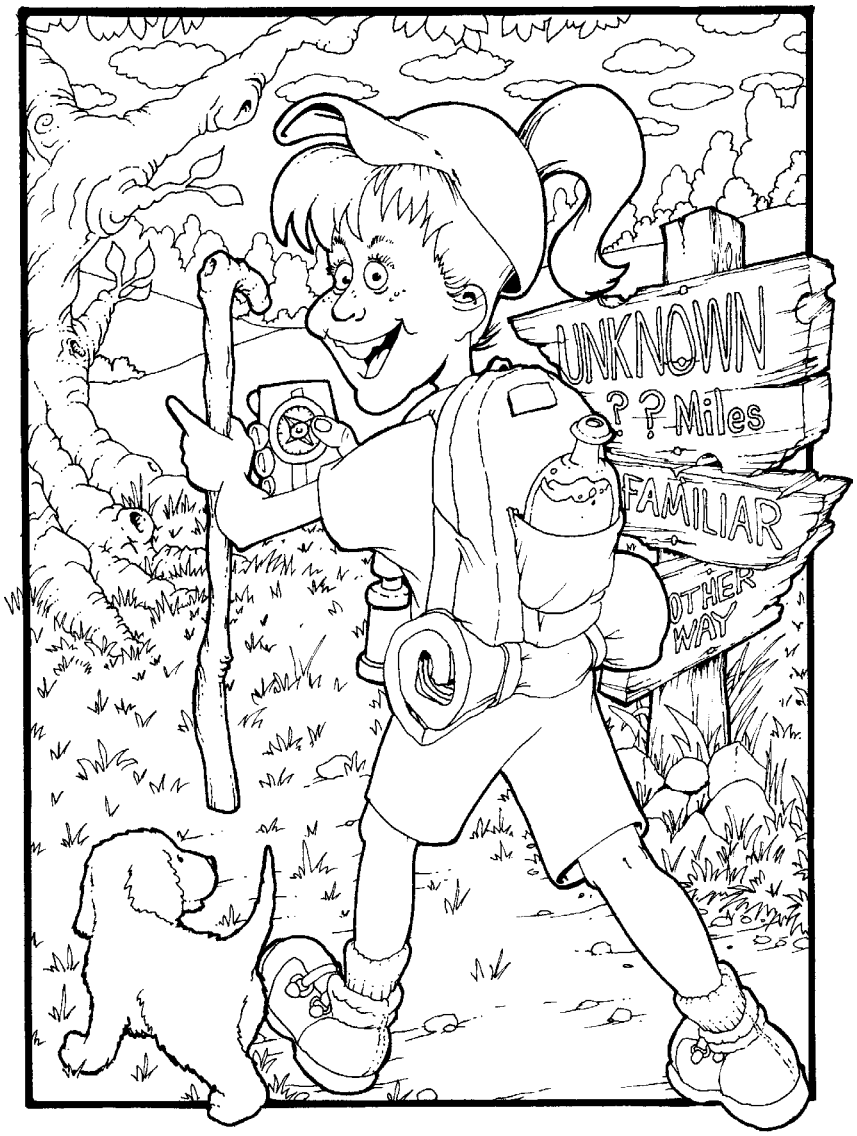
Detail of map drawn by Alexander Ross in 1821 showing locations of Indian communities along the Snake (Lewis) and Columbia Rivers. *Map used courtesy of Ellensburg Public Library, Ellensburg, Wash.*

Explorers of the Pacific Northwest

Forward Into the Unknown

*Explorers in the Pacific Northwest - narrative
*What does it mean to be an explorer - classroom discussion
*How Explorers Prepared for their trips - narrative and quotes

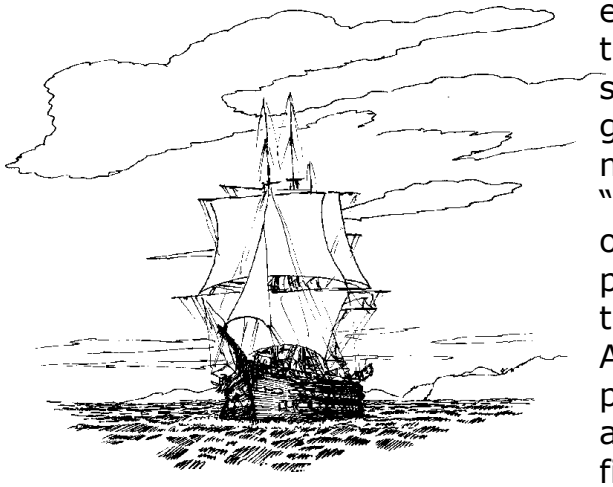
This unit is designed to demonstrate to the student some of the difficulties faced by the early explorers of the Pacific Northwest. After completion of this unit, the student should be able to understand that thorough preparation and teamwork led to successful expeditions.




UNKNOWN
?? Miles
FAMILIAR
OTHER WAY

Explorers in the Pacific Northwest

Who discovered the Pacific Northwest? Many scientists believe people traveled from Asia across a land bridge to Alaska thousands of years ago. As they slowly migrated south, they explored the land and formed cultures. They are ancestors of the American Indians of today. Many different groups or tribes of Indians lived in the Pacific Northwest for more than ten thousand years before European explorers came to this land.



Over 500 years ago, explorers from Spain, Portugal, England, France and Russia sailed the oceans in search of land to claim for their countries. They looked for wealth and natural resources to take back to their homelands. They especially hoped to find a water route that would connect their countries to seaports in Asia, as there were many goods they wished to trade in Asia. A mythical water route known as the "Northwest Passage" or the "Great River of the West" inspired adventurous explorers. Merchant ships had to sail all the way around North and South America to get to Asia. This water passage would be a faster shortcut across the continent. Whoever found it first would profit from control of the trade route.

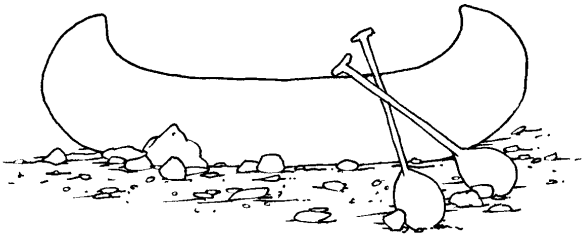
From the 1500's through the 1700's Spanish, Portuguese and Russian explorers sailed up and down the west coast of North America. They mapped much of the coast, and claimed land for their countries. They did not do much exploring inland. British and American explorers also explored bays and inlets, hoping to find the Northwest Passage. In 1791, Captain Robert Gray, an American, saw the mouth of a large river, but could not cross the sand bar. He returned the following year and was able to get across the rough waters at the mouth of the river, and sail 25 miles inland. He named it the Columbia River, after his ship.

Englishman George Vancouver heard of Gray's discovery and sent one of his officers, William Broughton, with a small ship to explore the river. Broughton sailed 100 miles up the river, making notes and naming landmarks.

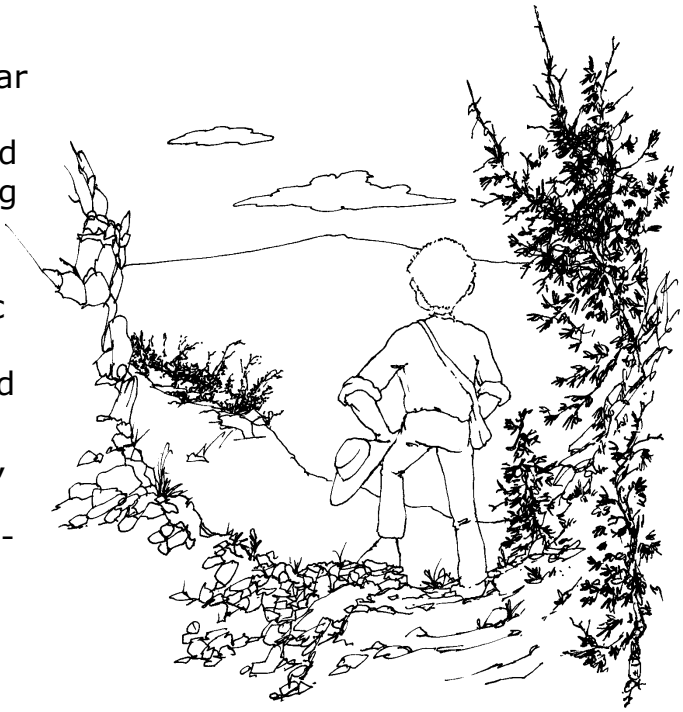
Overland Exploration

Europeans and Americans knew very little about lands in the center of the North American continent. By the time of the American Revolution much of the land east of the Appalachian Mountains was settled or mapped. Spanish, French, English and American traders had explored land and waterways along the Mississippi and Missouri Rivers. Various Indian tribes were very familiar with regions where they lived and traded. A lot of people knew a little about the land, but the information was not connected, and there were only incomplete maps and very few writings to share information about the land and travel routes.

French and English fur traders established posts around the Great Lakes. Soon, the two largest fur companies, Hudson's Bay Company and the North West Company, were sending explorers further out west to look for fur bearing animals, water and trade routes, and locations for supply posts.



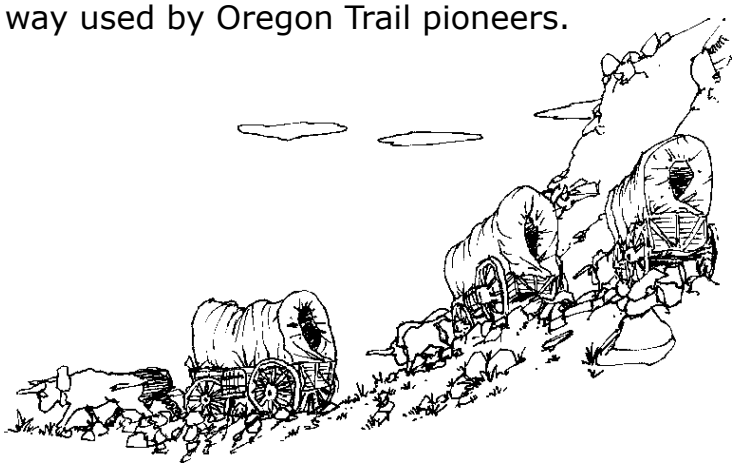
Alexander Mackenzie was a 25 year old Scotsman who worked for the North West Company. He explored through British Columbia, following a great river he thought might be the Northwest Passage. It turned out the river flowed into the Arctic Ocean, and he named it "River of Disappointment." Today it is called the Mackenzie River. His journals and maps were published in 1801, and caused great interest in the Pacific Northwest. American President Thomas Jefferson was especially interested, and began thinking about an American expedition to the West.



More about Overland Exploration

Fur traders did a lot of exploring in the years between 1800 and 1830. Often, they were adding to findings of explorers who had gone before them, or Indians who lived in the region. David Thompson of the North West Company surveyed the upper Missouri River and located the headwaters of the Columbia River. Simon Fraser, also of the North West Company, explored British Columbia and followed the Fraser River to the Pacific Ocean. Peter Skene Ogden explored the Snake River country. When the North West Company was taken over by Hudson's Bay Company, he led what was known as the "Snake Brigades" from 1824-1830, trying to find and trap all the beaver in the Northwest. While doing this work, he explored much of Idaho, California, Nevada, Utah and Wyoming.

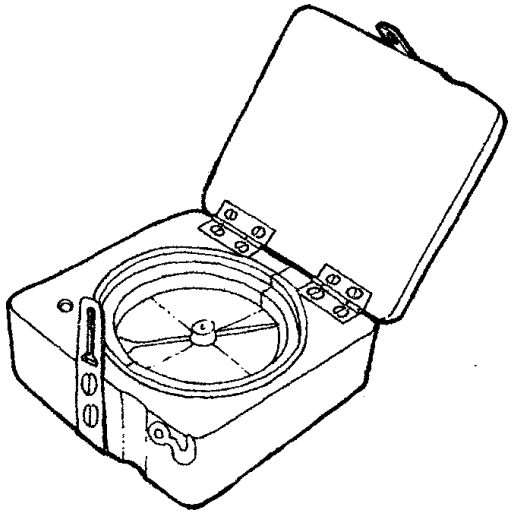
The American Fur Company was founded by American John Jacob Astor in 1808. He set up a post at Astoria, near the mouth of the Columbia River. He hoped to have both sea and overland routes to this post, so he sent out an expedition from St. Louis in 1810. The "Astorians," as they were called, had a very difficult time. They made mistakes, they encountered hostile Indians, they ran out of food, and they endured harsh weather. Wilson Price Hunt led this group, which at one point followed the Snake River into Hell's Canyon. In 1812, Robert Stuart led seven men back eastward over the continent from Astoria to New York. He took a route slightly south from what Hunt had used. Putting together information from local Indian tribes, he found a route that included a fairly easy crossing of the Rocky Mountains, called South Pass. His route later became the main way used by Oregon Trail pioneers.



The fur companies were bitter rivals, and much of their work was done quickly and secretly to try to outsmart other companies and beat their rivals to the best locations for trapping and trading. Their goal was making money. Though they learned a lot about the land and its resources, this information was not connected in a useful way until much later. Scientific and surveying expeditions put many of these pieces together, and filled in the gaps of knowledge.

Lewis and Clark's Expedition

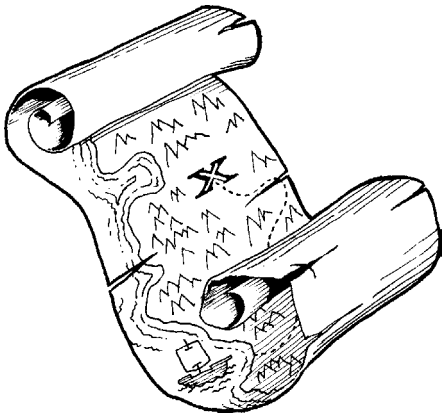
President Thomas Jefferson had long wished to launch expeditions to explore and map the unknown lands of North America. Jefferson wanted to extend trade beyond American boundaries, and to have Americans in the Pacific Northwest. He also was very interested in geography and natural history. At the time Jefferson became President in 1801, only Indian tribes knew exactly where the Rocky Mountains were located. Euorpeans did not know where the "Continental Divide" would be (that is, a point where rivers on one side all flow to the east and rivers on the other side all flow to the west). Many of the animals so familiar to westerners today, such as coyotes, prairie dogs, and antelope, were unknown to Americans who lived in 16 states, mostly east of the Appalachian mountain range. Jefferson also was negotiating to purchase a large tract of land from the French. This land exchange, completed in 1803 was known as the Louisiana Purchase, and added 838,000 square miles to the United States.



President Jefferson arranged with Congress to send an "Exploration of Discovery" out west. Led by Captain Meriwether Lewis and Lieutenant William Clark, the expedition had both military and scientific goals. They left St. Louis in 1804 and went all the way to the Pacific coast, then returned in 1806. Along the way, they mapped their route, met with Indian tribes, and collected specimens of plants and animals which they shipped back to President Jefferson. The permanent group known as the "Corps of Discovery" included 27 soldiers, a half-Indian half-French-Canadian hunter named George Druillard, an interpreter and guide named Toussaint Charbonneau, with his wife Sacagawea and their infant son John-Baptiste, and Clark's black slave York. Meriwether Lewis' Newfoundland dog "Seaman" was an unofficial member of the expedition.

Lewis and Clark

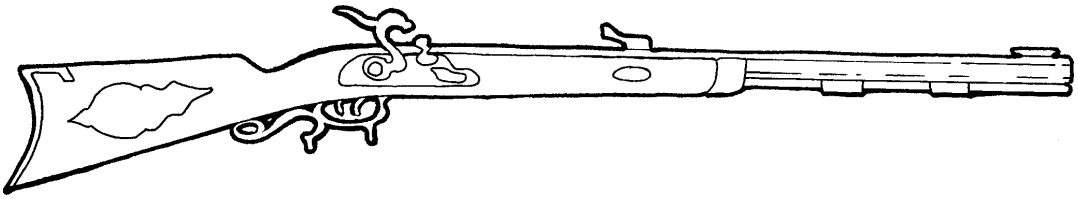
It was a mixed group of people. Their various skills and languages all contributed to the success of the venture. Over two years difficult travel, they lost only one member of the party, and had only one serious injury when Captain Lewis was shot in the seat of the pants. They had only one violent encounter - with Blackfeet Indians. They had run-ins with grizzly bears, overturned boats, and severe winter weather. The soldiers, including French-Canadian trappers recruited for the mission, had great frontier skills as rivermen, carpenters, and hunters. Druillard provided food along the entire route, but was also skilled at sign language and was familiar with Indian trade customs; he often advised and interpreted for the leaders. Sacagawea could converse in Hidatsa and Shoshone, and was very helpful in finding directions and negotiating with people in her Shoshone homeland. Lewis and Clark were co-captains of the expedition, and all members of the party were given a vote in making major decisions.



Several members of the Corps of Discovery were urged to keep journals, so that if anyone was lost the knowledge they gained on the trip would still be saved. Journals kept by Patrick Gass were published, and the detailed journals of Lewis and Clark became a benchmark in knowledge about the west. Upon their return, William Clark filled in many of the unknown areas on the map of North America, including the Continental Divide. The natural history specimens they collected were a source of wonder to scientists who had never seen such plants and animals. Their encounters with Indian tribes formed the basis for American trade and political negotiations with tribes in the Pacific Northwest for many years after. Lewis and Clark, finding the headwaters of the Missouri, the mouth of the Snake River, and navigating much of the Columbia, mostly put to rest the myth of the Northwest Passage and the Great River of the West.

Mountain Men

One member of the Corps of Discovery, John Colter, asked to leave the Lewis and Clark expedition on its return east, so he could explore some more of the Rocky Mountain regions. John Colter explored around the area of present day Yellowstone Park, and became one of the first of a special breed of men known as "Mountain Men". Mostly, they worked on their own, but sometimes they would work for a fur company. They trapped furs, traded with Indians, and worked as guides.



Mountain men such as Jedediah Smith, Jim Bridger, Thomas Fitzpatrick, Jim Beckwourth, and Christopher "Kit" Carson gained vast, firsthand knowledge of the mountains, rivers, lakes, forests, deserts, plants, and animals as they roamed the west in pursuit of fur. William Henry Ashley organized an expedition of mountain men in 1822 to trade in the western mountains. He later started an annual "Rendevous" which was a get-together where the men would trade for supplies, have wild parties, and visit and tell stories.

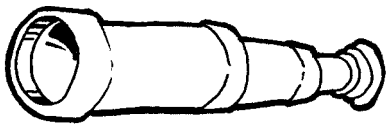
Because of their travels and trade with Indians, a Mountain Man might know several languages and customs of different tribes. Sometimes they married Indian women, and became closely related to Indian tribes. Some lived solitary lives, far from family. Often, mountain men worked in small groups or brigades for mutual protection. Most of the time they lived and worked outdoors. They had to be self-sufficient to survive.

Their knowledge of the land and people of the west made the Mountain Men very valuable in guiding later scientific expeditions for the U.S. Government and helping settlers find the way west. Jim Beckwourth discovered a way through the Sierra Nevada Mountains that became a main route for the California Trail. Jim Bridger located the Great Salt Lake, and Thomas Fitzpatrick led wagon train pioneers west to the Oregon Country.

Scientific and Military Expeditions

Along with those looking for fur and trade routes were scientists and surveyors, who explored for new plants, animals, and minerals, and worked to make maps of the vast wilderness. Naturalists, who study plants and animals, traveled with explorers and traders collecting specimens, and worked with artists to describe and illustrate new plants. Thomas Nuttall, an Englishman who lived in America, traveled along with ornithologist John Townsend on Nathaniel Wyeth's fur trade expedition in 1834. They collected plants and birds along the route of the Oregon Trail, which they cataloged and sent back to museums and universities in the east. David Douglas sailed on a Hudson's Bay ship to Fort Vancouver and from there began exploring and collecting seeds along the Columbia and Willamette Rivers. Douglas made two trips to the Oregon Country, and gets the credit for finding and naming many species, including the Ponderosa Pine and the Douglas Fir tree.

Charles Wilkes, a Navy officer, explored the Columbia River and Willamette River Valley for the U.S. Government from 1838 to 1841. He made detailed notes and maps of the rivers, the climate, and the resources. John C. Fremont, a Captain in the U.S. Corps of Topographical Engineers, was sent on an expedition by the U.S. Government to the Rocky Mountains in 1842. The next year, he continued on the route of the Oregon Trail to Fort Vancouver. His maps and notes were published, and became the best known information about the route west. John C. Fremont became very famous for his explorations, and later ran for President.



Each exploration, whether by a fur company explorer, a sea captain, a military man, scientist, or a mountain man, led to more and more information about the Pacific Northwest. Rivers were mapped. Landmarks were given names. Plants and animals were listed and studied. Europeans learned more about the native people, and the Indians learned more about the Americans and Europeans. The discoveries of the early explorers led to travel routes we use today. They led to drawing boundaries for states and the border between Canada and the U.S. Information gathered and published by explorers raised public interest in settling or starting a business in the Northwest, which eventually brought on rapid changes to the Indians and their way of life. It was only about fifty years between the time Robert Gray sailed into the mouth of the Columbia, and the time the first wagon trains brought settlers to the Oregon Country. When exploration began, the Pacific Northwest changed forever.

Forward Into the Unknown - A Classroom Discussion

The following questions are intended to stimulate discussions to lead the student to consider the nature of exploring, and better understand how explorers in the Pacific Northwest had to deal with problems in their time. Additionally, the discussion should allow the student to feel the immensity of exploring new un-charted regions.

Classroom Discussion

What is it like to be an explorer of unknown lands? How many of you have taken a trip to a place you had never been before? It happens to all of us. It happens all the time. When we are going somewhere new and unknown to us sometimes we feel fearful. We might feel curious. We might feel excited because we expect to see new things. These same thoughts and feelings are shared by all people, and especially by explorers.

To explore means to travel to a new region, and then to look around closely and investigate what is there. What are some reasons why people want to explore?
(Some reasons might include to look for a new home, to look for resources such as farmland or minerals, or to gather scientific information. Another reason is curiosity - just to see what's on the other side of the hill, or ocean, or on another planet.)

What might be scary about exploring an unknown land? (Fear of dangerous or hostile people there, fear of a difficult or hostile climate, fear that there will be nothing to eat, fear that you might not be able to get back home...)

What would you do to prepare for an exploring trip? Suppose I said "Next week we're going to a place in the middle of South America, where no one has ever been?" What kinds of things would we have to think about to prepare for our trip?
(How will we get there? How long will it take to travel? What is the climate like? Can we breathe the air? Is it hot, cold, rainy? What kind of clothes will I need to take? Will there be food for us to eat when we get there? Do we need to take our own? How long will we need to stay? What kind of things will we want to see? Are there people there? Are there animals there? Are they hostile or friendly? If we meet other people - how will we communicate with them?)

Even though we'd been told no one had ever been there, are there ways we could find out some information?
(We could research and see if someone had been near there before and written about it. We could research places alongside this region, directly to the west or east, north or south, and see if there is something that compares to it. That might give us some ideas about climate and atmosphere.)

How can you find reliable information about places? How can you tell the difference between information that is just a story, or information from someone who has really visited a place?

After you had thought about it and researched as much as possible, what would you do to prepare for a trip to an unknown place? (Gather supplies. Plan a route to get there. Figure out transportation. Learn ways to communicate. Perhaps notify someone to come to your rescue if you don't return home by a certain date.)

What kinds of things would you take?

How would you keep a record of your trip, so you could tell other people what you saw?

Forward into the Unknown

How Explorers prepared for their journeys.

Read this quote from an explorer's journal, and write a response to each question.

"We traveled in bateaux and light-built wooden canoes; the former had eight, and the latter six men. Our lading consisted of guns and ammunition, spears, hatchets, knives, beaver traps, copper and brass kettles, white and green blankets, blue, green, and red cloths, calicoes, beads, rings, thimbles, hawk-bells etc.; and our provisions of beef, pork, flour, rice, biscuits, tea, sugar, with a moderate quantity of rum, wine, etc. The soft and hard goods were secured in bales and boxes, and the liquids in kegs, holding on an average nine gallons. The guns were stowed in long cases. From thirty to forty of these packages and kegs were placed in each vessel, and the whole was covered by an oil-cloth or tarpaulin, to preserve them from getting wet."

*This was written by Ross Cox who was at Astoria in 1812, and fitted out an expedition to a post on the Spokane River. (*citation The Columbia River, 1831 by Ross Cox).*

Why would they be taking things like copper and brass kettles, white and green blankets, beads, rings, thimbles, and hawk-bells?

Why would they be taking all these supplies and all the men by boat rather than going over land with pack horses?

Forward into the Unknown

How Explorers prepared for their journeys.

Read this quote from an explorer's journal, and write a response to each question.

This quote is from the journal of Patrick Gass, a member of the Corps of Discovery led by Lewis and Clark. This is what he wrote about the first day of their expedition on May 14, 1804.

"The best authenticated accounts informed us, that we were to pass through a country possessed by numerous, powerful and war-like nations of savages, of gigantic stature, fierce, treacherous and cruel; and particularly hostile to white men."

The men in this expedition didn't know what to think about the Indians they might meet in the west. They didn't have a lot of information. From Patrick Gass' description, how would you feel about traveling out to meet these people?

How would you prepare to meet people you believed might be fierce and hostile?

Do you think people are more likely to believe that people they don't know are scary? Or friendly?.... Why?

Patrick Gass was in a group of 33 people, facing a large new area he thought had "powerful and war-like nations...". Do you feel differently if you are traveling alone or in a small group, than if you are in a large group?...Why?

Forward into the Unknown

How Explorers prepared for their journeys.

Read this quote from an explorer's letter, and write a response to each question.

This is from a letter written by Meriwether Lewis to President Thomas Jefferson, April 20, 1803:

"Recapitulation of an estimate of the sum necessary to carry into effect the Missouri Expedition:
Mathematical Instruments.....$217.
Armor Accouterments extraordinary.....81.
Camp Equipage.....255.
Medicine & packing.....55.
Means of transportation.....430.
Indian presents.....696.
Provisions extraordinary.....224.
Materials for making up the various
articles into portable packs.....55.
For the pay of hunters, guides and
interpreters.....380.
In silver coin to defray the expenses
of the party from Nashville to the last
white settlement on the Missouri.....100.
Contingencies.....87.
Total: $2,500.

Where did Meriwether Lewis expect to spend the most money on supplies? Why do you think this was his biggest expense?

Do you know the meaning of the word "contingency"? If not, look it up in your dictionary, and then explain why it would be important to budget some money for this when exploring.

Meriwether Lewis planned to buy materials for making up the various articles into portable packs. Why couldn't he buy packs already made as we are able to today?

Forward into the Unknown

How Explorers prepared for their journeys.

Read this quote from an explorer's letter, and write a resonse to each question.

This quote from Peter Skene Ogden, about an expedition through present day eastern Oregon and western Idaho in 1826.

"...a winter voyage to the Snake Country may be and is by some considered a trip of pleasure but from what I have experienced the two last winters I am of a different opinion. And by what route it can be undertaken without serious loss, I am at a loss to decide...if the winter be mild or severe: Starve you must. If optional with me I should prefer starting in October from Fort Nez Perce with good horses, not such trash as were given to me last fall, and 40 days provisions. I am of opinion an expedition might succeed without being reduced to the necessity of killing horses for food..."

Based on this advice from Peter Skene Ogden, what do you think was most important to take along on a trip through this territory?

Do you think this is reliable advice? Is there something in this quote that would make you think Peter Skene Ogden had real experience and knows what he it talking about?

Explorers of the Pacific Northwest

The Clash of Cultures

*Euro-Americans and Native Americans - reading and questions about differences between cultures.
*The Value of Language - classroom activities on the challenges of communicating between cultures.
*Known vs. Unknown - reading and questions on the Indian perspective of meeting explorers.

A Clash of Cultures

How did the Euro-American explorers affect the Native Americans? Read the following passages and answer questions.

In the history of humankind when two cultures meet there can be a struggle between the cultures for supremacy. This was the case with the Native Americans and the Euro-Americans.

In reading the journals of the early explorers the two cultures are often represented as working cooperatively. The men and women of both groups interacted with each other. The primary point of contact between the two groups was through trade.

One area of cultural difference was in the idea of ownership of land and goods. In the following passages taken from the journal of Nathaniel Wyeth, a fur trader, two separate views are presented about the same Indian tribe.

[Wyeth] 8th September, 1832

Mooved (*sic*) camp down the creek about 12 miles and came to the village under the escort of about 20 Indians on Horseback one of whom by the direction of the chief shewed (*sic*) us the place for our camp where grass and water could be had here the chief harangued his people telling them not to come into our lines nor steal from the white people...I found these Indians great thieves in the small line knives etc...

Nathaniel Wyeth followed this journal entry with the following entry written the next day while he was staying with the same Indians as he wrote about above.

[Wyeth] 9th September, 1832

In morning went to see the Indians catch Salmon which is done by entangling them in their passage up the creek among dams which they erect and spearing them they catch an immense quantity the operation commences in the morning at a signal given by their chief. This chief is a good sized man and very intelligent and the president would do well if he could preserve the respect his subjects as well or maintain as much dignity.

Notice that Wyeth's writing lacks punctuation. Wyeth was one of the better spellers among the explorers, but did not see any need to punctuate his sentences.

A Clash of Cultures

How does Wyeth portray Native Americans?

Why do you think he gives such different views of the same people?

Why might Wyeth consider the Indians thieves, but the Indians not consider borrowing wrong?

A Clash of Cultures

These passages are also from the journal of Nathaniel Wyeth, a fur trader who traveled west to establish a fur post in the 1830s.

[Wyeth] 5th February 1833

> ... I should think the fall to be about 8 feet in the space of 60 Rods There are here two fishing villages both now deserted as the people here say from the inmates being all dead of the fever but I suspect some are dead and the rest and much larger part frightened away...

Why do you think Nathaniel Wyeth would want to believe that most of the Indians had been frightened into running away?

What did Euro-Americans bring with them which killed many Native Americans?

Why do you think Native Americans were killed by European diseases so easily?

A Clash of Cultures

Read the following two passages from Nathaniel Wyeth's journals. These entries tell us about the Indians religious beliefs before the Euro-Americans brought their beliefs to the Native Americans.

[Wyeth] 25th October, 1832

> ... A pole with a knob at the top is erected over her remains at the foot of the Dalles is an island called the Isle of the Dead on which there are many sepulchers these Indians usually inter their dead on the Islands in the most romantic situations where the souls of the dead can feast themselves with the roar of the mighty an eternal waters which in life time afforded them sustenance and will to all eternity to their posterity.

How does this differ from Euro-American beliefs?

Why might the Native Americans have developed different beliefs?

[Wyeth] 9th June, 1833

> ... I think the Indians die better than the whites perhaps they have less superstition in regard to the future and argue that as the deity makes them happy here he will also hereafter if there is existence for them.

Why would this make Nathaniel Wyeth think that Native Americans were less superstitious than Euro-Americans?

The Value of Language - A Classroom Activity

One of the most difficult barriers to overcome when interacting with new people is the language. Early explorers were able to overcome language difficulties through the use of interpreters, sign language, and trade languages. Trade languages are made up using a few words and signs to communicate basic ideas.

Interpreters - are people who know more than one language and can do translations between those languages. Early explorers often used translators, however, there were frequent problems because of the many different Indian languages, and because most of the interpreters were French-Canadian trappers, who could not translate to English or Spanish, only to French. So British and American explorers would have to find others who could translate French into English. Other interpreters were Indians who had lived briefly among white people. Some of them knew only a little English, so could only translate those few words and ideas. The early explorers had to wonder: Do the interpreters speak the right languages? Can they be trusted to interpret correctly? Where can we find the people who know these languages?

Here is an interesting situation of the Corps of Discovery Expedition led by Lewis and Clark. One of their privates, Francois Labiche, could fluently speak both English and French, and often interpreted for them. They hired an interpreter, Toussaint Charbonneau, for his knowledge of Hidatsa and Mandan languages, which he could translate into French, but not English. Charbonneau's wife Sacagawea could speak both Shoshone and Hidatsa. On August 17, 1805, Meriwether Lewis recorded a meeting they had with Shoshone Chief Cameahwait.

> "...through the medium of Labuish, Charbono and Sah-cah-gar-weah, we communicated to them fully the objects which had brought us into this distant part of the country, in which we took care to make them a conspicuous object of our own good wishes and the care of our government."

For this exchange, Lewis and Clark spoke English to LaBiche, who translated to French to Charbonneau, who translated to Hidatsa to Sacagawea, who translated to Shoshone for the Chief Cameahwait. They had to translate through five different people...do you think there is a greater chance for someone to get the message wrong when it goes through so many people?

What might happen if someone translates something incorrectly?

The Value of Language - A Classroom Activity

Try this exercise to experiment how easily things can get translated incorrectly. Divide students into groups with at least five in each group. This is based on the familiar game "Gossip" in which a message is quickly spoken from one group participant to the next. The last student to receive the message will say it to the entire class, to see how well it compares with the original message. These messages are based on somewhat complicated instructions which might have been similar to what explorers asked a translator to communicate to an Indian, and then to translate the information back. It is a long message - tell the students they are not expected to remember it word for word, but to convey the message as accurately as possible.

1) To get to that place, cross the second river you come to, not the wide one but the narrow one, and then go left two miles until you see a blue mountain. Not a green mountain because that's the wrong way, but a blue mountain.

2) Go right one mile, then two miles left. You'll be there the next day. Ask for Mac. Not Jack, but Mac. And look out for Tim. He might hurt you. His brother Jim is a good man, but not Tim.

After the exercise, ask the entire group why this might have been difficult, and how it might show us difficulties about translations. Was the long message hard to remember? Were there words that sound similar and are difficult to hear clearly? Was there information that maybe wasn't important, but was included anyway?

The Value of Language - A Classroom Activity

Sign Language - is a series of hand gestures and positions to communicate ideas and words. Many people are familiar with American Sign Language or Signed Exact English used by people with hearing difficulties. Traders and Indians also used sign languages because it was easier for them than learning all the different languages and dialects they might encounter. The chart on the following page shows some standard signs used by Plains Indians.

To better understand some of the benefits and difficulties of using sign language, try this exercise. Divide students into pairs, or into small groups of three to four students each. Copy and clip the phrases below and hand out one to a designated student in each group. This student will try to communicate the message without speaking or writing...only using hand gestures or facial expressions. The others will try to figure out what they are saying.

Students should find this somewhat frustrating. They may experience the difficulty of trying to convey literal sentences, and how sign language works best to convey basic ideas. They may realize how much we depend on words to communicate clearly. The advantage of known sign language is we don't get frustrated trying to invent the right gesture every time we want to talk to someone. After completing the first part of the exercise, show students the Indian sign language chart, and discuss how some of the signs might have been invented.

How do I get to the water fountain?

The best day of the year is the Fourth of July.

Did you see the stars in the sky last night?

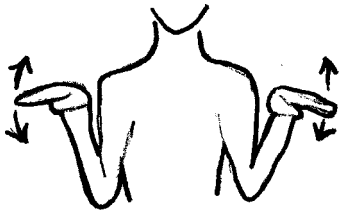
It's too bright in here! Will you get me a hat?

What kind of animal has a long neck and big brown spots?

What time is dinner at your house tonight?

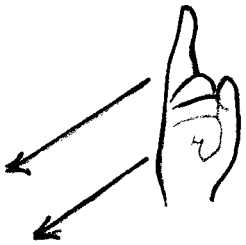
Red is my favorite color. I'd like to paint this room red.

I don't like old things. When I go shopping, I want new things.



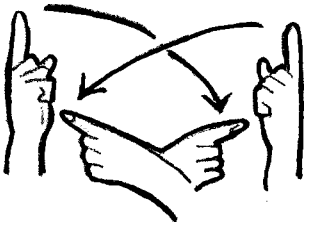
BIRD

TALK

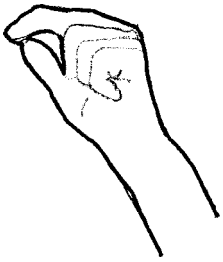


BOY

BUFFALO

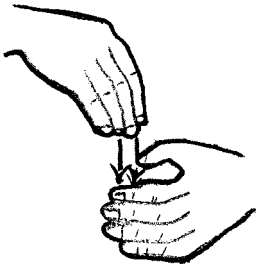


TRADE

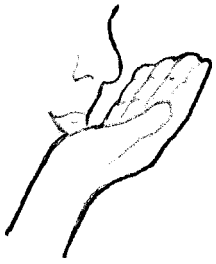


LITTLE

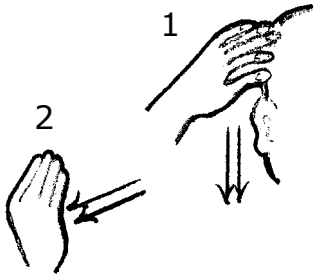
BOOK



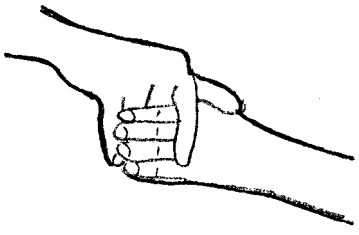
BAG



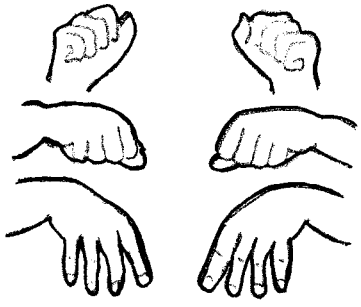
WATER



GIRL



HORSE



RAIN

The Value of Language

Trade Language - is a language developed between people who buy and sell goods amongst each other. It frequently uses a few words or word combinations from all the languages of those people. For example, the term "lingua franca" refers to trade langauge used in the ports of the Mediterranean Sea. It combined words from Italian, French, Turkish, Spanish, Greek and Arabic languages. A sailor from Spain could use this language with a Turkish trader in a town in Italy. This term "lingua franca" is sometimes used for any commonly developed language. On the following sheet are some words from the Chinook jargon which was used amongst traders and native people in the Pacific Northwest.

See if students can put together some basic sentences using the Chinook vocabulary.

Chinook Language

The Chinook Language was a trade language developed by Indians in the Pacific Northwest to communicate amongst their communities, and with the British, French and Spanish traders who came into the territory. The words are a combination of words and sounds from all languages used by these people, and that can be easily understood and translated.

Hello - Klahowya
Thank you - Mahsie
yes - ah ha
no - no, Wake, halo (all three were used)
friend - seeks
I, me, mine - nika
you, yours - maika
American person - Boston
French person - pasiooks
crazy - lemolo
old man - oleman
old woman - lummi
beaver - eena
horse - kiuatan
bob-tailed horse - siskiyou
saddle - lasell
blanket - pasee-si
hay - tupso
cow - moos-moos
cat (also for big cats like cougars) - puss puss
bird - kalakala
dog - kamooks
pig - cosito
mosquito - malakwa
snake - oluk
people - tillicum
food - muckamuck
water - chuck
sweet - tsee
rotten - poolie
milk - tatoosh
potato - wapato
bread - bannack
dollar, money - dolla
how many - kunsih
trade, do business - huy-huy
buy - mahkook
canoe - canim
carry, lift - lolo
hungry - olo
thristy - dly
sleep - moosum
mountain - lamonti
wagon - chickchick
one - ixt
two - kunamoxt
three - klone
four - lakit
five - kwinnum
six - taghum
seven - sinamoxt
eight - stotekin
nine - kwaist
ten - tahtlum
hundred - tukamonuk
thousand - tahtlum tukamonuk
where? - kah?
what? - iktah?
and, or, if - pe
yuck! - kweesh!
right on!- nwitka!
laugh - heehee
fight - pukpuk
Chinook language - Chinook wawa
American language - boston wawa
give, share - potlatch
(same in both languages)
house - house
bed - bed
soap - soap
shoes - shoes

Chinook Language

Try writing these phrases using Chinook language. Remember, it isn't necessary to write word for word to communicate the idea!

My friend is hungry. Can I buy bread from you?

I will give you two dollars for that blanket.

Where can I buy a horse and saddle?

Now try some of your own sentences....

Known versus Unknown *A reading exercise.*

Before European explorers came west, Indians had already explored much of the land. They searched for good places to find food, and for good campsites. They located places to get supplies for making tools. They found where enemies might be living. They knew the land very well before the Spanish, French, British, Canadian, and American explorers arrived. When these explorers from foreign lands appeared, the Indians had to do a different type of exploring. They had to ask questions. They wanted to know why the strangers were coming. It was important for them to know if the strangers were friendly, or if they might hurt the Indian people. The newcomers to the west sometimes brought trade goods or tools that would be helpful to the Indians. Metals and manufactured goods from other lands were not always available to the Indians. Before the time of the European explorers, the Indians did not have horses or guns. These changed their way of life.

The land where the Indians lived had no name or boundaries before the time of the explorers. Each group of Indians had their own names for the land, and their territories were not marked on maps or with fences or walls. They traded amongst each other, and moved around as needed to find food or supplies.

Here are some stories written by American explorers about meeting Indians.

William Ashley was a fur trader. He wrote about meeting an Indian while exploring in 1825. (William Ashley wrote notes about this meeting, and didn't always use proper grammar. His notes have been re-written into sentences for this story.)

"About 10 o'clock we met with one of the party, a Snake Indian. He met me with great familiarity and ease, as much so as if he had been accustomed to being with white men all his life Calling aloud 'American?', I answered in the affirmative. He then advanced and extended his hand, and by signs asked many questions. How many men were with me? Where were they? What was the object of our pursuit in the country? All of this I answered for him with signs, after passing about an hour with me, during which time I made inquiries relative to the country west, and his knowledge of any white men in the country."

Patrick Gass traveled with Lewis and Clark on the Corps of Discovery expedition. He wrote this in September 1805.

"This band of the Flatheads have a great many beads and other articles, which they say they got from white men at the mouth of this river; or where the salt water is. They have a large stock of horses. Their buffalo robes and other skins they chiefly procure on the Missouri, when they go over to hunt, as there are no buffalo in this part of the country and very little other game. Most of the men of this band are at present on a war expedition against some nation to the northwest, that had killed some of their people; as we understood in our imperfect communications with them."

Known versus Unknown

Answer these questions about the stories you just read.

In William Ashley's story, why do you think the Indian man asked "American?" before he greeted the explorers?

What kinds of things would Indians want to get by trading with the explorers and mountain men? The Flatheads had many men away on a war expedition. How would this affect their interest in trading?

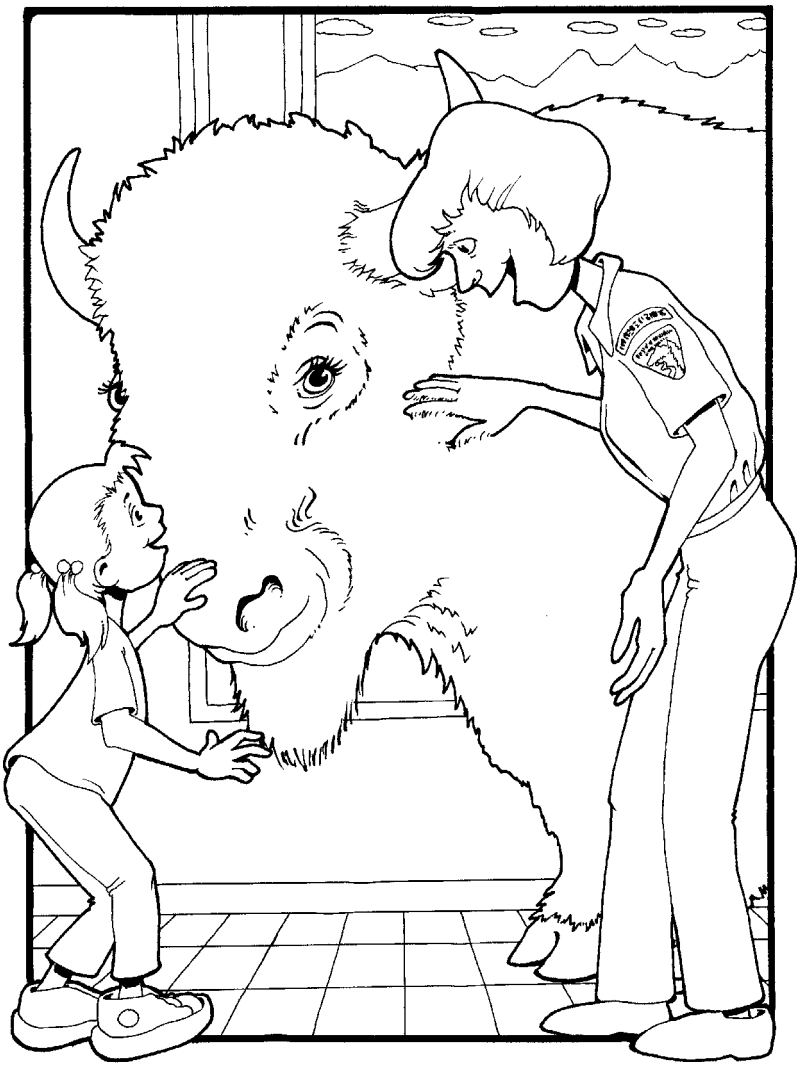
If you were an Indian meeting someone you'd never seen before, what kind of questions would you ask?

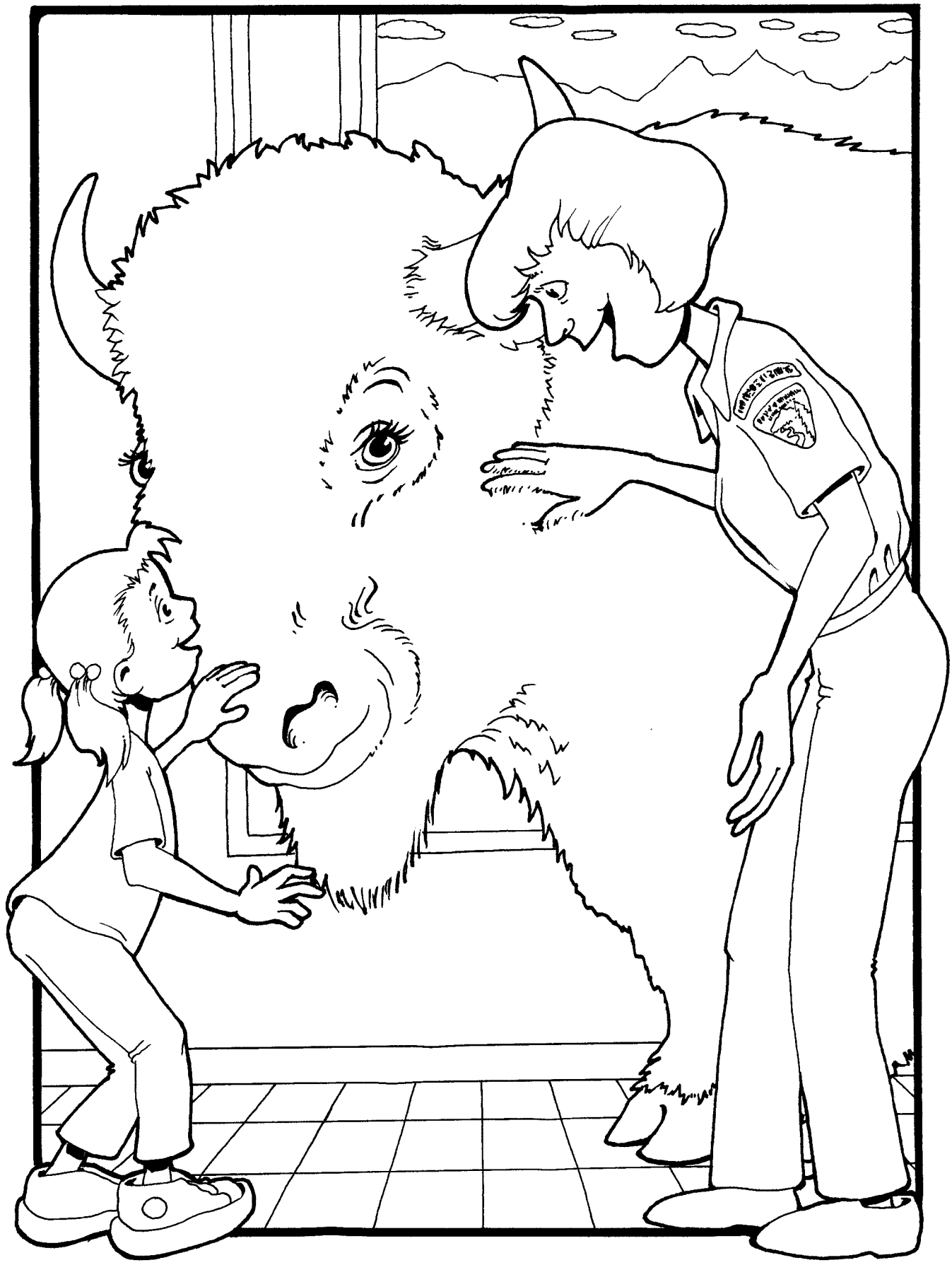
In these stories, did the Indians seem happy to see the explorers and mountain men, or frightened to see them? Why do you think they felt that way?

Explorers of the Pacific Northwest

Site Visit Activities

*Orienteering - The Explorer's Course
*Expectations vs. Reality
*I Spy Explorers Activity Sheets





Orienteering - The Explorer's Course, An Outdoor Activity

One of the most important skills used by explorers to the Pacific Northwest was the ability to navigate through unknown terrain without getting lost. Most of the explorers were familiar with the compass as a basic tool of navigation. Many also used sextants and octants to locate their latitude. Since a timepiece can be used to fix longitude the early explorers had the ability and the tools to fix a rough location based on latitude and longitude. Lewis and Clark often gave their position by degree, minute, and second.

Another, but less precise, method of orienteering is based on dead reckoning. Dead reckoning means determining the direction one wishes to travel and then using a fixed point or the sun to maintain that direction of travel.

A big problem the explorers faced in finding their way across the continent was the lack of accurate maps. With an accurate map and a compass, a person can successfully navigate from one point on the map to another.

There are several good books as well as some good web sites that teach the skill of orienting a compass to a map. The basic approach is to first place the compass flat on the map. The needle points to the north, so the next step is to turn the map so it is aligned in the same direction as north on the compass. The explorer would then find points on the map that correspond with the landscape, and travel in the desired direction, stopping to check often that the compass, the map, and their direction of travel all match. It is not necessary that students be able to orient a compass and a map to complete the explorers course at the Oregon Trail Interpretive Center site.

This activity corresponds with hiking trails at the Interpretive Center, and will probably require 90 minutes to complete. The route is nearly two miles long. There are three starting points, so groups can be divided to begin their activity in different locations. The object is for each group to explore their assigned route, making observations on landscape, landmarks, directions, and of plants and animals along the way. They record these notes on journal pages and map provided, and upon completing their hike, should write a description of their trek sufficient to help someone else to find their way over the same route. For the trek, members of each group will have appointed tasks. Captain will take notes, keep the group moving, keep time, and take a vote whenever the group needs to make a decision. Navigator will use the compass and advise the group on which direction they are traveling. Botanist will direct the group in observing and noting interesting plants. Biologist will watch for animal signs – such as droppings, fur, or dead skins. Meteorologist will note weather observations. Geographer will make landmark descriptions and lead the group in assigning names to landmarks. Geologist will make observations about rocks. Cartographer will make notes to help the group complete their map. Depending on the size of each group, these assignments can be doubled or combined.

The course is designed with two checkpoints along the trails, which, if possible, should be manned by adult helpers. The checkpoint stops will help students stay on track, and assist with any difficulties. The students should understand that this activity is not a race. Finishing first isn't the goal; observing and writing clear directions is important. Please inform students that they should not collect specimens along the way, but only record the plants, animals, and rocks they find through written descriptions or drawings.

Basic supplies such as compass, clipboards, and inexpensive binoculars can be provided by the Interpretive Center if your group does not have these available. Please call ahead of your group visit if this is needed, so we can ensure that these supplies will be available.

Hiking trails are mostly paved, graveled or hard packed soil. There is an elevation change of 370 feet covered by the hiking trails between the top and base of Flagstaff Hill. There are no water fountains or restroom facilities along the way. It is recommended hikers take along water, insect repellent, and a hat, and dress appropriately for the season. During summer season, sudden lightening and thunderstorms may occur, and it is important to keep notice of weather conditions.

Exploring to the Great West

Your group has been assigned to explore this route by following these instructions.
Before starting, each team member will take a specific job. Together as a group, you are to explore and document the route, and complete a map, with descriptions to help someone else making this hike.Team members:

Captain:_____ _

Take notes, keep the group moving, keep time, and take a vote whenever the group needs to make a decision.

Navigator:_____

Use the compass and advise the group on which direction they are traveling.

Botanist:_____

Direct the group in observing and noting interesting plants.

Biologist:_____

Watch for signs of animals...such as droppings, fur, or dead skins. Make note of any animals you see, and describe their activities and habitat.

Geographer_____

Note descriptions of the landscape and lead the group in assigning names to landmarks.

Cartographer:_____

Make notes on the map, fill out completed map after the expedition.

Geologist:_____

Note rocks and minerals found along the way.

Meteorologist:_____

Notes weather conditions.

If there are not enough members in your group for each of these jobs, some people can do two jobs. Your teacher will explain how to use the compass. As your group hikes along the path, make notes and complete the journal pages. When you finish your hike, fill in blank portions of the trail on your map, and add notes as to landmarks and land features.

Please, stay on trails. Do not collect specimens of plants, animals or rocks, but only make notes or draw pictures.This is not a race. Finishing first is not the goal...gathering good information is the task for this hike.

A Journal of Our Expedition:

We started a journey from _____

at (time)_____ on this date:_____

(Make plenty of notes of what you see along the way. Describe the condition of the path, where the land is rocky or smooth, what types of plants, weather conditions, animals, landmarks, and the landscape and features you can see.)

As you start your hike, first note where the sun is located, and what the weather is like today.

THE TREKKERS

Start at South Side of Parking Lot, at the trailhead of the paved path.
Orient yourself to the north. What do you see in front of you as you face north?

Go east about 20 paces to the fork in the trail, and take path to the south until it branches with a dirt trail. Take the dirt trail heading south.

Stop to test wind direction. Find north on your compass; one member of your group takes a small piece of grass and drops it so the breeze carries it while other members of the group watch. What direction does it fly? This will help you determine wind direction. If there is no breeze today, have your meteorologist include that in the notes.

Describe what you see in the distance to the south and to the west.

To the north of this trail, do you see any land formation that looks like a rock wall?

Stop at the bench. Look at the hill to the SW (about 220 on the compass). Assign a name to this landmark that might help others find it.

Remember to make notes about trail condition, plants, any signs of animals such as burrows or droppings, and about the types of rocks you see while walking along this trail.

When you reach bottom of this trail, you will see a small wooden shelter, this is checkpoint one. At the shelter, orient your group to the north, there are four trails here. One leads to the west, one leads to the northwest, one leads to the southeast, and the one you just walked heads to the northeast.

Explore the west trail to the sign. What does the concrete marker say?

Return to the shelter and explore the trail to the southeast…what is written on the granite marker?

Return to the shelter, and proceed up the northwest trail. Describe what you see to your left as you walk up the trail.

Stay on paved path to the bench and sign…what is the sign about?

The trail will switchback to the east; continue following the trail switchback to the northwest. As you reach the top of the trail look for a branch in the path.

Checkpoint two. Check your compass and figure out which path will lead you west. As you move up this trail, there is a rock formation directly ahead of you. Assign a name to this landmark, to be added to your map.

Once you have reached the shelter at Panorama Point, orient your group to the north.

Describe what you see facing north.

Describe what you see facing west.

Describe what you see facing east.

Return to the Interpretive Center. When you reach the first fork in the trail, take the path heading east.

Stay on paved trail back to the Center. When you pass the shade shelter, what do you see on the hill to the north?

What do the signs you pass on this trail say?

Stay on paved path up to fork where trail goes to Panorama Point or the Mine site, and stay to the right. From here, you can take the loop trail up to where your class or group has arranged to meet. When you get back to your meeting place, take some time to gather together all the notes from your group, and fill in your map.

THE VOYAGEURS

Starting Point is at north side of the parking lot, on walkway to front entrance of the Interpretive Center building.

Orient your group to face north. What is directly in front of you?

Follow trail to the north until you come to a fork in the trail. Go east on this trail approximately 60 paces, then follow the path northwest.

Follow trail as it winds around. What do you see to the east of you as you walk this trail?

When you reach the stairs above the mine site, check your compass. In what direction are you headed?

Keep walking until you reach the fork between the mine site and the wagon encampment. Look westward in the distance for a small building with three roofs. This is your destination. Which path should you take to get there – to the left or right?

Stay on the paved trail until you reach the bench and sign…what does the sign say?

As you walk towards the shade shelter building, what do you see on the hill to the north?

Keep walking until you reach the fork in the trail. This is a checkpoint. Figure out which direction to walk to get to Panorama Point. As you walk this trail, there is a rock formation ahead of you…make up a name for this landmark.

Once you have reached the shelter at Panorama Point, orient your group to the north.

Describe what you see facing north.

Describe what you see facing west.

Describe what you see facing east.

Walk back to the checkpoint at the fork in the trail, and follow the branch of the trail heading south and east. This switches back toward the west. Walk to the bench and sign…what feature does the sign point out?

Continue walking east and south. Stay on the paved path until you reach the shade shelter. As you walk, describe what you see on your right.

This shelter is another checkpoint. Check your compass. There are four trails here. One leads to the west, one leads to the northwest, one leads to the southeast, and the one heads to the northeast. Explore the west trail to the sign. What does the concrete marker say?

Return to the shelter and explore the trail to the southeast…what is written on the granite marker?

Return to the shelter, and proceed up the northeast trail. Describe the condition of this trail. Remember to make notes about trail conditions, plants, any signs of animals such as burrows or droppings, and about the types of rocks you see while walking along this trail.

Stop at the bench. Look at the hill to the SW (about 220 on the compass). Assign a name to this landmark, to put on your map later.

At you continue walking up the hill, do you see any land formation to the north that looks like a rock wall?

Describe what you see in the distance to the south and to the west.

Describe what you see in the distance to the south and to the west.

Stop to test wind direction. Find north on your compass; one member of your group takes a small piece of grass and drops it so the breeze carries it while other members of the group watch. What direction does it fly? This will help you determine wind direction. If there is no breeze today, have your meteorologist notes those conditions.

Keep walking on trail until it branches with a paved trail. Head west on the paved trail and follow this path back to your group meeting place in the Interpretive Center. Remember to fill in missing parts of your map.

THE EXPLORERS

Start at Picnic Shelter. Orient your group to the north.
Take the paved path heading NW to where it intersects with a path heading SW. Take this path SW to intersection, and head south.

Where the path intersects again, head south-southwest. As you walk this path, what do you see to the east?

Stop at the scopes if you like and view the land to the west. Continue on path to intersection with a dirt path. What does the sign say?

Head southeast down the path.

Stop to test wind direction. Find north on your compass; one member of your group takes a small piece of grass and drops it so the breeze carries it while other members of the group watch. What direction does it fly? This will help you determine wind direction. If there is no breeze today, have your meteorologist note those conditions.

Describe what you see in the distance to the south and to the west.

To the north of this trail, do you see any land formation that looks like a rock wall?

Stop at the bench. Look at the hill to the SW (about 220 on the compass). Assign a name to this landmark that might help others to find it.

Remember to make notes about trail condition, plants, any signs of animals such as burrows or droppings, and about the types of rocks you see while walking along this trail.

When you reach the bottom of this trail, you will see a small wooden shelter. This is checkpoint one. At the shelter, orient your group to the north, there are four trails here. One leads to the west, one leads to the northwest, one leads to the southeast, and the one you just walked heads to the northeast.
Explore the west trail to the sign. What does the concrete marker say?

Return to the shelter and explore the trail to the southeast…what is written on the granite marker?

Return to the shelter, and proceed up the northwest trail. Describe what you see to your left as you walk up the trail.

Stay on paved path to the bench and sign…what is the sign about?

Walk back to the checkpoint at the fork in the trail, and follow the branch of the trail heading south and east. This switches back toward the west. Walk to the bench and sign…what feature does the sign point out?

Continue walking east and south. Stay on the paved path until you reach the shade shelter. As you walk, describe what you see on your right.

This shelter is another checkpoint. Check your compass. There are four trails here. One leads to the west, one leads to the northwest, one leads to the southeast, and one heads to the northeast. Explore the west trail to the sign. What does the concrete marker say?

Return to the shelter and explore the trail to the southeast…what is written on the granite marker?

Return to the shelter, and proceed up the northwest trail. Describe what you see to your left as you walk up the trail.

Stay on paved path to the bench and sign…what is the sign about?

The trail will switchback to the east; continue following the trail switchback to the northwest. As you reach the top of the trail look for a split in the path.

Checkpoint two. Check your compass and figure out which path will lead you west. As you move up this trail, there is a rock formation directly ahead of you. Assign a name to this landmark, to be added to your map.

Once you have reached the shelter at Panorama Point, orient your group to the north. Describe what you see facing north.

Describe what you see facing west.

Describe what you see facing east.

Return to the Interpretive Center. When you reach the first fork in the trail, take the path heading east. Stay on paved trail back to the Center. When you pass the shade shelter, what do you see on the hill to the north?

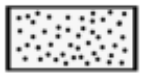
What do the signs you pass on this trail say?

Stay on paved path up to fork where trail goes to Panorama Point or the Mine site, and stay to the right. From here, you can take the loop trail up to where your class or group has arranged to meet. When you get back to your meeting place, take some time to gather together all the notes from your group, and fill in your map.

To complete your map:

*Fill in missing portions of trail
*Make a compass rose showing direction North
*Make notes of where you saw plants, animals, and rocks
*Show natural and manmade features
*Put in names of landmarks.

Some common map symbols:


rocks


grasses


unpaved trail


mine


settlement


building

or you can invent your own symbols.

Expectations Versus Reality - An Indoor Activity

In "Expectations vs. Reality" the student is given the opportunity to experience some of what the early explorers thought and felt when dealing with the unknown. Often the explorers had heard rumors or received inaccurate information on what to expect. These unfounded expectations led to prejudices about the Pacific Northwest and its inhabitants. The objective of this activity is to teach the student that expectations are often different from reality. It is usually better to reserve judgement about someone or something until you have actually experienced the reality.

Prior to visiting the Center, have students write in their journals as to what they expect to find at the Oregon Trail Interpretive Center. This might include people, animals, plants, landscapes, and activities. The students should be encouraged to be as detailed and thorough as possible in what they expect.

After the students arrive at the Center have them make journal entries as they explore the exhibits. The students should not worry about spelling or grammar during this portion of the activity, but rather they should be encouraged to make as many notes as possible that they will be able to understand when they are back in the classroom.

After the visit is complete have the students write a formal report, in the style of a report to the President, detailing what they really found. Then have the students compare their expectations to their realities. In particular they should note any differences or inaccurate misconceptions in their expectations.

Sample journal pages which can be copied and distributed to the students are included.

Suggested classroom discussion topics for this exercise...

1) When we face anything unknown, our minds begin working to cope with the unknown situation. If we have no information, what happens? (We imagine, speculate, listen to rumors, compare unknown to what is known, theorize, assume.)

2) What is a theory? If we don't know exactly what we are doing or where we are going, why would a theory be useful? How might it cause problems?

3) What happens when we make assumptions about something, and then find out we were wrong? Is it difficult to change our minds about something we believe?

4) Have you ever heard of the term "empirical science"? This term means scientific facts based on experience and observation, not just speculation or beliefs.

5) Why is it a good idea to write down observations as soon as possible after they happen? Do you think the mind can play tricks on us, and we can get confused about details?

6) Lewis and Clark were instructed to look for specific things on their expedition. What happens if we are instructed to specifically look for something? How does that affect our ability to observe and experience? If you were in Lewis & Clark's position, would you record only what you were told, or would you explore whatever interested you along the way?

Journal Exercise

What Do I Think the Exhibit Will Be Like?

Journal Exercise

What was the Exhibit Like?

A Report to the President on my Expedition to the National Historic Oregon Trail Interpetive Center.

Dear Mr. President:

How Did My Expectations Differ From the Reality of the Experience?

Explorers
Search and Find

As you go through the exhibits at the National Historic Oregon Trail Interpretive Center, look for answers to these questions.

1. What kind of outfit is the figure on the first white horse wearing?

2. Explorers constantly had to observe animals and plants along their way. As you walk through the orientation gallery at the Interpretive Center - which animals and plants can you spot? Mark an X by each of these you find.

___Owl ___Tumbleweed ___Sage Grouse ___Coyote

___Bunchgrass ___Eagle ___Rattlesnake ___Meadowlark

___Poison Ivy ___Willow

3. There are two figures of Indians watching the wagons. What do they say?

___Why do they want to come here, when they have so much land back East?

___Sometimes they trade good horses, but mostly they have brought us injustice and sickness.

___We do not know how many more people will keep coming, and if they will try to fight us.

4. Name three tribes that lived in what is currently eastern Oregon.

5. What does the man on the brown horse have hanging over his shoulder? How would he use this?

6. Find the map on the wall with the title "A New Map of North America"

What is the date on this map?_____

Is Florida on this map? Yes No

Is Oregon on the map? Yes No

Explorers
Search and Find

7. On the display panel "The Explorers", who brought the U.S. Exploring Expedition to the Northwest in 1841?

8. Who is pictured in the oval on the lower part of the panel?

9. When did John C. Fremont travel to Oregon?

10. Find the panel with the title "The Trappers". What animal do you see at the base of this panel?

11. Which items are pictured on this panel?

Bottle of whiskey Castoreum container Frying pan Box of dynamite

Black powder container Beaver trap Buckskin jacket

12. Find the panel with the title "The Naturalists" and answer these questions.

When did David Douglas gather specimens?

What is the name for the rabbits in the picture?

Who drew the picture?

13. Find a book with a map displayed in a case in this area. Who wrote this book?

Search and Find

14. Describe the hooves on the bison.

15. What do you think the large forked spear displayed on the wall was used for?

16. Which of these common trade items are displayed in the "Trading" case? (circle)

pony beads harmonica clay pipe mirror

coins comb candy basket

17. What is pictured on the Jefferson Peace Medallion?

18. In the trade camp scene, what is on the Indian woman's dress?
If she lived far inland from the ocean, how did she get these?

19. What kind of teepee is shown in the trade camp exhibit?

20. What kind of fish was the fish-hook used to catch?

21. What type of firearm is displayed on this wall?

22. Which fort was named for a "grizzled old trapper"?

Explorers
Search and Find

23. Which fort was originally known as Fort Nez Perces?

24. What fur company built Fort Boise?

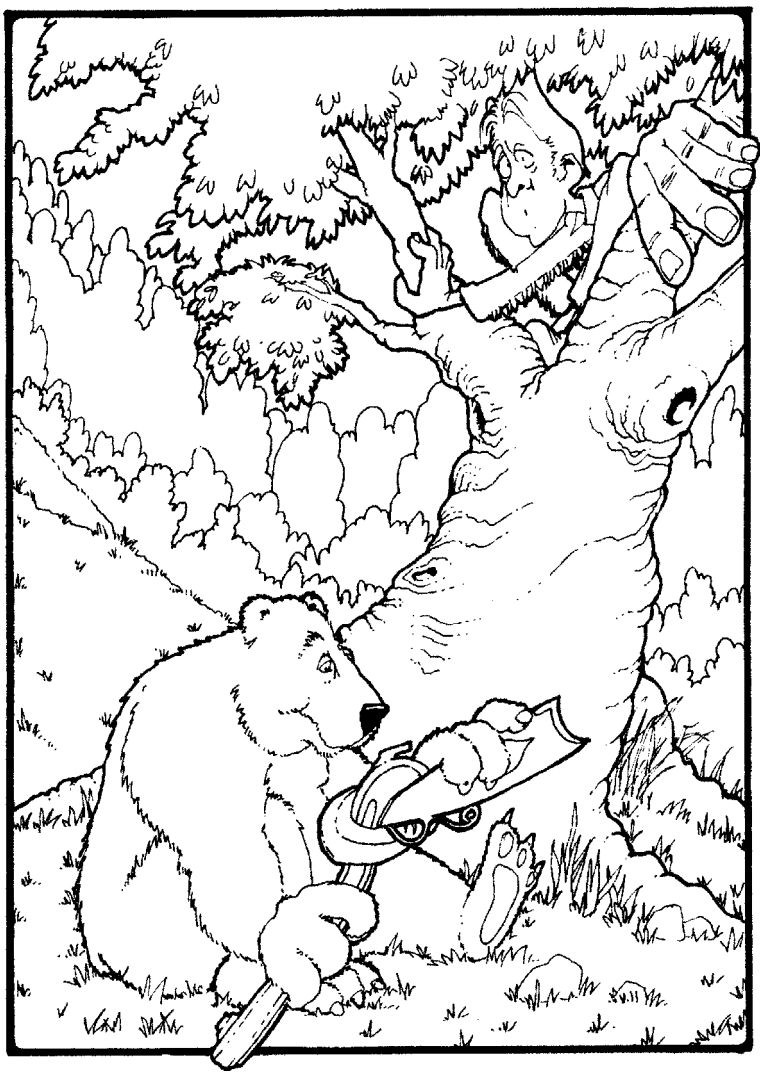
25. In the fort model, what is hanging from the rack by the teepees?

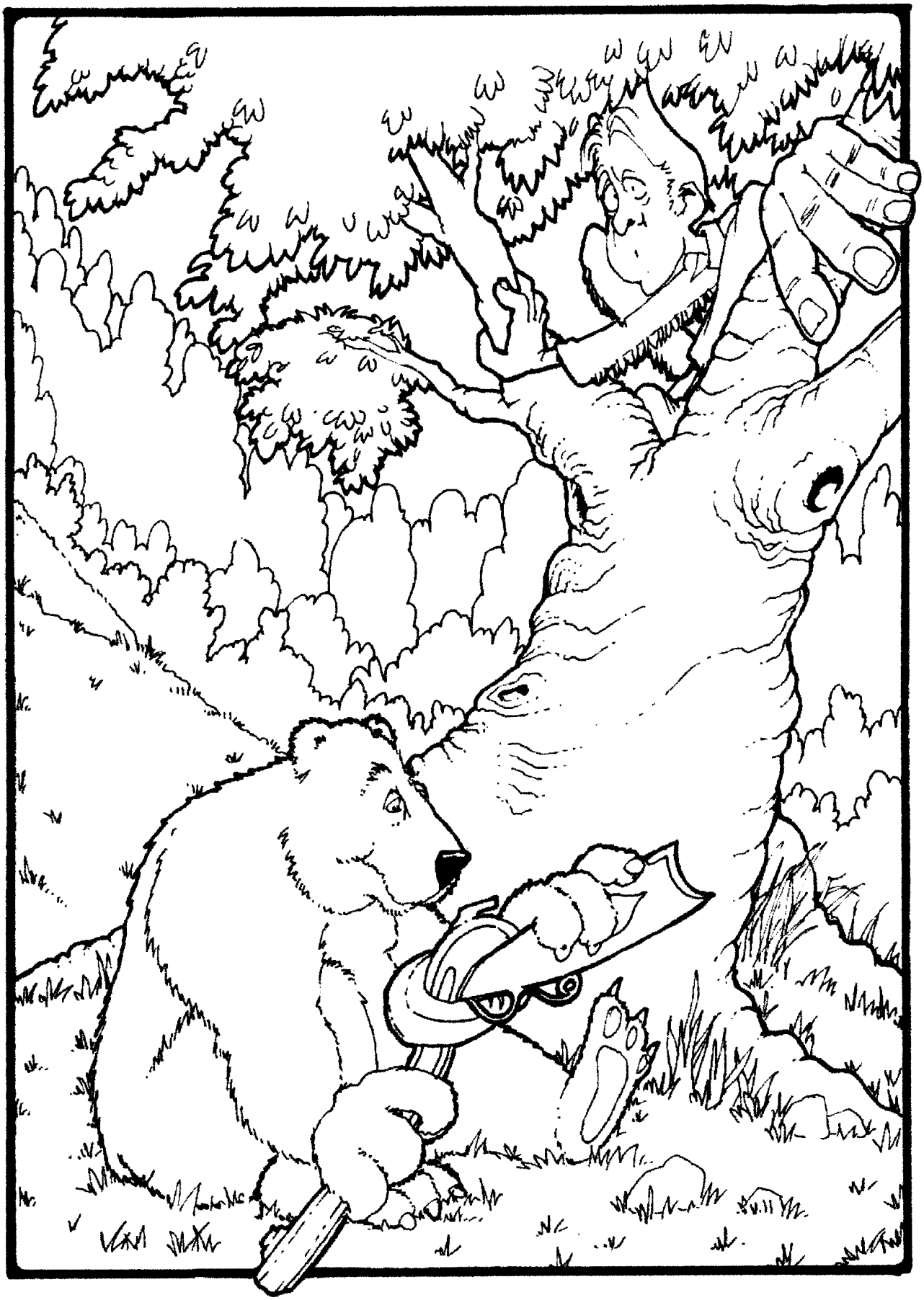
26. What landmark was located in Baker Valley?

Explorers of the Pacific Northwest

Pre- and Post-Visit Activities

*Making Maps
*Using a Compass
*Orientating a Map and Compass
*Technology Then & Now





Making Maps

This exercise will help prepare students for the map making/orienteering exercise. The goal is to help the student recognize and draw basic map symbols. The student will also learn how to draw a compass rose, and place the cardinal points on the compass rose.

Materials needed:

A blank piece of paper
Pencil
Ruler, helpful, but not necessary
Mechanical compass or template for drawing circles, helpful, but not necessary

The following pages includes a list of common map symbols, and ideas for students to develop their own symbols. There are directions for drawing a compass rose.

Using these instructions, have each student draw a map of the school grounds, showing location of buildings, boundaries and fences, and features such as location of playground equipment, baseball diamonds, etc. Students will probably not be able to use all the common map symbols, but these should be used to discuss how to invent some symbols for things such as playground equipment, drinking fountains, parking lots, or other particular features they wish to show on their map.

Together as a class, discuss how to orient their drawing to the north, and then how to draw a compass rose on their maps. Traditionally, most maps have north at the top of the page, and the compass rose may be placed in any easily found, blank space on the page. If possible, gather together some examples of maps, whether modern or historic, to show the variety of ways mapmakers create symbols to show compass directions. Depending on time and ability of students, have them draw up to eight or sixteen cardinal points, and label accordingly.

Map Symbols

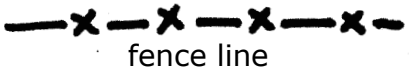
To show landmarks or land features on maps, many map makers use symbols instead of words. Over the decades, some map symbols have become standard.


church


school


structures


river


fence line


grassy area


mine


paved road,
and unpaved road


towns or
settlements

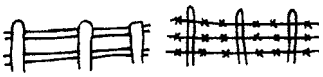
city


mountains


trail

Early map makers sometimes invented symbols, and you can too. You can draw a simple picture or symbol to depict a feature - something easy for others to recognize when they read the map. Here are some ideas.


bike trail


fences


DANGER!

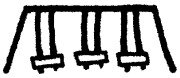

pond


mean dog


forest


rabbit hole

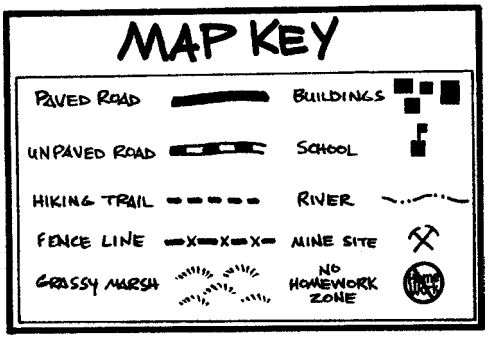

drinking
fountain


playground


restroom

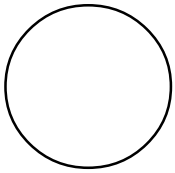

buried treasure


ice cream shop

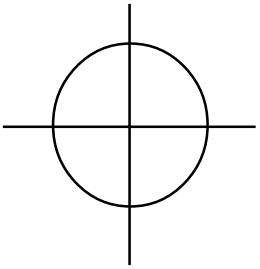


Map Keys - it is a good idea to include a "Map Key" somewhere on your map. This helps the reader understand the symbols.

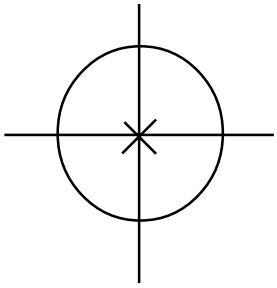
Making a Compass Rose



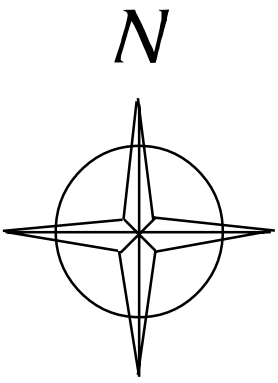
1. Draw a circle



2. Draw intersecting lines, like a large plus sign, over the circle, crossing the center point of the circle.

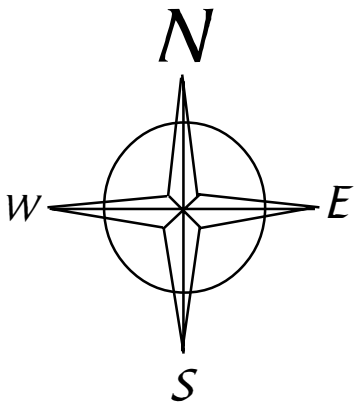


3. Draw an X over the center point



4. Draw lines from edge of X to end of each line. Color in and decorate as you wish. Draw an N over the top.

5. If you wish, you may draw in additional directional points, and color and decorate the compass rose to fit the design of your map.



Using a Compass

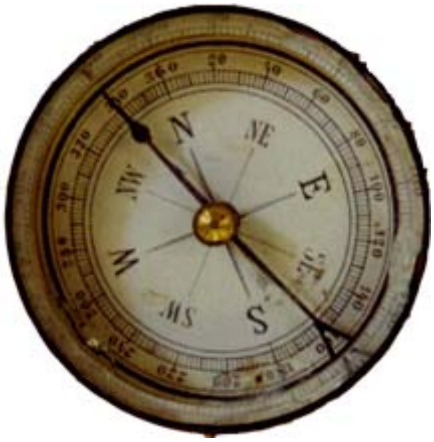
What happens when you are lost? Being lost can be stressful, scary, can waste a lot of time, and can be dangerous. A compass can help us find a direction or read a map when we are lost. A compass was a basic tool used by explorers and mountain men to find their way, and to draw maps of where they had been.

History of the compass

The magnetic compass was invented 2000 years ago by the Chinese. A Chinese magician Luan Te discovered, while playing a game, that one of the game pieces, a spoon made of lodestone, always twirled around to point north. Lodestone is a magnetic iron found in nature. Experimenting with lodestone, the Chinese developed different types of ways to use magnetic materials to point in the direction of north and south. They also developed a liquid compass, in which a magnetized strip floating on water would point north. European people learned about the compass while trading with China, and then Arabic people learned about compasses from Europeans. Many changes and improvements have been made to the compass, but there has always been one big problem with magnetic compasses - they operate on the principle that the earth is the biggest magnet of all, and will always pull the magnetic compass needle to point north towards the north pole. If there is another piece of metal close by, magnetic compasses may not work. So, in the early 1900s, Elmer Sperry invented a gyrocompass, which is not magnetic. A gyrocompass operates with a small motor and will always point north, even from outer space, from an airplane, or from a submarine.

Early compasses had 32 points, to indicate all the possible wind directions. This was important for ship navigation. For our purposes, we will just be looking at the four main directions.

This exercise requires a simple compass - one for each student would be ideal, but one for every five students will also work. Copy the worksheet on the next page for students to complete as they study their compasses.



Using a Compass

Find the parts of the compass...
THE NEEDLE is probably pointed, or painted a different color at one end. This is the end that will always point north.
THE CARDINAL POINTS. Fill in the four points on your compass marker

_____, _____, _____, _____. These are known as the four cardinal, or primary, points.

Does your compass have an orienting arrow? That is, a large line or arrow indicating north/south? Yes No.

Does your compass have degree marks on the outer rim? Some compasses have numbers showing degrees between cardinal points. How many degrees are there total?

Hold your compass between both thumbs and forefingers, to make a triangle with your arms. Keep the compass level and close to your body. Find the north pointing arrow. Slowly turn your body until the north pointing arrow is lined up with north on the compass. Now you are facing north. While facing north, answer these questions:

What is on the east wall of your classroom?

What direction is your teacher's desk from where you are standing?

What is on the south wall of your classroom?

From where you are standing, what direction is the classroom door?

Is your classroom oriented straight north/south or east/west? If not, what compass direction best describes the way your room is situated?

How to make your own liquid compass.
For this you will need a sewing needle, a magnet and a glass of water. First, you need to magnetize the needle by rubbing it on a magnet. (A lot of people have refrigerator magnets; this is an easy place to find one.) A needle will float on water, but it must be placed carefully. If this is difficult, try putting the needle on a strip of paper, and then placing the paper on the water. The needle will float pointing north/south.

Finding Directions without a Compass

What if you're traveling and become lost, but do not have a compass? Here are some ideas for telling directions without a compass.

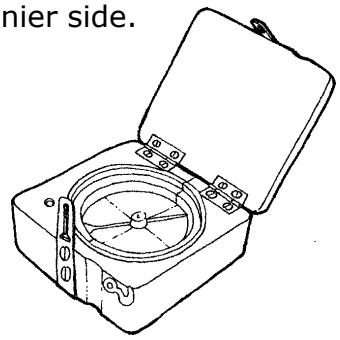
The following ideas work for the northern hemisphere. In the southern hemisphere, you might have to reverse some of the instructions. These ideas also work on a very basic principle with which you are already familiar: the sun rises every morning in the east, and travels westward, to set in the west. In the wintertime, the slant of the earth makes the sun appear further south, closer to the equator. In summer, the slant makes the sun appear further north or almost directly overhead.

Method 1 - Sunshine and shadows. This will work on a sunny day. You will need a pole or stick, and a couple of rocks for marking position of shadows. Find a level piece of ground. Push the stick into the ground so it is straight and vertical from the ground. Find the end of the stick's shadow and mark with a small rock. Wait about twenty minutes, and again mark the end of the shadow with a rock. The line between the rocks will be approximately east-west.

Method 2 - Wristwatch method. This is another daytime method using the sun, but you also need to have an analog watch (that is, a watch with minute and hour hands, not a digital watch). If your watch is set at the correct time of day, point the hour hand toward the sun. While holding the watch in that position, find the place halfway between that point and the number twelve on the watch. That is south. If all you have is a digital watch, you can use a piece of paper to draw the current time as it would appear on a watch face. Point the hour hand on your drawing toward the sun, and follow the rest of the instructions to find south.

Method 3 - Another sunshine and shadows method. In the northern hemisphere, especially in the United States and Canada, the sun is almost always to the south most of the year. So, on a sunny day, look closely at your shadow. It will generally point north. Around noon, shadows will point almost directly north. In the morning, they will point to the northwest, and in the afternoon and evening, they will point to the northeast.

Method 4 - Tree method. How can trees tell us which way is north? The north side of the tree is usually the shadiest. Moss or lichen is more likely to grow on the north side of a tree. There may be fewer branches on the north side. Ants like to build nests on the south side of trees - the sunnier side.



Technology Then and Now

After visiting the Interpretive Center, you may realize that the tools and technologies available to explorers in the 1700s and 1800s were very different from today. Our ability to accomplish tasks quickly and accurately can depend a great deal on the tools we have available. Listed below are tools and equipment used by explorers in history, and in modern times. By each one, mark whether you think it was used by explorers in historic times such as Lewis and Clark, Fremont, Hunt, Stuart, or Ashley, or if it is only available to modern explorers. Mark those items mainly used in historic times with an O, those available only today with an X. For some, you may think they were used in historic times, but are still used today; mark those with a B.

_____canoe

_____camera

_____quill pen

_____laptop computer

_____ballpoint pen

_____magnetic compass

_____global positioning system unit

_____Jeep

_____muzzle loading rifle

_____pack mule

_____rubber soled hiking boots

_____moccasins

_____thermos bottle

_____dried food

_____telescope

_____binoculars

_____tape recorder

_____journal

_____video camera

_____plant press

_____watercolors

_____cast iron pot

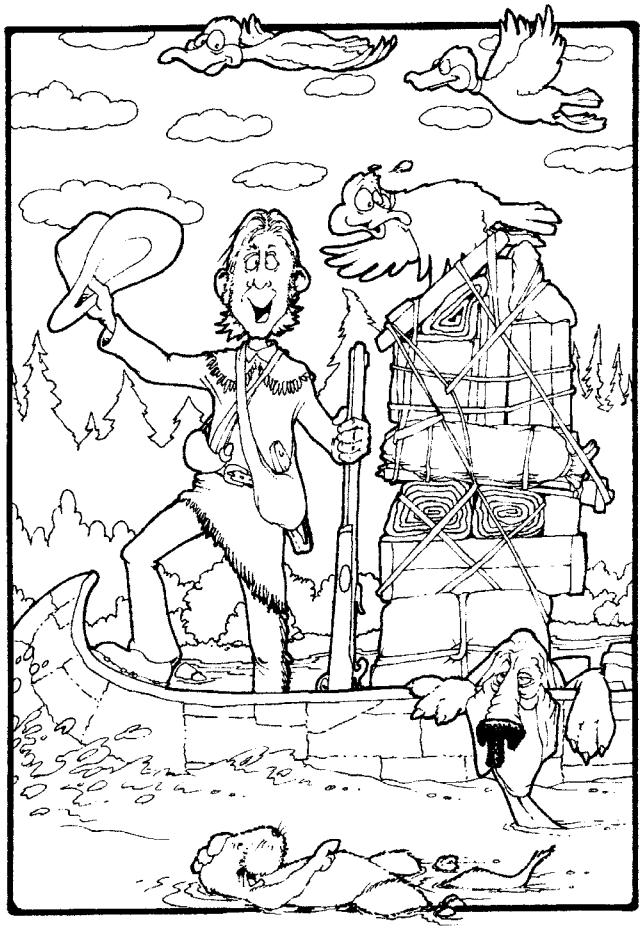
_____canvas tent

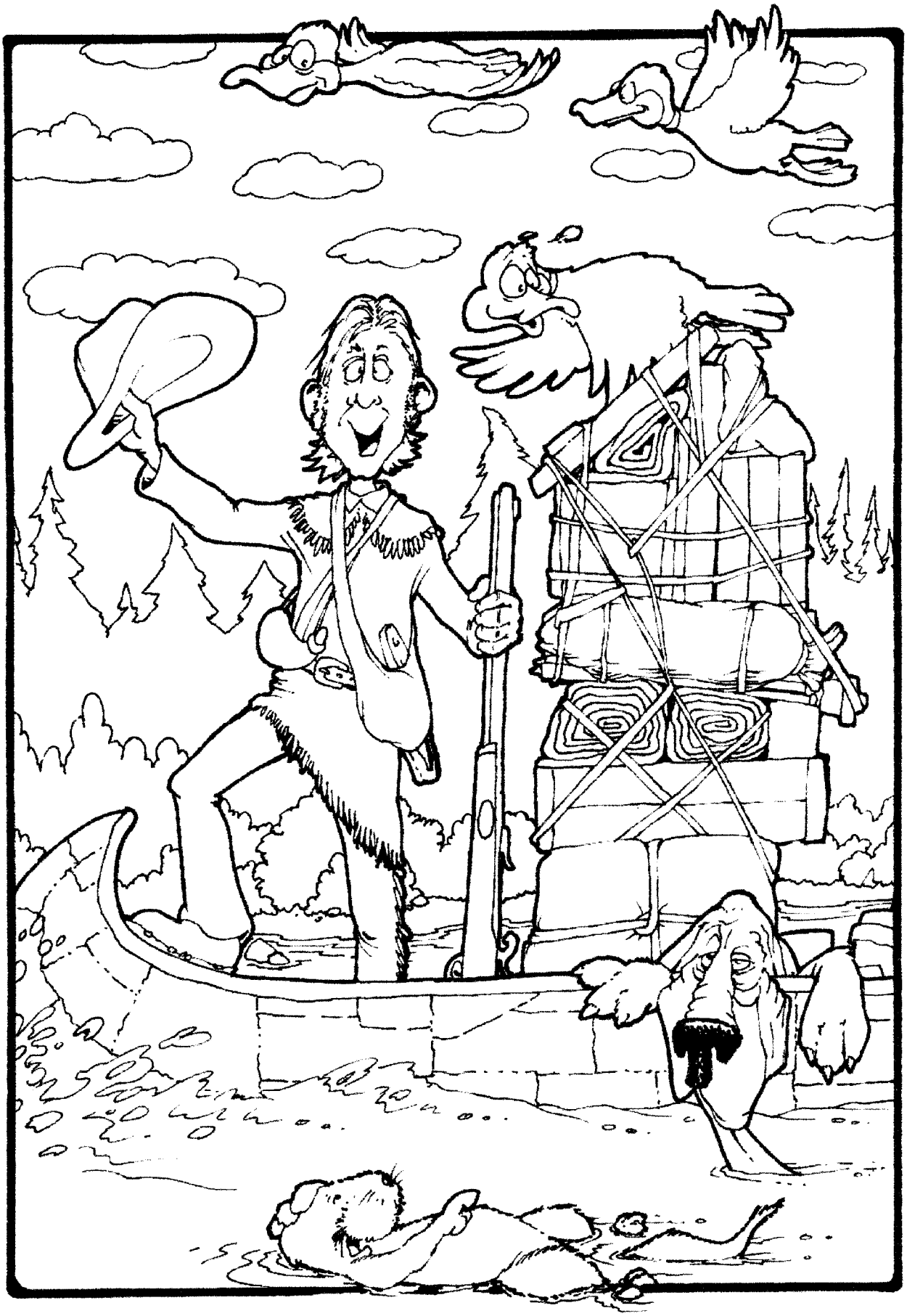
_____bedroll

Explorers of the Pacific Northwest

Classroom Activities and Activity Sheets

*Explorers Word Search
*Spelling
*Observation - Collecting and Identifying Plants
*Vocabulary and Reading Comprehension
*Word Scramble
*Math Exercise
*Building a Replica Fort
*Working Together - The Portaging Game





WORD SEARCH

Find each of the following names of people who explored in the Pacific Northwest.

James Cook
John C. Fremont
York
Robert Gray
Kit Carson
David Douglas
Dr. John McLaughlin
Cameahwait
Jim Bridger
Peter Ogden
Sacagawea
Wilson Price Hunt
Jim Beckwourth
Robert Stuart
William Clark

J B T J I M B R I D G E R W M D U N A O H T I
D I W I L S O N P R I C E H U N T E S K E R E
A S M A H E A M C G U A R T M R N D R R D A O
I E A B I I A I A A R M A N C O D G E A L U K
Y G W L E M K I D R M E L O H B R O S L O T L
U O H A G C R P T T R A I M O E J R D C S S W
N J R W G U K E N U G H C E S R E E I M T T D
O R U K Y A O W I A I W S R D T T T J A C R R
E I K T U T C D O R L A J F H G L E L I S E U
M N O W T R T A D U N I I C N R A P J L W B O
R R Y K R T N K S I R T H N I A M D D L I O A
G C R C R A M G M M V T S H H Y O Y I I M R J
H J A M E S C O O K S A H O E I R E A W O S K
N O S R A C T I K H K E D J P A A R R K W U D
K I A R I D R J O H N M C L A U G H L I N A E
A J G G S O C N N R G L Y W M O C O T H S T T

Spelling

Below are three journal entries made by William Clark while exploring. He made notes, and later, after he returned home, an editor corrected Clark's writing. Circle the spelling errors in the journal entries. Then look up the correct spelling in your dictionary, and write the correct spelling in the space provided below the journal entry.

August 18th Sunday 1805
at 10 oClock I set out accompanied by the Indians except 3 the interpreter and wife, the fore part of the day worm, at 12 oClock it became hasey with a mist of rain wind hard from the S.W. and cold which increased untill night the rain Seased in about two hours. We proceeded on thro' a wide leavel vallie without wood except willows & Srubs for 15 miles...

29th November Thursday 1804
the detph of the Snow is various in the wood about 13 inches, The river Closed at the Village above Mr. LaRock and one of his men Came to visit us, we informed him what we had herd of his intentions of makeing Chiefs &c. and forbid him to give Meadels or flags to the Indians, he Denied haveing any Such intention, we agreed that one of our interpeters Should Speak for him on Conditions he did not say any thing more than what tended to trade alone.

Sunday 20th April 1806
I shewed the Eneshers the articles I had to give for their horses. they without hezitation informed me that they would not sell me any for the articles I had, if I would give them Kittles they would let me have horses, and not without that their horses were at a long ways off in the planes and they would not send for them &c. My offer was a blue robe, a calleco shirt, a Silk handkerchief, 5 parcels of paint, a knife, a Wampom moon, 8 yards of ribon, several pieces of Brass, a Mockerson awl and 6 braces of yellow beeds; and to that amount for each horse which is more than double what we gave either Sohsohne or first flatheads we met with on Clarks river. I also offered my large blue blanket, my coat sword & plume none of which seamed to entice those people to sell their horses. notwithstanding every exertion not a single horse could be precured of those people in the course of the day.

Observation, Recording, and Collecting Specimens

For this exercise, explore a schoolyard, nearby field or park, or a garden. To start thinking as explorers and naturalists, look closely at plants and record their findings through a drawing and written description. On the following pages are a "naturalist recording sheet" for taking into the field and making notes, an illustration of examples of leaf types, and illustrations made by explorers in the field. Instructions below are for pressing a plant. Pressed and preserved specimens were sent to herbariums, which are like libraries for plant specimens. Researchers can look at preserved specimens to study and compare with other plants.

Pressing a Plant Specimen
Supplies: Digging tool, pocket knife or shears to trim off desired portion of plant, plastic bag to keep specimen moist while collecting, sheets of newspaper, blotter paper or clean cardboard, a plant press of two pieces of plywood or a lattice of wood strips nailed together, rope or cloth tape straps to apply pressure to the press.

Collecting the specimen: Do not collect rare or single plants, and do not collect from someone else's property without permission. Gather roots and entire portion of the plant if possible, but if roots are too thick, collect as much of the stem, leaves, flowers and seeds as will fit in your press. Tag the collected plant to match the specimen to your field notes.

Place the plants in a once-folded sheet of newspaper; arrange the plant so leaves, flowers, and stem will be easy to see once pressed. If you have more than one specimen, place a sheet of cardboard or heavy blotter paper between each of your newspaper-with-specimen folders. Try to make these equal size. Place this stack between the plywood boards, and tighten with straps, or use weights to apply pressure. Check each day and replace newspaper if there is too much moisture. Plants should dry in 3 to 5 days.

To mount the specimen:
Supplies: white glue diluted with water (2 parts glue to 1part water), a paint brush, a piece of glass or cookie sheet, scrapbook paper (rag fiber is best), wax paper. Paper or linen strips may also be needed for thick specimens.

Steps: Brush the watered-down glue on the glass or cookie sheet. Place the dried specimen on the glue covered surface and press down to get glue thoroughly on the plant specimen. Place scrapbook paper next to the glass or cookie sheet, and carefully lift the specimen and place on the paper. You may need tweezers to help with this. Put a piece of wax paper over the specimen and scrapbook paper, and place another piece of blotter paper above and below. Put one side of the plywood press or another heavy board over this, and use weights to press uniformly until glue is dry, about one day. Remove the blotter and wax paper, and label your herbarium specimen sheet. If plant did not adhere well because of stem or leaf thickness, you can use thin paper strips to fix the specimen to the herbarium sheet.

Exploring Nature

Among the many explorers who were learning about the land, the routes of rivers, and the Indian people who lived throughout the west was another group of explorers with a special interest. ***Naturalists*** were scientists seeking to discover and learn about plants and animals. The North American and South American continents had many plants and animals that were unknown in other parts of the world.

The early explorers brought back ***specimens*** of food plants, flowers, and animals that made people in Europe even more curious about what else they might find in the New World. Some of the new plants could be used as medicines or tonics, such as tobacco. Other plants were valuable new sources for food, like corn, potatoes, and cocoa

Strange animals, reptiles, birds, and fish were seen, like moose and bison. Scientists were eager to find more plants and animals, and expand their knowledge of what kinds of life inhabited the planet. They joined exploring expeditions, or put together their own exploring journeys with the plan of finding, collecting, recording and naming their discoveries.

To find the specimens, naturalists had to travel along waterways or by walking, and then carefully look around. Sometimes by talking to Indians they learned a great deal about plants and animals, and their habits. They had to carry collecting equipment with them, as well as food and camping supplies.

To collect, the ***botanists*** would dig up plants with a ***trowel***, and press or dry the plants between sheets of paper. If the plant had seeds, they would collect these as well. ***Zoologists*** and ***ornithologists*** had to catch animals, fish, and reptiles, by shooting, trapping or fishing. Although they sometimes tried to keep live specimens, this was very difficult, so the animals usually were killed and preserved by skinning or stuffing. They also collected horns and bones. Specimens had to be carried or shipped back to a museum, and many collectors lost all their specimens in accidents while traveling back home. Specimens were put together in collections at museums, libraries, or collecting societies, where they were classified and saved for research.

To record their findings, the scientists wrote detailed notes about what and where they found a plant or animal, what the landscape or climate was like, what the ***ecosystem*** was like, the behavior of animals, the size of herds, if plants grew alone or in groups, and many other details. Some of the scientists were also artists, or included artists in their expeditions. Before cameras were invented, these artists were the only means of recording the appearance of a landscape, a plant or animal. They drew detailed illustrations, showing the specimens from different angles, and often painted in watercolors to help record the accurate colors.

The European and early American explorers named all the plants and animals that were new to them. Of course, the Indians usually already had names for these plants and animals that were familiar to them, and often these names were used by the naturalists. In 1753 a Swedish scientist named Carl Linne set up a system for naming plants using two parts. In the Linneaus system, one term would describe the general group the plant or animal most resembled, the second word would describe that particular plant or animal. Botanists examined their specimens to assign ***classifications*** that best described their finds, which were usually written in the Latin language used by scientists around the world. They also gave popular names to the plants, often associated with the place, or the nearest Indian tribe, or sometimes, named after a friend or a member of their expedition.

Vocabulary words:

Natural History - the study of nature, especially studying nature by doing research outdoors.
Naturalist - a scientist who studies nature. Often the word *biologist* is also used to describe someone who studies nature, and particularly living things.
Botany - the science of learning about plants. A *botanist* is the scientist who studies plants.
Ornithologist - a scientist who studies birds. *Ornithology* is the study of birds.
Specimen - a sample, something typical of a larger group.
Trowel - a hand-sized tool, in the shape of a small shovel, to use for digging up plants or rocks.
Ecology - the study of environments, and how all parts of the geography, minerals, water, climate, plants and animals relate to each other. *Ecosystem* is a word that is sometimes used to describe the environment and pattern of a particular place.
Zoologist - A scientist who studies animals. *Zoology* is the science that deals with animals.
Classification - arranging things in groups by using a system. The Linneaus System is a way of classifying plants and animals by their similarities to other plants and animals.

Meriwether Lewis and William Clark, in their expedition to the west coast of North America were given instructions from President Thomas Jefferson. These included directions to observe and make notes about the climate, animals, and plants. Before leaving on their journey, Meriwether Lewis was sent to Philadelphia to work with important scientists to learn how to identify plants and animals, and how to collect specimens. In their journals, Lewis and Clark described hundreds of different fish, reptiles, birds, mammals, plants and trees that were unknown to Americans on the East Coast. They were the first Americans to observe and describe the pronghorn antelope, prairie dog, mountain goat, bighorn sheep, grizzly bear, and coyote. They also learned that many animals known on the East Coast or in Europe also lived in many other places on the continent. They shipped back hundreds of plant and animal specimens, and also sent some live animals to Thomas Jefferson - four magpies, a sharp-tailed grouse, and a prairie dog. Thomas Jefferson planted some of the seeds brought back from the expedition in his garden at Monticello. Even though Lewis and Clark were not well-trained scientists, they did an excellent job in observing and recording their findings. Because they were the first, they assigned names to many plants and animals, and their work greatly increased the knowledge about what plants and animals lived in the west. Their work became the basis for all the scientific expeditions of the west that followed.

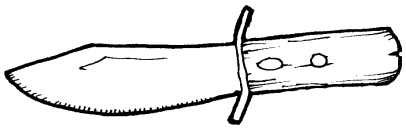
June 22, 1805 near Great Falls, Montana: *"There is a kind of larke here that much resembles the bird called the oldfield lark...the note differs considerably."* This was a western meadowlark.

June 13, 1805, in Montana *"Goodrich had caught half a dozen very fine trout, have generally a small dash of red on each side behind the front ventral fins"*. A cutthroat trout.

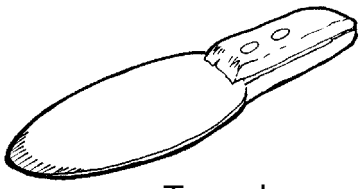
September 14, 1804 *"Killed a Buck Goat of this countrey."* This was the first time any American had seen a pronghorn, also called an antelope.

September 18, 1804 *"Killed a Prarie Wolff, barks like a Small Dog."* A coyote.

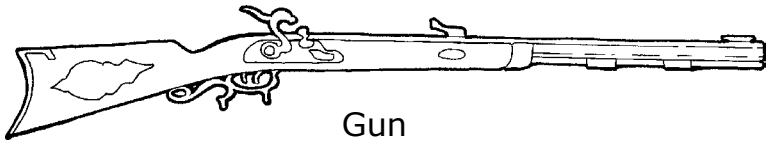
Tools of the Naturalist



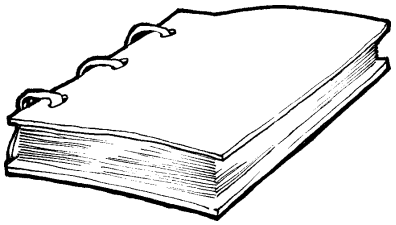
Knife



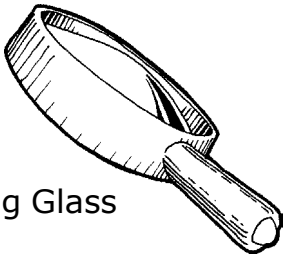
Trowel



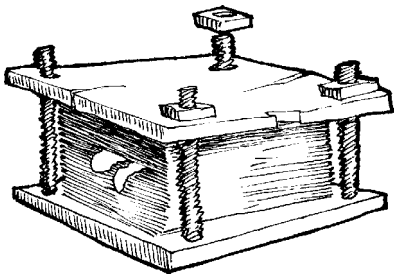
Gun



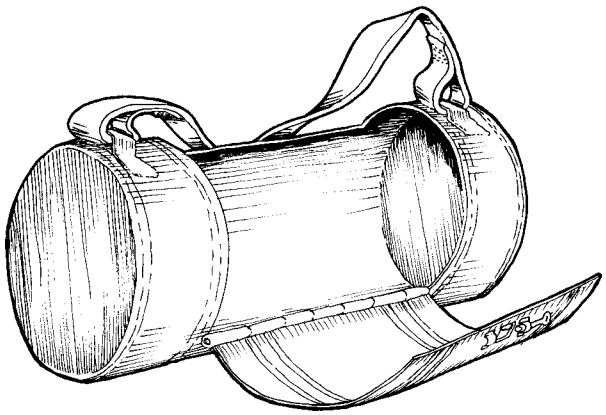
Notebook



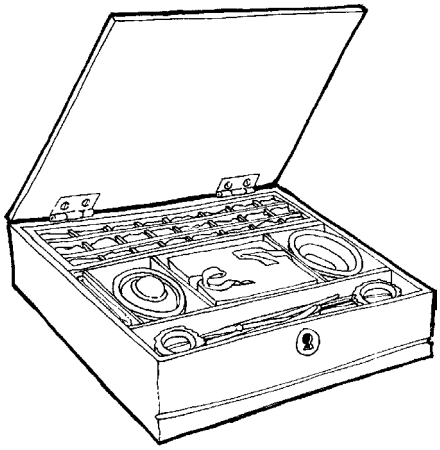
Magnifying Glass



Plant Press



Vasculum



Watercolor Kit

Plant Recording sheet

Date:_____

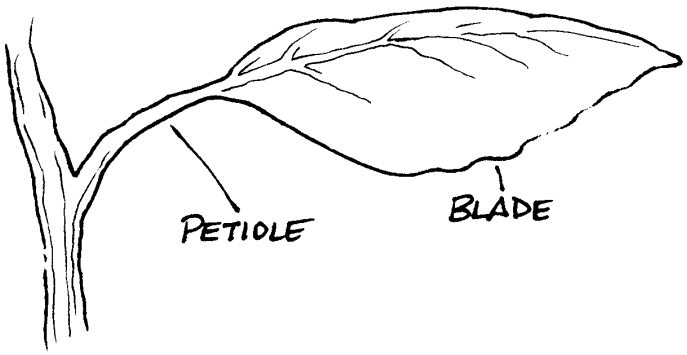
Location where I found this plant:_____

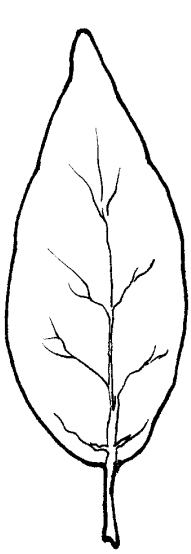
Describe the plant by writing details that would help someone see a mental picture of the plant. Include some of these descriptions: How tall? What color are the leaves and flowers? What shape are the leaves? Does it have smooth edges, or serrated edges? How are leaves positioned on the stem? Are the leaves broad or narrow? Are the leaves in clusters? Are the leaves and stem smooth or hairy? Does the plant grow in a clump, or it it a single stalk? If there are flowers, what shape and size are the petals? Do the flowers blossom singly, or in clusters? Can you describe any fragrance? Are there any berries or seeds you can describe?

Now describe the setting and environment where you found the plant. Does it grow in groups or alone? How is the soil? Is it rocky, sandy, muddy, or something else? Is it moist or dry? Does this plant seem to grow next to other types of plants? What is the season of the year...late spring, early fall, something else? Would you say the plant is just sprouting, is at full growth, or dying back? Do you see any animals around who might be feeding on this plant?

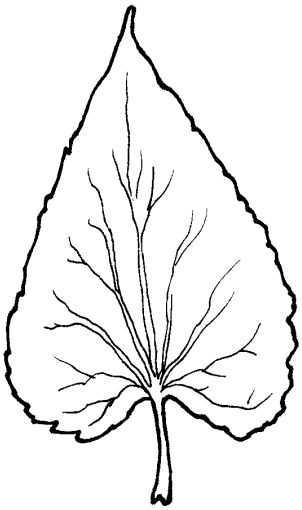
Do you know the name of this plant?

Here are examples of some different types of plants leaves, and the terms to describe them.





ENTIRE



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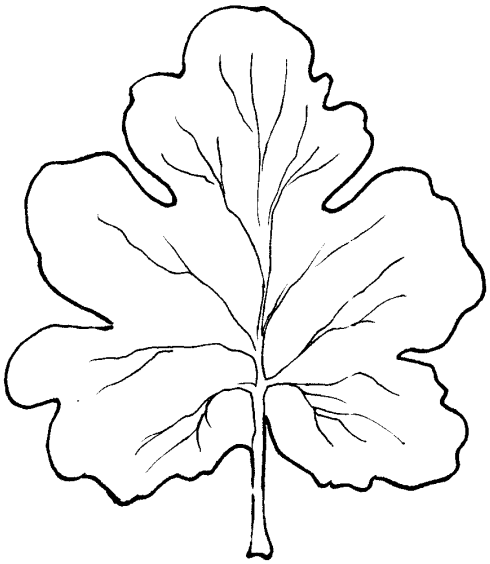
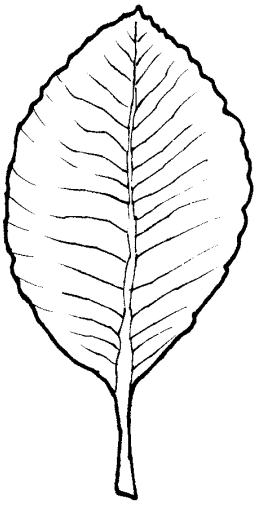


LOBED

LINEAR

LANCEOLATE



OVATE

Documenting Your Plant Discovery With a Picture.

On this page, draw a picture of your plant. Show details of the leaves and flowers, and if you can see roots or a bulb, draw that too. Look at the sample of plants drawn by John Torrey, and notice the details he drew.

This plant was collected on the expedition led by John C. Fremont through Oregon and California in 1843, drawn by John Torrey, and published in *Report of the Exploring Expedition to the Rocky Mountains, 1842 and Oregon and North California 1843-44.*

Vocabulary and Reading Comprehension

Language has changed a lot since the days of the early explorers. Writing style and use of words were quite different 175 years ago than they are today. It can be difficult to understand, even though it is the same language.

From a report to General Henry Atkinson by William H. Ashley, dated December 1, 1825, define the underlined words as they are used. Consider the word within the context of the paragraph.

"We continued to move forward without loss of time, hoping to be able to reach the wood described by the Indians before all our horses should become exhausted. On the 1st January, 1825, I was exceedingly surprised and no less gratified at the sight of a grove of timber, in appearance, distant some two or three miles on our front. It proved to be a grove of cottonwood of the sweet-bark kind suitable for horse food, situated on an island in the river offering among other conveniences, a good situation for defense. I concluded to remain here several days for the purpose of recruiting my horses, and made my arrangements accordingly. My Indian friends of the Pawney Loup deputation, believing this place to be nearly opposite to the Arapahoe and other Indian camps on the Arkansas determined to proceed hence across the country. They prepared a few pounds of meat and with each a bundle of wood tied to his back for the purpose of fuel, departed the following morning on their mission."

Circle the best definition that fits the way the writer was using the words:

context: a) the fleshy part of a mushroom cap b) interrelated conditions
c) surrounding words or phrases that lend meaning

wood: a) a hard, fibrous substance b) a tract of land with trees growing on it

exhausted: a) completely used up b) very tired c) transferred dye from a dyebath

exceedingly: a) extremely b) very c) to a high degree of quantity or quality

gratified: a) thankful b) satisfied c) indulged

appearance: a) coming into view b) the way something looks;
c) formally coming to a courtroom

suitable: a) matching, similar b) having the necessary requirements c) proper

situation: a) position of employment; b) a set of circumstances

concluded: a) finished b) enclosed or confined c) decided

recruiting: a) resting and renewing strength b) gaining a fresh supply
c) enlisting workers

deputation: a) appointment as an official b) a group acting as a unit

opposite: a) contradictory b) complimentary acting role c) across an intervening space

proceed: a) continue b) take legal action c) go forward

purpose: a) designed for b) deliberate intent c) an old Scottish dance

departed: a) deviated b) died c) went away

mission: a) a religious establishment b) military maneuver c) an assigned task

Editing Journals

Field notes and journals are often hasty notes that need to be edited. Historical writings sometimes need editing and updating so modern readers can better understand the information. Editors are people who correct, and sometimes rewrite, books, articles, and manuscripts so they will be easier to understand. For this exercise, rewrite the passages from William Ashley's 1825 report in a style that would be easier for a present day reader to understand.

EXAMPLE:
"*We continued to move forward without loss of time, hoping to be able to reach the wood described by the Indians before all our horses should become exhausted."*
This sentence could be rewritten as:
"We stayed on schedule, hoping to reach the forest described by the Indians before all our horses became too tired."

Rewrite these passages in the space below each.

"On the 1st January, 1825, I was exceedingly surprised and no less gratified at the sight of a grove of timber, in appearance, distant some two or three miles on our front."

"I concluded to remain here several days for the purpose of recruiting my horses, and made my arrangements accordingly."

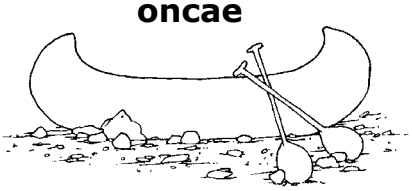
"My Indian friends of the Pawne Loup deputation, believing this place to be nearly opposite to the Arrapahoe and other Indian camps on the Arkansas determined to proceed hence across the country."

"They prepared a few pounds of meat and with each a bundle of wood tied to his back for the purpose of fuel, departed the following morning on their mission."

Word Scramble

Unscramble the letters below to find the name of tools and equipment used by explorers on their westward journeys.

oncae



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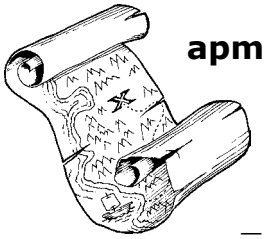

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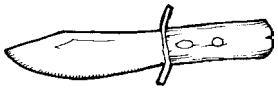

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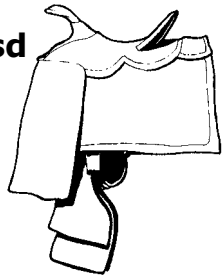

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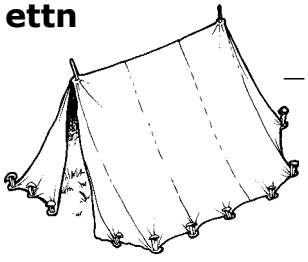

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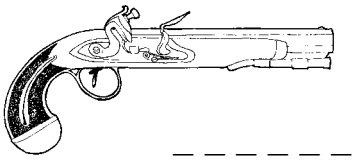

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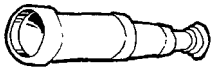

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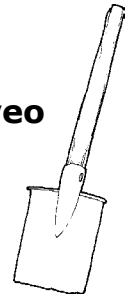
lhsveo



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Practical Math

You are leading an exploring expedition through the Pacific Northwest. Your party has decided to split into two smaller groups so you can explore a wider area. You split up at the fork of a river, and agree to meet again at a fur post in fifteen days. Looking at a map, you figure the distance your group must travel to the fur post is 210 miles. How many miles must you travel each day to get to the fur post on time?

_____miles divided by _____ days = _____miles per day.

The President asks you to lead an exploring party for 250 miles up the Missouri River to record all the wildlife you can find. You are to return and have a report on your expedition in 40 days. You need some helpers so you ask 4 people to go along with you. While figuring supplies, you estimate you will need about three pounds of food each day to feed everyone. How much food should you buy for the total trip?

Number of people_____
multiply by number of days_____
multiply by pounds of food per day_____
= total amount of food_____

While exploring with Lewis and Clark, you are asked to negotiate with the Nez Perce Indians to get some horses to pack supplies and carry people. You would like to have seven horses. Two of the horses are for men to ride, and each man weighs 160 pounds. The other five horses are for packs of supplies, and each pack weighs 140 pounds. The Indian trader says he doesn't have seven horses, he only has five to trade, but each horse is very strong and can carry 210 pounds. Can you redistribute the weight in your supplies and people for only five horses? Or will you need to leave supplies behind?

Total weight: _____men x _____ lbs. each = _____
_____ packs x _____ lbs. each = _____

Total weight of supplies_____ + total weight of men_____=_____

Total weight _____ divided by_____horses=_____lbs. per horse.

_____Yes, I can do it with five horses.

_____No, I'll have to leave _____pounds of supplies behind.

Explorer Retrieval Chart

From research, find facts to fill in the boxes for each of these explorers.

Dates of Exploration	Country Represented	Area Explored	Discoveries	Results of Exploration
1. Captain Robert Gray				
2. Alexander Mackenzie				
3. Peter Skene Ogden				
4. David Douglas				

Building a Replica Fort

Following are some illustrations and descriptions of forts (in the exploration and fur trade era, fur posts were called forts).

Fort Hall, Fort Boise, and Fort Walla Walla were just three of the forts built during the time of the explorers and fur traders. Through research and the effort of building a model fort, students can learn about the necessities required in a post. Questions below are intended to help guide this activity.

Many materials may prove useful for building a model fort. Popsicle sticks are the easiest to work with and can be glued together to form outer walls of the fort. Toothpicks, straws, clay, cardboard and foam core can also be used. Accuracy and scale are not as important as learning about the types of materials used in historic times, why posts were designed with a particular layout, why structures like blockhouses were needed, why forts were gated and fortified, and how people lived within these structures.

Research questions:

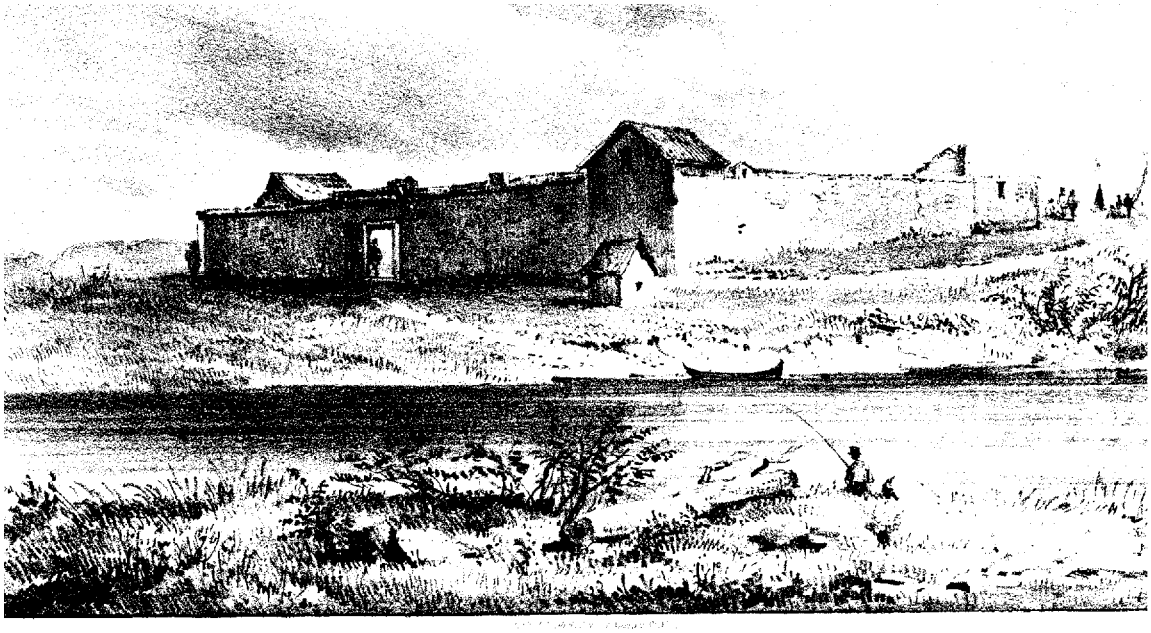
What were the buildings made of? Why were those materials used? (Had to utilize materials that were available near by, could not haul supplies from great distances, forts had to be built quickly).

Why do all these forts have high walls and gates? (To keep livestock inside when needed, to protect against hostile attacks, to help portect interior of the fort from wind and severe weather).

What kind of activities went on inside the fort? (Some people lived there, so there were bedrooms, a cooking and dining area, and supply rooms for food. Fur trading business took place, so there was an office for bookkeeping, a warehouse to keep fur pelts brought in by Indians, and a store full of trade goods. Animals were kept there, so forts had corrals and stables, and probably a blacksmith shop. Forts were in remote locations, so people living there tried to raise gardens to help supply their food. The gardens were frequently outside the walls.)

Fort Boise

This post was located on the east bank of the Snake river, about half a mile north of where the Boise River and Owyhee River flow into the Snake. A post was built there in 1813 by John Reid but it was destroyed in an Indian attack in 1814. The Hudson Bay Company tried a post there in 1819, which did not last, but in 1834 Thomas McKay built another post there for Hudson Bay Company. The Company withdrew from the area in the early 1850s, and the fort was abandoned and gradually disintegrated from flooding and weather.



VIEW OF FORT BOISSÉ ON SNAKE RIVER.

INSIDE VIEW OF FORT BOISSE ON SNAKE RIVER.

These images from 1851 Alexander edition, Annual Report of the Quartermaster General for Fiscal Year ending 30th June, 1850 by Osborne Cross. Illustrations by George Gibbs and William Henry Tappan.

Fort Boise

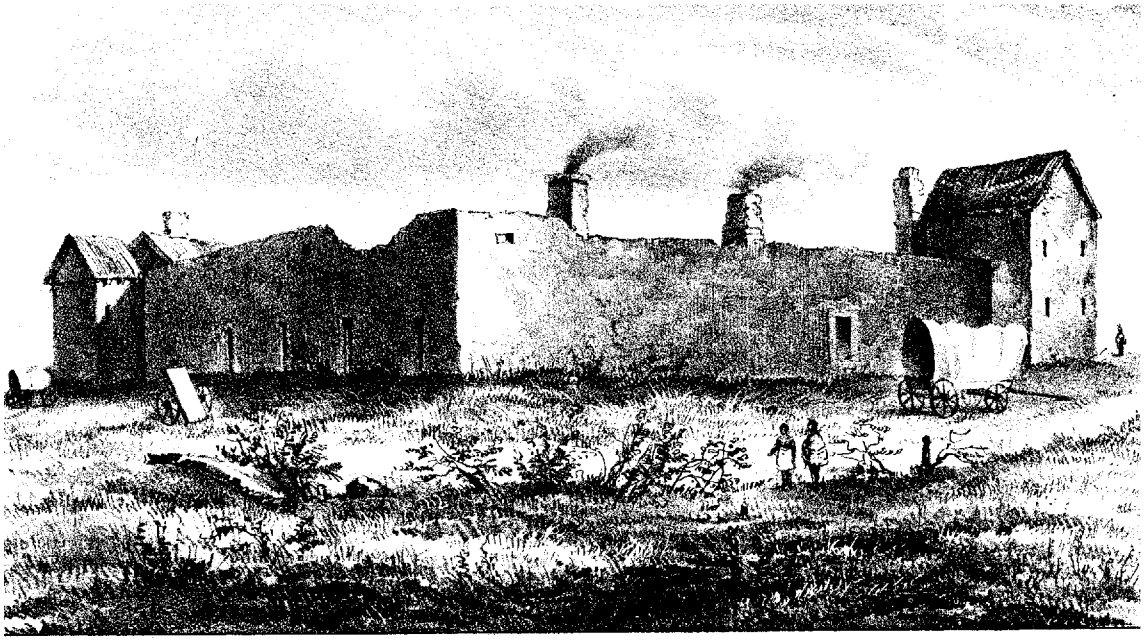
Narcissa Whitman visited Fort Boise - which she called Snake Fort - on August 19, 1836. She wrote this about the landscape around the Fort: "It is situated on Big Wood River, so called because the timber is larger than any to be seen this side of the mountains. It consists chiefly of cotton wood, and is small compared with timber in the States."

Thomas Farnham wrote this about the fort in 1839:
"It consists of a parallelogram about 100 feet square, surrounded by a stockade of poles about 15 feet in height. It is constructed of logs, and contains a large dining room, a sleeping apartment and kitchen. On the north side of the area, in front of this, is the store; on the south side, the dwellings of the servants; back of the main building, an out-door oven; and in the northeast corner of the stockade is the bastion. This was Fort Boisais in 1839. Mons. Payette was erecting a neat adobe wall around it. He expected soon to be able to tear away the old stockade..."

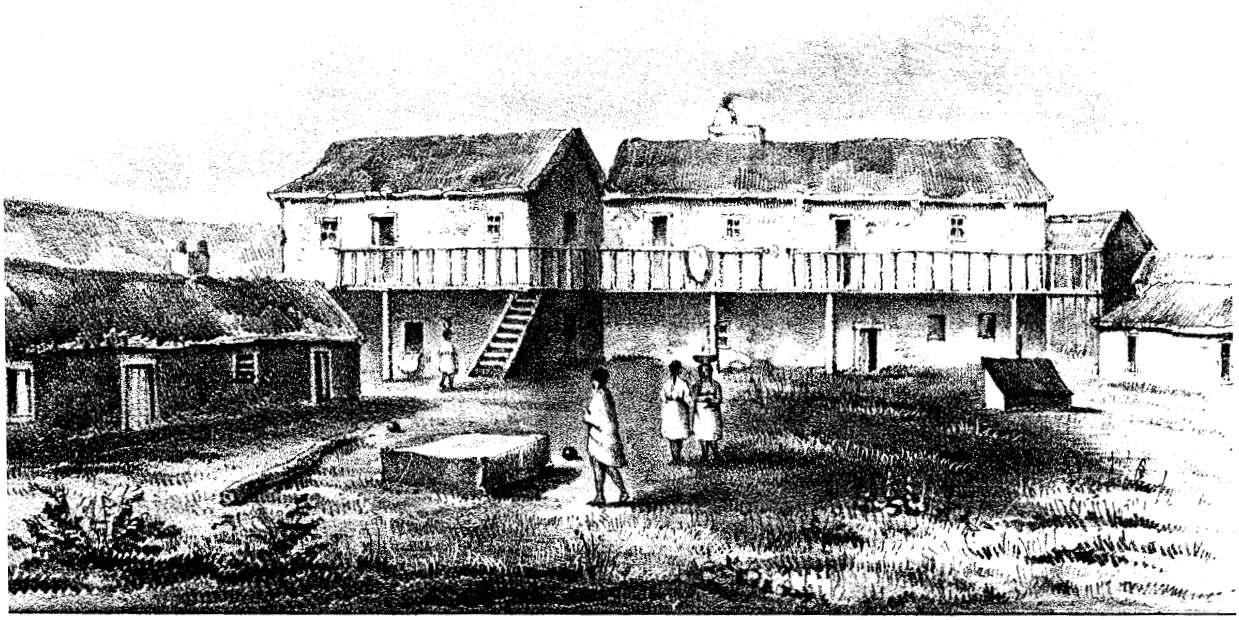
Mons. Payette refers to Francois Payette, the clerk of the fort. Mons is an abbreviation for "Monsieur" the French word for "Mister". Many of the fur traders and explorers in the Northwest at the time were French-Canadian, so French names are often found in historical records.

Fort Hall

This was a stockade style fur post built by Nathaniel J. Wyeth in 1834 near the mouths of Portneuf River and Bannock River on the east bank of the Snake River in present day eastern Idaho. It was about 80 feet square. It was sold to Hudson's Bay Company in 1837, and rebuilt the next year by covering the logs with adobe. It was abandoned in 1856.



OUTSIDE VIEW OF FORT HALL, ON SNAKE RIVER, OR LEWIS' FORK OF THE COLUMBIA RIVER.



Lith of E. Michelan, 111 Nassau St. N.Y.

INSIDE VIEW OF FORT HALL, ON SNAKE RIVER, OR LEWIS FORK OF THE COLUMBIA RIVER

These images from 1851 Alexander edition, Annual Report of the Quartermaster General for Fiscal Year ending 30th June, 1850 by Osborne Cross. Illustrations by George Gibbs and William Henry Tappan.

Fort Hall

Osborne Russell wrote this about Fort Hall in 1834:
"On the 18th we commenced the Fort which was a stockade 80 ft. square built of Cotton wood trees set on end sunk 2 1/2 feet in the gorund and standing about 15 feet above with two bastions 8 ft. square at the opposite angles. On the 4th of August the Fort was completed. And on the 5th the Stars and Stripes were unfurled to the breeze at sunrise in the center of a savage and uncivilized country over an American Trading Post."

Narcissa Whitman was at Fort Hall on August 3-4, 1836. She wrote this:
"...the buildings of the Fort are made of hewed logs roof covered with mud bricks, chimney and fireplaces also of the same. No windows except a square hole in the roof, and in the bastion a few port holes large enough for guns only. The buildings are all enclosed in a strong log wall...The turnips in the garden appear thrifty, the tops very large and tall but the roots quite small. The peas looked well but had most of them been gathered by the mice. Saw a few onions that were going to seed, these looked quite natural. This is all the garden contained...the building at Fort William on Larimys Fork of Platte, Black Hills, are made in the same way, but larger and more finished than here. Here we had stools to sit on, there we had very comfortable chairs, bottomed with buffalo skins."

Osborne Cross was at the Fort August 8, 1849. By that time, it had been rebuilt in adobe. He wrote this description:
"It is built of clay and much in the form of Fort Laramie, having a large sally port which fronts on the Portneuf, with its walls extending back towards the banks of Snake river. There is a blockhouse at one of the angles. The buildings inside are built against the side of the wall and of the same materials. The main building is occupied by the proprietor, while the others are intended for storerooms and places for the hands...rooms are all small and by no means comfortable..."

Fort Walla Walla

Originally called Fort Nez Perces, this post was built in 1818 by Donald Mackenzie on the east bank of the Columbia River about half a mile from the mouth of the Walla Walla river. It was a stockade style trading post for the Hudson's Bay Company, where traders could bring their furs and get supplies. This was a location for trading with the Cayuse, Nez Perce and Walla Walla Indians. It was destroyed in 1855 during wars between Indians and settlers in the region.

John Ball was at the fort on October 18, 1832. He wrote this:
"...the fort was bilt of upright timbers set in the ground. The timbers were some fifteen or eighteen feet high. A small stockade, with the stations or bastions at the corners for lookouts..."

Nathanel Wyeth was at the fort October 14, 1832. His description included this:
"...the fort is of no strength merely sufficient to frighten Indians mounting 2 small cannon having two bastions at the opposite corners of the small enclosure. There were six whites there."

Narcissa Whitman was at the fort September 1, 1836 after having traveled overland for many weeks. She wrote this:
"...After the usual introduction & salutation, we entered the Fort & were comfortably seated in cushioned armed chairs. They were just eating breakfast as we rode up soon we were at the table and were treated to fresh Salmon potatoes, tea bread & butter...The door yard was filled with hens, turkeys, pigeons, and in another place we saw cows, hogs and goats in abundance and I think the largest and fattest cattle and swine I ever saw. We were soon shown a room, which Mr. Pambrun said he had prepared for us, by making two bedsteads on bunks, on hearing of our approach. It was the west bastion of the fort full of port holes in the sides, but no windows and filled with fire arms. A large cannon already loaded stood behind the door, by one of the holes."

Explorer Twenty Questions

A review activity after studying western explorers.

This activity will help students practice formulating specific questions and help recall the important contributions of historical figures from the exploration era. Below is a list of names mentioned throughout this book, and used in many other materials related to exploration of the American west. Students may be given the list prior to the activity for time to review basic information about these individuals. Teacher preparation will require thirty 3" x 5" cards wtih a name of each of these explorers written on it, and tape.

Based on the game "Twenty Questions", each student will have a note card taped to their back and determine the name of that person based on asking questions. Each will carry a piece of paper numbered 1-20 and a pencil. Students will mingle for 20 minutes asking questions that can be answered only with a "yes" or a "no". They cannot ask more than two questions of any one person. After each question, they should check off one of the numbers, or write in clues that help them find the answer. Anyone who can figure out their "identity" in twenty questions is a wimmer. At the end of the activity, students return to their seats, and the teacher will ask each student if they know their identity, ask each student how many questions it took to determine the answer, and which question or clue was key in helping them solve the question. To discourage wild guesses, tell students they will have three points deducted each time they attempt a wild guess.

George Vancouver
Robert Gray
Thomas Jefferson
Simon Fraser
Wilson Price Hunt
Robert Stuart
Meriwether Lewis
William Clark
George Druillard
Sacagawea
Pomp
Seaman
Cameahwait
Patrick Gass
John Colter
Jedediah Smith

Jim Bridger
Jim Beckwourth
Kit Carson
Thomas Nuttall
John Townsend
David Douglas
John C. Fremont
Thomas Fitzpatrick
William Henry Ashley
Peter Skene Ogden
David Thompson
Benjamin Bonneville
Toussaint Charbonneau
Alexander Mackenzie
John Jacob Astor
Nathaniel Wyeth

Landmark Match Up

Many explorers named landmarks while they were exploring...and many landmarks were named for explorers years later. Write in the name of the person that inspired the name of the landmark, and whether they came by sea, overland, or worked with the fur trade.

Vancouver, Washington_____

Fremont National Forest_____

Bonneville Dam_____

Lewiston, Idaho_____

Gray's Harbor_____

Fraser River_____

Mackenzie River_____

Astoria, Oregon_____

Clark County, Washington_____

Beckwourth Pass_____

Broughton Bluff_____

Ogden, Utah_____

Payette, Idaho_____

Pompey's Pillar_____

Cook's Inlet_____

Cape Meares_____

The Portaging Game

Explorers often had to "portage" their equipment and provisions over places where rivers were impassable. That is, they had to get out of the water, unpack their boats, and carry belongings - and the boats - around rapids or waterfalls until they could get back to smooth water. (Read stories about portaging from Lewis & Clark's journals on following page.) Portaging was difficult and time-consuming, so groups always had to work together to find the most efficient way to move their goods. This game, based on portaging, will help students better understand the teamwork that happens when a group of people need to achieve a common goal. This game works as a timed race, in which teams race against a clock over a set course.

-Establish a course. If outside on a playground, a distance of about 100 feet is suitable. Inside, in a gym or classroom, a shorter distance may be used, and it may be desirable to set up a winding route or "obstacles" to make the course more challenging.
-Assemble a pile of approximately ten assorted objects of different sizes or shapes. This will represent the cargo that needs to be carried across the course. Selection of objects should include different sizes, shapes, and weights, and at least two objects too large to be carried by one person.
-Divide class into groups of four or five students each.
-Give the groups two minutes to figure a strategy to carry all the objects as quickly and safely as possible over the course.
-Using a stopwatch or clock, the teacher will time each group as they portage their provisions from one point to the other over the course. For any object dropped along the way, twenty seconds is added to the total time.

At the end of the activity - ask the class the following questions:
How did your group come up with their strategy to move the objects?
What did you think was most difficult about moving things this way?
If you were an explorer traveling down the river - would you rather portage or attempt to run your boat through the rapids? Why?

Suggested objects for your portaging pile: a basketball, a gallon milk jug filled with water, a large empty cardboard box, a small open top box with paper clips or other loose items, an oversized pillow, a chair, a broom, a flag on a pole, a piece of chalk, a sweatshirt.

Portaging

The word “portage” refers to carrying or moving things. Explorers traveling on water ways sometimes came upon a waterfall or rapids too rough to take their boats. When this happened, they had to find a way to take everything out of the boat, carry the boats and the baggage over land, and then put the boats back in where the water became smooth again. Sometimes, the land around the waterfall or rapids was steep, rocky and difficult to walk on, so they would have to explore around for a way to carry their goods. Here are some quotes from Meriwether Lewis about how they found a portage around the Great Falls of the Missouri River (which is at present day Great Falls, Montana).

The river was one continued scene of rapids and cascades, which I readily perceived could not be encountered with our canoes, and the cliffs still retained their perpendicular structure, and were from 150 to 200 feet high. In short, the river appears here to have worn a channel in the process of time through a solid rock. Captain Lewis, 13 June 1805

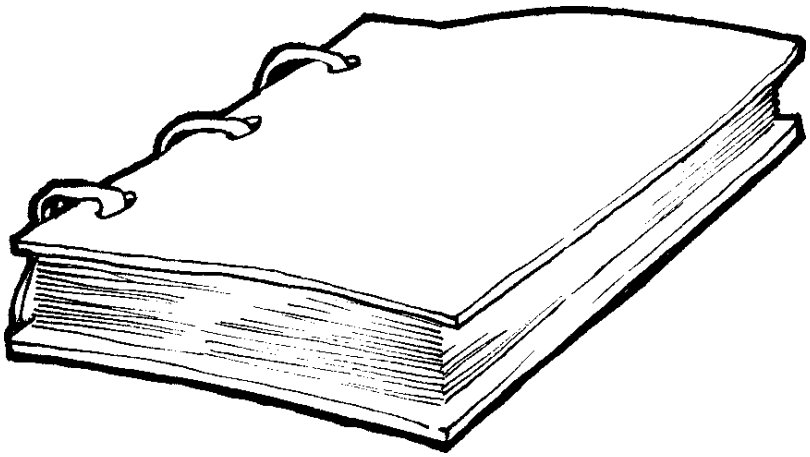
This evening after dark Joseph Fields returned and informed me that Captain Clark had arrived with the party at the foot of a rapid about 5 miles below which he did not think proper to ascend, and would wait my arrival there. I had discovered from my journey yesterday that a portage on this side of the river will be attended by much difficulty in consequence of several deep ravines which intersect the plains nearly at right angles with the river to a considerable distance, while the south side appears to be a delightful smooth, unbroken plain. The bearings of the river also make it probable that the portage will be shorter on that side than on this. Captain Lewis, 15 June 1805

Captain Clark set out early this morning with five men to examine the country and survey the river and portage, as had been concerted last evening. I set six men at work to prepare four sets of truck wheels with couplings, tongues and bodies, that they might either be used without the bodies for transporting our canoes, or with them in transporting our baggage…. The balance of the party I employed first in unloading the white pirogue, which we intend leaving at this place, and bringing the whole of our baggage together and arranging it in proper order near our camp. This duty being completed, I employed them in taking five of the small canoes up the creek, which we now call Portage Creek, about 1 3/4 miles. Here I had them taken out and laid in the sun to dry. Captain Lewis, 17 June 1805

This morning I employed the greater part of the men in transporting a part of the baggage over Portage Creek to the top of the high plain about three miles in advance on the portage. I also had one canoe carried on truck wheels to the same place and put the baggage in it, in order to make an early start in the morning, as the route of our portage is not yet entirely settled, and it would be inconvenient to remain in the open plain all night at a distance from water which would probably be the case if we did not set out early, as the latter part of the route is destitute of water for about 8 miles. Captain Lewis, 21 June 1805

The Lewis and Clark Expedition needed nearly three weeks to portage 18 miles around the Great Falls!

Explorers of the Pacific Northwest
Answer Keys



Many of the question and answer pages in this guide do not have answer sheets. Answers will be based on the student's consideration of the subject, and answers in the general range as listed are appropriate.

page 39 Forward into the Unknown

Why would they be taking things....

These were common trade items valued by various Indian tribes, and were used for trading for supplies or presenting as gifts.

Why would be taking by boat....

In most cases, traveling by water was faster and easier than traveling overland.

page 40

These answers should all reflect the individual ideas and conclusions of the student.

page 41

Where did Meriwether Lewis...

Indian presents. Lewis and Clark were very concerned with establishing good relations with Indians, to spend time visiting with them to obtain information and knowledge of the land. Gifts were an important part of diplomacy.

Do you know the meaning of the word "contingency"...

A contingency fund was important because there were so many unknowns on this expedition. They planned as best as they could; however they knew there could be many unplanned expenses (such as equipment breaking, supplies not arriving, etc.)

Meriwether Lewis planned to buy...

He could not buy ready made packsbecause this was the first trip of this sort and nothing existed on the market that would fit their needs. Any time someone or some project is among the first, it is often necessary to design and make custom equipment.

page 42

Based on this advice...

Good horses and plenty of food.

Do you think this is reliable...

Peter Ogden's statement "from what I have experienced the two last winters" is followed by some strong opinions and specific examples. His advice sounds as if it is based on experience, and would therefore be more reliable.

pages 46,47,48 A Clash of Cultures

Answers to these questions will be based on the individual student's opinions and ideas, except for these two questions:

What did Euro-Americans bring with them which killed many Native Americans?
A variety of diseases, such as small-pox, measles, veneral disease contributed to epidemics and many deaths among Native Americans.

Why do you think Native Americans were killed by European diseases so easily?
Europeans had experienced these diseases for many generations, and had developed ways to recognize the symptoms and treat the illnesses, and, in many cases, how to prevent disease transmission. Indians had never known these diseases, and did not know how the disesases started, how they progressed, which treatments were most effective, and how to prevent infections from spreading.

page 55

Chinook Language - try writing these phrases....

Any combinations of the words should be considered an appropriate effort.

My friend is hungry. Can I buy bread from you?
nika, seeks, olo, mahkook,bannack, maika

I will give you two dollars for that blanket.
nika, huy-huy, kunamoxt, dolla, pasee-si

Where can I buy a horse and saddle?
kah?, nika, mahkook or huy-huy, kiuatan, pe, lasell

page 57 Known versus Unknown

Answers to these questions will be based on the individual student's opinions and ideas.

page 96 Spelling

First paragraph
worm - warm, hasey - hazey, Seased - ceased, leavel - level, vallie - valley, Srubs-shrubs

Second paragraph
detph - depth, herd - heard, makeing - making, Meadels - medals, haveing - having

Third paragraph
hezitation - hesitation, Kittles - kettles, planes - plains, calleco - calico, ribon - ribbon, Mockerson - moccasin, beeds - beads, Sohsohne - Shoshone

page 105 Vocabulary and Reading Comprehension

contest: c
wood: b
exhausted: b
exceedingly: b
gratified: a
appearance: a
suitable: b
situation: b
concluded: c
recruiting: a
deputation: b
opposite: c
proceed: c
purpose: a
departed: c
mission: c

page 106 Editing Journals

Answers to these questions will be based on the individual student’s opinions and ideas.

Explorers
Search and Find

ANSWER SHEET

As you go through the exhibits at the National Historic Oregon Trail Interpretive Center, look for answers to these questions.

1. What kind of outfit is the figure on the first white horse wearing?

Buckskins

2. Explorers constantly had to observe animals and plants along their way. As you walk through the orientation gallery at the Interpretive Center - which animals and plants can you spot? Mark an X by each of these you find.

___Owl ___Tumbleweed _X_Sage Grouse _X_Coyote

_X_Bunchgrass ___Eagle _X_Rattlesnake _X_Meadowlark

___Poison Ivy ___Willow

3. There are two figures of Indians watching the wagons. What do they say?

___Why do they want to come here, when they have so much land back East?

_X_Sometimes they trade good horses, but mostly they have brought us injustice and sickness.

___We do not know how many more people will keep coming, and if they will try to fight us.

4. Name three tribes that lived in what is currently northeastern Oregon.

Cayuse, Walla Walla, Nez Perce

5. What does the man on the brown horse have hanging over his shoulder? How would he use this?

Powder horn - to load gunpowder into his rifle

6. Find the map on the wall with the title "A New Map of North America"

What is the date on this map? 1806

Is Florida on this map? (Yes) No

Is Oregon on the map? Yes (No)

Explorers
Search and Find

ANSWER SHEET

7. On the display panel "The Explorers", who brought the U.S. Exploring Expedition to the Northwest in 1841?

Charles Wilkes

8. Who is pictured in the oval on the lower part of the panel?

Kit Carson

9. When did John C. Fremont travel to Oregon?

1843

10. Find the panel with the title "The Trappers". What animal do you see at the base of this panel?

beaver

11. Which items are pictured on this panel?

Bottle of whiskey Castoreum container Frying pan Box of dynamite

Black powder container Beaver trap Buckskin jacket

12. Find the panel with the title "The Naturalists" and answer these questions.

When did David Douglas gather specimens? 1820s

What is the name for the rabbits in the picture? *Townsend Hares*

Who drew the picture? *Audobon*

13. Find a book with a map displayed in a case in this area. Who wrote this book?

John C. Fremont

Explorers
Search and Find

ANSWER SHEET

14. Describe the hooves on the bison.

black, cloven, hairless - any similar descriptions are appropriate

15. What do you think the large forked spear displayed on the wall was used for?

Fishing

16. Which of these common trade items are displayed in the "Trading" case? (circle)

pony beads harmonica clay pipe mirror

coins comb candy basket

17. What is pictured on the Jefferson Peace Medallion?

-a handshake
-a crossed pipe and hatchet

18. In the trade camp scene, what is on the Indian woman's dress? If she lived far inland from the ocean, how did she get these?

-shells; probably by trading

19. What kind of teepee is shown in the trade camp exhibit?

Three pole lodgepole, Sioux style, buffalo hide (information is on last page of the flip book in the exhibit).

20. What kind of fish was the fish-hook used to catch?

Salmon or sturgeon

21. What type of firearm is displayed on this wall?

long rifle, muzzle loader

22. Which fort was named for a "grizzled old trapper"?

Fort Bridger (information is in caption beneath the picture of Ft. Bridger)

ANSWER SHEET

23. Which fort was originally known as Fort Nez Perces?

Fort Walla Walla

24. What fur company built Fort Boise?

Hudson's Bay Company

25. In the fort model, what is hanging from the rack by the teepees?

Dried meat, jerky, smoked meat - any answer referring to drying food is correct.

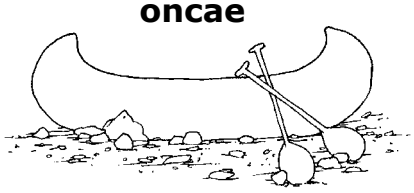
26. What landmark was located in Baker Valley?

The Lone Pine Tree

Word Scramble ANSWER SHEET

Unscramble the letters below to find the name of tools and equipment used by explorers on their westward journeys.

oncae



canoe
_ _ _ _ _

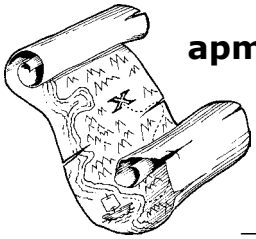
samspco

_ compass _
_ _ _ _ _ _ _

lfeir

_ rifle _ _
_ _ _ _ _

apm



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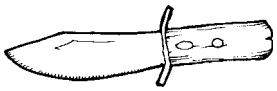
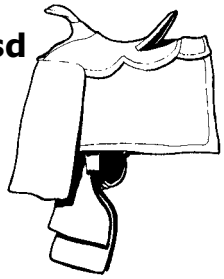


_ knife _
_ _ _ _ _

dlaesd



_ saddle _ _
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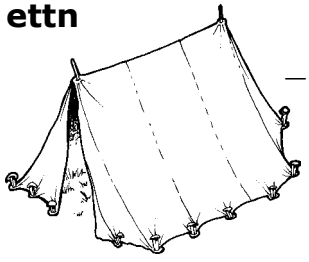
ettn



_ tent _
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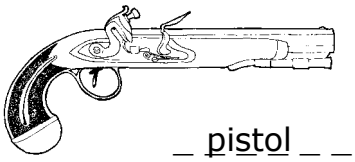

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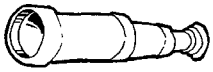

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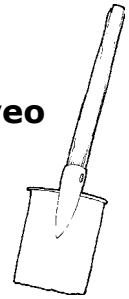

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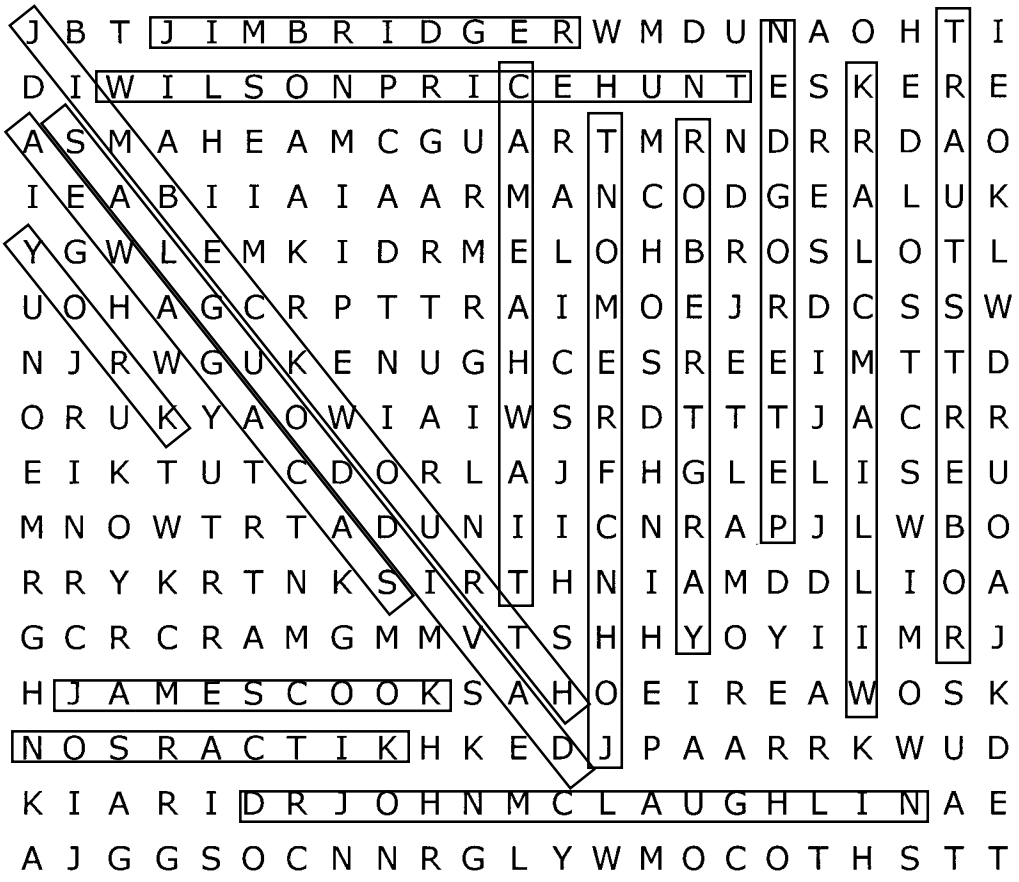
WORD SEARCH ANSWER SHEET

Find each of the following names of people who explored in the Pacific Northwest.

James Cook
John C. Fremont
York
Robert Gray
Kit Carson
David Douglas
Dr. John McLaughlin
Cameahwait
Jim Bridger
Peter Ogden
Sacagawea
Wilson Price Hunt
Jim Beckwourth
Robert Stuart
William Clark



Practical Math

ANSWER SHEET

You are leading an exploring expedition through the Pacific Northwest. Your party has decided to split into two smaller groups so you can explore a wider area. You split up at the fork of a river, and agree to meet again at a fur post in fifteen days. Looking at a map, you figure the distance your group must travel to the fur post is 210 miles. How many miles must you travel each day to get to the fur post on time?

210 miles divided by 15 days = 14 miles per day.

The President asks you to lead an exploring party for 250 miles up the Missouri River to record all the wildlife you can find. You are to return and have a report on your expedition in 40 days. You need some helpers so you ask 4 people to go along with you. While figuring supplies, you estimate you will need about three pounds of food each day to feed everyone. How much food should you buy for the total trip?

Number of people 5
multiply by number of days x 40
multiply by pounds of food per day x 3
= total amount of food 600

While exploring with Lewis and Clark, you are asked to negotiate with the Nez Perce Indians to get some horses to pack supplies and carry people. You would like to have seven horses. Two of the horses are for men to ride, and each man weighs 160 pounds. The other five horses are for packs of supplies, and each pack weighs 140 pounds. The Indian trader says he doesn't have seven horses, he only has five to trade, but each horse is very strong and can carry 210 pounds. Can you redistribute the weight in your supplies and people for only five horses? Or will you need to leave supplies behind?

Total weight: 2 men x 160 lbs. each = 320
5 packs x 140 lbs. each = 700

Total weight of supplies 700 + total weight of men 320 = 1020

Total weight 1020 divided by 5 horses= 204 lbs. per horse.

X Yes, I can do it with five horses.

_____No, I'll have to leave _____pounds of supplies behind.

Technology Then and Now

After visiting the Interpretive Center, you may realize that the tools and technologies available to explorers in the 1700s and 1800s were very different from today. Our ability to accomplish tasks quickly and accurately can depend a great deal on the tools we have available. Listed below are tools and equipment used by explorers in history, and in modern times. By each one, mark whether you think it was used by explorers in historic times such as Lewis and Clark, Fremont, Hunt, Stuart, or Ashley, or if it is only available to modern explorers. Mark those items mainly used in historic times with an O, those available only today with an X. For some, you may think they were used in historic times, but are still used today; mark those with a B.

B canoe

X camera

O quill pen

X laptop computer

X ballpoint pen

B magnetic compass

X global positioning system unit

X Jeep

O muzzle loading rifle

B pack mule

X rubber soled hiking boots

O moccasins

X thermos bottle

B dried food

B telescope

X binoculars

X tape recorder

B journal

X video camera

O plant press

O watercolors

O cast iron pot

O canvas tent

O bedroll

Landmark Match Up Answer Key

Vancouver, Washington ...George Vancouver, British Sea Captain

Fremont National Forest...John C. Fremont, American overland explorer

Bonneville Dam...Benjamin Bonnevile, American overland explorer

Lewiston, Idaho...Meriwether Lewis, American overland explorer

Fraser River...Simon Fraser, British overland explorer, fur trade

Mackenzie River...Alexander Mackenzie, British overland explorer, fur trade

Astoria, Oregon...John Jacob Astor, fur trade

Clark County, Washington...William Clark, American overland explorer

Beckwourth Pass...Jim Beckwourth, American overland explorer, fur trade

Broughton Bluff... William Robert Broughton, British sea explorer

Ogden, Utah...Peter Skene Ogden, fur trade

Payette, Idaho...Francois Payette, fur trade

Pompey's Pillar...John Baptisite Charbonneau, Sacagawea's son nicknamed "Pomp" on the Lewis and Clark Expedition.

Cook's Inlet...James Cook, British sea explorer

Cape Meares...John Meares, British sea explorer and trader

Explorer Retrieval Chart

Answer Key

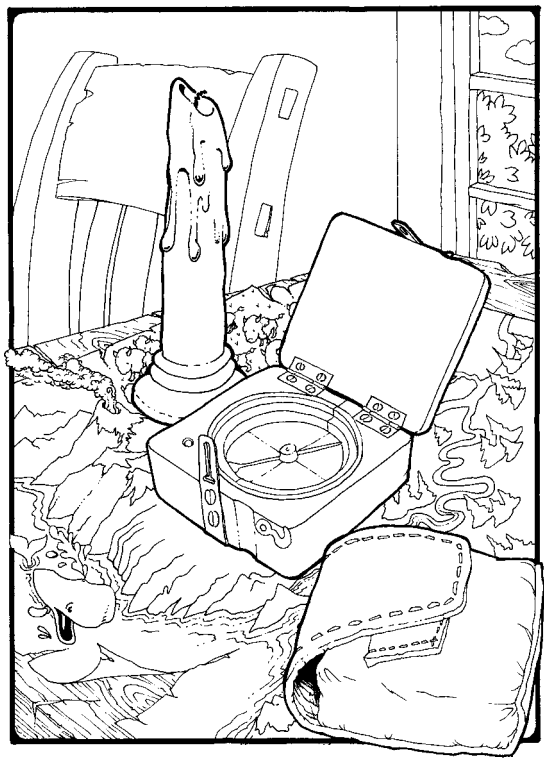
From research, find facts to fill in the boxes for each of these explorers.

Dates of Exploration	Country Represented	Area Explored	Discoveries	Results of Exploration
1. Captain Robert Gray 1789-90 1791-92	USA	Pacific Coast of North America	Columbia River	-Detailed Maps of coastline -American claim for Pacific Northwest
2. Alexander Mackenzie 1789-1793 or 1780s-1790s	Great Britain Canada	Western Canada	Mackenzie River Route to Arctic Ocean Route Across N. America to Pacific Ocean	-helped establish claimsfor NorthWest Co. andfor Great Britain -Journals became famous, inspired other explorers
3. Peter Skene Ogden 1824-1830	Great Britian Canada	Oregon Country - Oregon, Idaho, Utah, Wyoming, Nevada, California	Found and documented many waterways and trade routes	-Established fur posts for Hudson's Bay Company -Established trade relations between US, Great Britain, and Native Americans
4. David Douglas 1825-1827 1829-1833	Great Britain England	Washington, Oregon California	-many species of plants -Douglas Fir, Grand fir, silver fir, Ponderosa pine, and many more trees.	Expanded knowledge of western tree and plant species

Explorers of the Pacific Northwest

Additional Resources

*Glossary
*Suggested Reading for Adults
*Suggested Reading for Juveniles
*Historic Sites



Glossary of Terms and Names

Bateaux - A light, flat-bottomed river boat, often used by French Canadian fur traders.

Cameahwait - A Shoshone chieftain and brother to Sacagawea who helped Lewis and Clark cross the Rocky Mountains.

Cardinal Directions - The four main directions: North, South, East, and West.

Checkpoint - A site used in orienteering to keep people on track to a specific goal.

Compass - A scientific device used to navigate from one point to another. A compass consists of a needle and dial marked in degrees.

Compass rose - An eight pointed star used on maps to indicate the cardinal directions and the intermediate directions.

Corps of Discovery - The name of the Lewis and Clark Expedition of 1803-1806.

Dead Reckoning - Navigating from one point to another without the aid of scientific instruments.

Engagees - the name given to trappers employed by the Hudson's Bay company and the North West Company.

GPS - Global Positioning System. This is a system used in modern times for navigating and recording geographical information utilizing satellites. Not available to early explorers, today this term is used frequently in map making and documentation.

Great American Desert - the name given to the plains area of the North American continent by some of the early explorers, particularly Zebulon Pike and Stephen H. Long.

Hudson's Bay Company - A famous British fur company involved in exploration of the Northwest. The company was chartered in 1670, and is still in existence today, although in a very different form. It had many claims and titles to property in America, which were not entirely bought out until 1869. Frequently abbreviated HBC.

Intermediate Directions - The four in-between compass directions. Northeast, Northwest, Southeast, and Southwest.

Latitude - A position on the Earth based on lines that run parallel to the equator. The equator is considered to be zero degrees latitude, and each pole is 90 degrees north or south respectively. By combining the latitude of a position with the longitude of a position it is possible to fix an exact location.

More Terms and Names

Lingua Franca - A language that is used to facilitate trade. Among Native Americans of North America this was often sign language.

Longitude - Half-circles that meet at the north and south poles which are used with lines of latitude to set an accurate fixed position on the globe. Greenwich, England has been established as the Prime Meridian or zero degress longitude. All other lines are measured both to the west and the east of Greenwich. Since the Earth is a globe that equals 360 degrees, the lines of longitude run 180 degrees both to the west and the east.

Manifest Destiny - The concept that the United States was meant to expand from the Atlantic coast to the Pacific coast.

Map Symbols - Pictures and graphic representations of terrain features and other objects on a map.

Navigation - The art of finding your way from one point to another.

North West Company - a famous British fur company involved in the exploration of the Northwest. It was formed in 1783, bought out the Pacific Fur Company in 1813, and merged with Hudson's Bay Company in 1821. Employees were known as "Norwesters".

Northwest Passage - The fabled water route that would allow direct water transportation from Europe west to Asia through the North American continent. The search for the Northwest Passage was one of the most influential motivations for exploration of the Pacific Northwest.

Octant - A scientific device used to calculate the latitude of a position.

Orienteering - The science of navigating from one point to another.

Prime Meridian - Zero degrees longitude. The Prime Meridian is located in Greenwich, England.

Sextant - A scientific device used to calculate the latitude of a geographic position.

South Pass - a gently sloping area in the Rocky Mountains, located in present day Wyoming, which was used by emigrant wagons in crossing the mountains.

Some Suggested Reading for Adults

There are a great variety of books available on subjects related to exploring. Below are just a few that have proven useful to us in researching and preparing programs on this subject, and that should be readily available through most public or university libraries.

Scholarly works – for those doing in-depth research, looking for details on particular events or individuals.

Siskiyou Trail: The Hudson's Bay Company Route to California. Richard Dillon. New York: McGraw-Hill Book Company, 1975. *The colorful story of the fur traders' trail over the Siskiyou Mountains between the Columbia River and San Francisco*.

Experiences in a Promised Land: Essays in Pacific Northwest History. G. Thomas Edwards and Carlos A. Schwantes, eds. Seattle: University of Washington Press, 1986. *A collection of essays about the Northwest from early exploration to the modern era.*

Westward Vision: The Story of the Oregon Trail. David Lavender. New York: McGraw-Hill Book Company, 1963. *In-depth history of the westward movement of the Pacific Northwest*.

The Fist in the Wilderness. David Lavender. Albuquerque: University of New Mexico Press, 1964. *A complex and scholarly account of the fur trade and the American Fur Company as seen through the eyes of Ramsay Crooks, field manager to John Jacob Astor*.

The American Fur Trade of the Far West. Hiram Chittenden. Lincoln: University of Nebraska Press. 1986. *Describes fur trade, mountain men, Indians involvement in the fur trade for era between 1807-1843*.

Mountain Men and Fur Traders of the Far West. LeRoy R. Hafen, ed. Lincoln: University of Nebraska Press, 1921. *Eighteen biographies of prominent mountain men by various authors*.

Fur Traders, Trappers and Mountain Men of the Upper Missouri. Le Roy Hafen. University of Nebraska Press, 1995. *Concise descriptions of some lesser known mountain men and their contributions to opening of the west*.

A Life Wild and Perilous: Mountain Men and the Paths to the Pacific. Robert M. Utley. Owl Books, 1998. *A large book, filled with details about various mountain men and explorers, how they lived in "uncivilized" frontier conditions, and their contributions to understanding the geography of the west. This is a good source for those wanting details beyond the introductory level.*

Caesars of the Wilderness: Company of Adventurers, Volume II. Peter C. Newman. Ontario: Penguin Books Canada Ltd. 1987. *A Canadian perspective of early fur traders*.

Gentle Conquest. James L Reveal. Washington D.C.: Starwood Publishing, 1992. *An excellent portrayal of the variety and importance of the discovery of North American flora from the time of Columbus to the end of the American frontier. Illustrated with many historical images.*

Encounters with a Distant Land: Exploration and The Great Northwest. Carlos Schwantes, ed. Moscow, ID: University of Idaho Press, 1994. A collection of essays on western discovery and exploration, and the impact on the Pacific Northwest.

More suggested reading for adults…

Lewis & Clark, Pioneering Naturalists. Paul Russell Cutright. Urbana: University of Illinois Press, 1969. *Focuses on work accomplished by this expedition in identifying, collecting, and describing flora and fauna along their route. Many journal excerpts.*

Undaunted Courage. Stephen E. Ambrose. New York: Simon and Schuster, 1996. *A biographical approach, focusing primarily on Meriwether Lewis, detailing his involvement in the preparation and execution of the Lewis and Clark expedition. Excellent resource for understanding the social and economic forces that shaped the expedition.*

Thomas Jefferson and the Rocky Mountains. Donald Jackson. Urbana: University of Illinois Press. 1981. *Provides useful background in understanding how President Jefferson, who never traveled west of the Appalachians, influenced several explorations of western lands. Good background on the knowledge that was available prior to the explorations by Lewis and Clark*.

The Conquest of Empire. Bernard DeVoto. Boston: Houghton Mifflin, 1952. *A detailed, scholarly work on the social and political reasons for exploring the unknown regions of the North American continent*

Exploring the Great Basin. Gloria Griffin Cline. Reno: University of Nevada Press, 1988. *In depth study of explorers within the Great Basin and their various motives for being there.*

Quick reads – generally, these are a more introductory level, general in subject matter, or brief in format.

Mountain Men of the American West. James A. Crutchfield. Tamarack Books, 1997. *Concise biographies of many of the prominent figures of the American Fur Trade. Good resource for those short on time to study the subject, or to have on hand for quick reference while reading other works.*

The Pacific Northwest: an Interpretive History. Carlos Schwantes. Lincoln: University of Nebraska Press, 1989. *A broad history of the Pacific Northwest from the first encounters between Captain James Cook and Native American to the late 1980s.*

Fort Vancouver National Historic Site. U.S. Department of the Interior, National Park Service Handbook 113. U.S. Government Printing Office, 1981. *A brief, well-illustrated history of the Hudson's Bay Company and its fur trading post Fort Vancouver.*

Exploring the American West 1803-1879. Department of the Interior National Park Service Handbook 116. Government Printing Office, 1982. *A brief history, well illustrated, covering explorations throughout the Great Plains, Northwest, and Southwest – including military, mapping, and scientific expeditions.*

The West; An Illustrated History. Geoffrey C. Ward and others. New York: Little, Brown & Co. 1996. *The first chapter has a useful synopsis of early Spanish exploration, sea trade and overland fur trade, and the Lewis and Clark Expedition. Illustrated with historic images and maps.*

More suggested reading for adults...

Illustrated –in addition to text, these are helpful for those seeking images for a lesson presentation or program.

Artists of the Old West. John C. Ewers. Garden City, NY: Doubleday & Company, 1965. *Beautifully illustrated book of early western artists and their journeys to the West.*

The Saga of Lewis & Clark: Into the Uncharted West. Thomas Schmidt and Jeremy Schmidt. Tehabi Books, 1999. *An account of the authors' personal experiences and feelings while studying and retracing the route of the Lewis and Clark Expedition. Lavishly illustrated with photographs, historic and modern images, and maps. Helpful in understanding locations, animals and conditions described in Lewis and Clark's journals*.

Mapping the West. Paul Cohen. New York: Rizzoli, 2002. *Reproductions of 65 maps from 1524 through 1890, chronicles the cartographic history of the western United States.*

The Trailblazers. Time-Life Books, ed. New York: Time-Life Books, 1973. *Easy to read account of the opening of the American west from Jefferson through the late 1870s. Well illustrated.*

Atlas of Western Expansion. Alan Wexler. New York: Facts on File, 1995. *Provides numerous maps, facts, illustrations and interpretive text related to exploration and settlement of the west*.

Exploring the West. Herman J. Viola. Washington: Smithsonian Books, 1986. *Describes explorations of western America throughout the 19th century. A great source for illustrations of landscapes and people associated with exploration; includes many photographs of artifacts and scientific documents from the Smithsonian collections related to historic explorations.*

In the Path of the Explorers: Tracing the Expeditions of Vancouver, Cook, Mackenzie, Fraser and Thompson. Steve Short and Rosemary Neering. Vancouver B.C.: Whitecap Books, 1992. Accounts of five explorers in British Columbia and the Pacific Northwest. Photographs.

Travel planning – useful for preparing field trips.

Traveling the Lewis & Clark Trail. Julie Fanselow. Helena: Falcon Publishing. 1994. *Helpful resource for locating and traveling to historic sites along the Lewis and Clark Trail.*

Along the Trail with Lewis and Clark. Barbara Fifer and Vicky Soderburg. Helena: Farcountry Press, 2001. *Well mapped guide book for planning tours along the route of the Lewis and Clark Trail. Resources for finding historic sites and information.*

More suggested reading for adults...

Biographies and journals – for specialized study on individuals involved with exploration.

Columbia Journals. Barbara Belyea, ed. Montreal: McGill-Queens University Press, 1994. *David Thompson's journal of his exploration and mapping of the Columbia River.*

Exploring the Northwest Territory: The Journals of Sir Alexander Mackenzie. T.H. McDonald, ed. Norman: University of Oklahoma Press, 1966. *Memoirs and journals of MacKenzie's voyage from Lake Athabasca to the Arctic Ocean.*

Journal of Captain Nathaniel J. Wyeth's Expedition to the Oregon Country, 1831-1836. Dr. Don Johnson, ed. Fairfield: Ye Galleon Press, 1984.

Peter Skene Ogden: Fur Trader. Archie Binns. Portland: Binford and Mort, 1967. *A biography of Peter Skene Ogden, this includes many quotes from correspondence between Ogden and his associations.*

The Discovery of the Oregon Trail: Robert Stuart's Narratives. Phillip Ashton Rollins, ed. New York: Charles Scribner's Sons. 1935. *Stuart's experiences with the Pacific Fur company and his expedition eastward from Fort Astor. This edition also includes Wilson Price Hunt's diary of his overland journey to Astoria. The introduction summarizes the contents of the journals.*

The Letters and Journals of Simon Fraser: 1806-1808. W. Kaye Lamb. Canada: MacMillan, 1960. *Compilation of writings of Simon Fraser during his 1806-1808 expeditions.*

Douglas of the Fir: A Biography of David Douglas, Botanist. Athelstan George Harvey. Cambridge: Harvard University Press, 1947. *A biography of David Douglas' life and explorations, detailing his journeys and accomplishments within the botanical and exploring worlds*.

The Overland Journeys of John B. Wyeth and John Kirk Townsend. Rueben Gold Thwaites, ed. Fairfield: Ye Galleon Press. 1970. *A reprint of the 1905 edition of overland narratives of John B. Wyeth and John Townsend, who accompanied Nathaniel Wyeth on his western expeditions to establish fur posts in 1832 and 1834.*

The Journals of Lewis and Clark. Bernard DeVoto. Boston: Houghton Mifflin Company. 1963. *Edited journals of Lewis and Clark, with detailed footnotes and annotations by DeVoto. Very helpful in understanding and fleshing out the context of the journal entries.*

Some Suggested Reading for Juveniles

History Books

To the Pacific with Lewis and Clark. Ralph K. Andrist. American Heritage Publishing. 1967 *For more advanced student readers, provides more detailed information about the Lewis and Clark Expedition. Well illustrated and indexed.*

The Incredible Journey of Lewis and Clark. Rhoda Blumberg. Beech Tree Books. 1995. *Well illustrated, easy to read history of the political background and specifics and aftermath of the Corps of Discovery Expedition.*

The Lewis and Clark Expedition. Sanna Porte Kiesling. Falcon Publishing. 1990. *For ages 9-12, covers highlights of the historic westward expedition.*

Lewis and Clark: American Explorers. Arlene Bourgeois Molzahn. Enslow Publishers, 2003. *Well-illustrated basic history of the journey, including the Louisiana Purchase, and background information on Lewis and Clakr. For ages 9-12.*

Explorers of the American West. Kelly Wittman. Mason Crest Publishers. 2002. *Basic history for ages 9-12.*

Jedediah Smith and the Mountain Men of the American West. John Logan Allen, William H. Goetzmann. Chelsea House. 1991. *Biographical information and experiences and accomplishments of the mountain men.*

Lewis and Clark. Richard F. Kozar. Chelsea House Publications, 1999. *A children's biography of the Lewis and Clark expedition.*

Lewis and Clark: Explorers of the American West. Steven Kroll. Holiday House, 1994. *For ages 6-10, introduces Meriwether Lewis adn William Clark on their expedition of 1804-06.*

Explorers of North America. Brendan January. Bt Bound, 2002. *A general history of discoveries and exploration in North America for ages 9-12.*

Exploration of North America Shirley Greenway, Barrons Educational Series*. For ages 9-12, magazine style presentation recounts many discoveries in North America and inlucdes the Louisiana Purchase and Lewis and Clark Expedition.*

Across America: The Story of Lewis and Clark. Jaqueline Morley. Franklin Watts, 1999*. Details different segments of the expedition, with facts about the time period incorported throughout.*

Seaman; The Dog Who Explored the West with Lewis and Clark. Gail Langer Karwoski. Peachtree Publishers, 1999. *Fictionalized account of the Corps of Discovery expedition from the viewpoint of Captain Lewis' Newfoundland dog.*

How We Crossed the West: The Adventures of Lewis and Clark. Rosalyn Schanzer, National Geographic, 2002. *A simplified version of the Lewis and Clark journals, with illustrations and maps.*

More suggested reading for juveniles...

Native American Culture and History

Native Americans. Fiona Macdonald and Patrick Toya Ladybird Books, 1997**.** *For ages 9-12.*

They Call Me Sacagawea*.* Joyce Badgley Hunsaker. The Globe Pequot Press. 2003. *The story of the Corps of Discovery expedition as seen trhough the eyes of one of its members, Sacagawea. Illustrated with graphics of the tools, clothing, and equipment used on the trek. For grades 2-3.*

Keepers of the Animals: Native American Stories and Wildlife Activities for Children. Michael J. Caduto, Joseph Bruchac, et. al. Fulcrum Publications, 1997. *Useful for students of all ages, uses 24 illustrated stories to show the importance of wildlife in Native American tradition, along with creative activities to further explore human connections with wildlife.*

Keepers of the Earth: Native American Stories and Environmental Activities for Children. Michael J. Caduto, et. al. Fulcrum Publications. 1999. *Useful for students of all ages, uses traditional Native American stories to help students connect with the natural world.*

Natural History, Wilderness Skills

Follow the Trail: A Young Person's Guide to the Great Outdoors. Jessica Low. Henry Holt and Co. 2003 *Although this book is about modern day camping and trekking, it includes information and activities to help understand basic techniques used by wilderness explorers, such as how to identify plants and trees, looking for animal tracks, and predicting weather. Will provide children with helpful perspective to understand the wilderness lifestyle of earlier times.*

Animals on the Trail with Lewis and Clark. Dorothy Hinshaw Patent. Clarion Books, 2002. *The author provides a brief synopsis of the history of expedition, but focuses on the Corps of Discovery's assigned task of collecting specimens and documenting the animals found along the way. Includes photographs of animals, landscapes, artifacts and sites along the route, and a list of 121 species of animals recorded by the explorers. For ages 9-12.*

Activity Books

Following Lewis and Clark's Track. The story of the Corps of Discovery. William E. Hill. Oregon-California Trails Association. 2001 *An educational activity book with numerous excerpts and excellent reading exercises. Grades 4-6.*

Lewis and Clark for Kids. Janis Herbert Chicgo Review Press. 2000. *For ages 9-12, well illustrated book with historical information and creative activities.*

Maps and Mapmaking Skills

The Children's Atlas of Exploration: Follow in the Footsteps of the Great Explorers. Antony Mason, Keith Lye. Millbrook Press Trade 1993. *Illustrated with photographs, maps and illustrations, this book highlights the history of exploration from prehistory to the space age, and examines the human drive to explore. For age 9-12.*

Small Worlds: Maps and Map Making. Karen Romano Young. Scholastic Trade. 2002. *For ages 9-12, 148 page book tells about maps and map makers, from ancient times to modern maps made for all types of purposes.*

Maps in History Walter G. Oleksy. Franklin Watts, 2002. *A brief history of cartography, explaining technology used to create maps, and social influences on mapmaking. For ages 9-12.*

The Story of Maps and Navigation. Anita Ganeri. Oxford University Children's Books, 1998*. A brief (32 page) book on the history of cartography. Good for reluctant readers, it includes basic facts on the different components of maps and how to read them. For students age 9-12.*

Historic Sites

Historic Sites and Museums related to Exploration, Mountain Men, Fur Trade in the Pacific Northwest (Washington, Oregon, Idaho, British Columbia, Western Montana, Western Wyoming)

Beacon Rock State Park – prominent site mentioned by many explorers and traders. Located 35 miles east of Vancouver on Washington State Hwy 14. Washington State Parks 7150 Cleanwater Lane, PO Box 42650 Olympia, WA 98504-2650 360-902-8844 www.parks.wa.gov.

Columbia Gorge Discovery Center / Wasco County Historical Museum - native plant interpretive trail, exhibits related to the Lewis and Clark Expedition and Native American culture, educational materials. 5000 Discovery Drive, The Dalles, OR 97058 541-296-8600 www.gorgediscovery.org

Columbia Gorge Interpretive Center – located about 40 miles east of Portland, includes exhibits about Native American life, and the Lewis and Clark expedition. PO Box 396, 990 SW Rock Creek Drive, Stevenson, WA 98648 800-991-2338 www.columbiagorge.org

Fort Boise Replica – reconstruction of an adobe fur post built by Thomas McKay of the Hudson's Bay Company in 1834 along the Snake River. Located in Parma, Idaho. Contact the Parma City Office, Box 608, 305 N. 3rd, Parma, ID 83660. 208-722-5138. e-mail parmch@w-idaho.net.

Fort Bridger – site of a trading post from 1843 into the 1850s originally operated by mountain man Jim Bridger. Located about 30 east of Evanston, Wyoming. Fort Bridger Historical Association, PO Box 112, Fort Bridger, WY 82933 307-782-3842. http://wyoparks.state.sy.us/bridger.htm.

Fort Canby State park - coastal park on the Long Beach Peninsula, includes an interpretive center with information about explorers by sea and by land. Located two miles southwest of Ilwaco, Washington, off US highway 101. PO Box 488, Ilwaco, WA 98624. 360-642-3078 www.parks.wa.gov

Ft. Clatsop National Memorial – recreated structures of the winter quarters for the Corps of Discovery. 92343 Fort Clatsop Rd, Astoria, OR 97103-9197. 503-861-2471. www.nps.gov/focl

Fort Hall Replica – replica of fur post built by Nathaniel Wyeth in 1834. 922 N. 7th Ave. Pocatello, ID 83204 208-234-1795 www.poky.net/forthall

Fort Langley National Historic Site – built in 1827 along the Frasier River, this site was part of Hudson's Bay Company's network of fur posts. One original building, several reconstructed buildings, costumed interpreters, historic artifacts. Located about ten miles southeast of Vancouver BC. PO Box 129, 23433 Mavis Avenue, Ft. Langley, BC Canada V1M 2R5. 604-513-4777 www.parkscanada.gc.ca/lhn.nhs/bc/langley.

Fort Laramie National Historic Site – preserves the history of a prominent trading post created in 1834 which later became a military post on the Great Plains. Preserved buildings from the military era, educational programs on the fur trade, Plains Indians, and westward migration. HC 72, Box 389, Fort Laramie, WY 82212. 307-837-2221 www.nps.gov/fola

Fort St. James National Historic Site – located in central British Columbia. A trading post built in 1806 by Simon Fraser, the main headquarters for trade in New Caledonia. PO Box 1148, Fort St. James, BC, Canada, V0J 1P0 250-996-7191. www.parkscanada.gc.ca

Fort Vancouver National Historic Site – interpretive center and re-creation of the historic Hudson's Bay fur trade post. 1501 E. Evergreen Blvd., Vancouver, WA 98661 1-800-832-3599 www.nps.gov/fova

Hat Rock State Park – the first distinctive landmark passed by the Lewis and Clark expedition on their journey down the Columbia. Located on the south bank of the Columbia River, eight miles east of Umatilla, Oregon. State of Oregon Parks and Recreation, PO Box 85, Meacham, OR 97859. 541-567-5032 www.oregonstateparks.org

Jackson Hole Historical Society and Museum – excellent collections of tools and trade items from the era of the mountain men. 105 Mercill Avenue, Jackson, WY 83001 307-733-2414. www.wy-bix.com/jacksonhistorical

Lewis and Clark National Historic Trail Interpretive Center – multi-purpose facility located along the route of the Lewis and Clark Expedition, exhibits detail the 1804-1806 journey with a focus on their interaction with Plains Indians. PO Box 1806, 4201 Giant Springs Road, Great Falls, MT 59403-1806. 406-727-8733 www.fs.fed.us/r1/lewisclark/lcic.htm

Lewis and Clark Trail State Park - a campsite of the Lewis and Clark expedition in 1806, features plentiful natural vegetation, interpretive programs and displays. Located 25 miles northeast of Walla Walla. 36149 Hwy 12, Dayton, WA 99328 509-337-6457. 509-337-6457 www.parks.wa.gov

Lolo Pass Visitor Center and Lolo Motorway – on US Highway 12, several sites associated with the Lewis and Clark expedition, with interpretive signs. Contact the Clearwater National Forest for more information and maps. Clearwater National Forest, 12730 Highway 12, Orofino, ID 83544 208-476-4541 www.fs.fed.us/r1/clearwater/LewisClark

Nez Perce National Historic Park – 38 sites associated with history of the Nez Perce people. Two visitor centers with exhibits and interpretive staff. Route 1, Box 100, Spalding, ID 83540-9715 208-843-2261 www.nps.gov/nepe

Sacajawea State Park – located five miles east of Pasco, Washington, near one of the main campsites of the Lewis and Clark Expedition. Includes an interpretive center – call 509-545-2361 for information on hours and tours. . Washington State Parks 7150 Cleanwater Lane, PO Box 42650 Olympia, WA 98504-2650 360-902-8844 www.parks.wa.gov

Tamastslikt Cultural Center – exhibits and programs offer perspective on the culture and history of the Cayuse, Umatilla and Walla Walla tribes. 72789 Highway 331, Pendleton, OR 977801 541-966-9748 www.tamastslikt.com.

End of the Oregon Trail Interpretive Center - exhibits and programs related to westward migration. 1726 Washington Street, Oregon City, OR 97045. 503-657-9336. www.endoftheoregontrail.org.