

AMERICAN PHILOSOPHICAL SOCIETY

Lewis and Clark: Collecting Useful Knowledge

This lesson introduces the idea of “useful knowledge” and why Jefferson would have sought it in the western regions of North America. It asks students to contemplate what makes knowledge useful, and how knowledge is collected and recorded. For this lesson, students should be familiar with the Lewis and Clark expedition in general. Students should know that it was created by President Thomas Jefferson, that it followed the Louisiana Purchase, and that it was the first expedition by the United States government into the lands purchased from France and beyond.

Learning Objectives

- Students will learn about the scientific objectives of the Lewis and Clark expedition, and how this goal was innately tied to the goal of westward expansion by Jefferson and the United States government
- Students will understand about the Enlightenment's influence on 18th and 19th century natural science and government policies
- Students will learn about the preparations made by Lewis and Clark for their expedition
- Students will discover what Lewis and Clark recorded in their journals
- Students will investigate other sources of knowledge for Lewis and Clark, including indigenous knowledge

Skill Objectives

- Students will closely analyze primary source documents to understand what can be learned from these sources
- Students will analyze maps and parts of a map
- Students will observe, measure, describe and record an object, utilizing math and scientific principles
- Students will practice writing skills through thorough description of an unknown object

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Curriculum Standards

- CCSS.ELA-LITERACY.RH.11-12.1 Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- CCSS.ELA-LITERACY.RH.9-10.3 Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.
- CCSS.ELA-LITERACY.RH.11-12.5 Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
- CCSS.ELA-LITERACY.RH.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
- CCSS.ELA-LITERACY.RH.11-12.8 Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.
- CCSS.ELA-LITERACY.WHST.11-12.9 Draw evidence from informational texts to support analysis, reflection, and research.
- CCSS.ELA-LITERACY.SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
- CCSS.ELA-LITERACY.SL.11-12.1.A Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
- CCSS.ELA-LITERACY.SL.11-12.1.B Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
- CCSS.ELA-LITERACY.SL.11-12.1.D Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

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Materials

- Primary source images and transcriptions
- Paper or notebook for writing and sketching
- Pen or pencil
- Ruler or tape measure
- Object or picture for description - ideally something with lots of detail (texture, color, weight, angles) for description and measurement. The educator can decide what is best in this situation for their students - students can select from options offered by the educator. Alternatively, a photograph of a plant or animal could be used.

Resources

- [Michaux Subscription by Thomas Jefferson](#)
- [Wahkiakum and Chinookan Primary Source Set](#)
- [Plants and Animals Primary Source Set](#)
- [Weather Primary Source Set](#)

Content & Context

Thomas Jefferson was vice-president of American Philosophical Society (APS) when he first constructed the idea of westward exploration, when he requested the members of the APS to fund an expedition by André Michaux, a French botanist, to explore the region west of the United States. While this plan fell through, Jefferson never gave up on his plan for an exploration of the western lands of North America. In 1801 Jefferson was elected as the third president of the United States, and selected Meriwether Lewis as his secretary. In 1803, following the Louisiana Purchase, Jefferson finally launched the expedition to explore the newly acquired territory, and selected his loyal secretary to lead the expedition. Meriwether Lewis was a Virginian plantation owner and soldier who, while he had no formal education in natural sciences, developed a passion for botany while growing up with his mother in Georgia. Jefferson directed Lewis to select his own co-captain, and Lewis immediately asked his former commanding officer and fellow Virginian William Clark. Lewis received training from Jefferson's contacts at the American Philosophical Society in Philadelphia, including training in medicine from Dr. Benjamin Rush, anatomy and fossils from Caspar Wistar, and mapmaking and surveying from Andrew Ellicott. Lewis and Clark and their team of over 40 men, including Clark's longtime enslaved servant York, left from St. Louis on May 14, 1804, and arrived at the Clatsop Nation along the Oregon coast in November 1805. They returned east and arrived in St. Louis in September 1806, over two years after setting out.

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Essential Questions

- What were Jefferson’s objectives for the Lewis and Clark expedition?
- What information did Lewis and Clark collect on their journey?
- What kinds of knowledge is useful? What makes knowledge useful?
- Where does useful knowledge come from?

Classroom Activity & Application

Opening

Start the lesson by posing a question to students about their knowledge of the Lewis and Clark expedition. Ask students, based on their previous knowledge of early America and the Louisiana purchase, why they think Jefferson would have sent this expedition to explore North America west of the Mississippi river.

“Promotion of Useful Knowledge”

1. After establishing their knowledge of the expedition and creating a list of potential purposes, distribute the [Michaux Subscription document](#) to students, or have the students take turns reading the document out loud.
2. Explain to students that Jefferson was the president of the American Philosophical Society before he became President of the United States and had been planning a trip to explore the region west of the United States well before the Lewis and Clark expedition, and this early example of instructions served as the blueprint for his later instructions to Lewis.
3. Have students reflect on the changes over the period, including global and national history. Some examples include: Jefferson elected President of the United States, England, Spain, and France struggling for control over land in the Americas, and the Louisiana Purchase.
4. Ask the students to reflect on what could be the reasons behind seeking geographic and scientific information about the region.

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- a. What were Jefferson, Lewis, and Clark hoping to find?
- b. What kind of information were they planning to acquire?
- c. Why would this information be useful?
- d. How would Jefferson's interests in the region have shifted in the 10 years between the Michaux and the Lewis and Clark expeditions?

Activity 1: Planning an Expedition

* This activity can be done in groups or pairs

1. Instruct each group to plan their own expedition in the 1800s into the North American continent and follow Jefferson's instructions. Students' lists of materials and skills should be reflective of what they intend to collect and record – What materials are necessary to collect the data they want? How will they transport those tools and materials across the country? Are there any skills they would need to learn before collecting the data?
2. Students should also create a list of the data they would record in their journals, keeping in mind their limited carrying capacity for supplies and tools.
3. Have the students present their plans to the class, either designating a spokesperson for the group or sharing as a group, including what they'll record, how they'll record it, tools they'll bring, and how they'll travel.
4. Reflection- lead students through a discussion on why they chose to record the information that they did. Why is this useful information for the president? Why would Lewis and Clark be interested in this information?

Primary Source Analysis

1. Distribute the primary source documents to each group. You can either give each group one primary source set or all of them, depending on time available.
2. Students should spend some time with the journal pages (transcriptions provided in document), carefully analyzing them to understand what Lewis and Clark are recording, what they are saying with the data, and the context for its collection. Example questions include:
 - a. Is there anything that you do not understand in the document? Is there a way you can discover its meaning?
 - b. What information is the document conveying?
 - c. What tools or methods of data collection did Lewis or Clark utilize to create this record?

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3. Ask each group to come up with a list of reasons that Jefferson might have been interested in the information. Have them answer the following questions as a group.
 - a. Was any of the information that Lewis and Clark collected surprising to you? Why or why not?
 - b. Why do you think Lewis and Clark decided this was an important thing to record?
 - c. How are they gathering this information? Did they rely completely on observation, or were there other sources of knowledge?
4. Have each group present their findings to the class and create a list of all the reasons that Lewis and Clark might have recorded this information. Lead students to reflect on if these records are different or the same as what they were planning to collect on their expedition. Some example questions could include:
 - a. What additional information are Lewis and Clark including that surprises the students?
 - b. Why do you think Lewis and Clark went into so much detail?
 - c. Does it provide any new insights into Jefferson's goals for the expedition?

Activity 2: Observation, Description, and Records

1. Now students will think about how the expedition collected this data for Jefferson. A brief overview of the Enlightenment's emphasis on direct observation, experience and record keeping might be beneficial here.
2. This activity will be done individually but keep students in their expedition planning groups. Give one object to describe to each group . (see materials list)
3. Instruct students to carefully observe, describe, measure, and record the object (or object depicted in the photograph). Students should approach their written discussion as if describing to someone who has never seen it before.
4. Ask students to consider all the different types of information that is necessary to accurately describe the object – What details help describe its appearance? What can they describe about the objects used through its appearance? Students should be encouraged to record the object in whatever way is best for them – drawing and writing, visual descriptions of its texture and coloring, and recording its weight and size.
5. After drawing/describing, students should be led in a discussion about what skills/knowledge was required for them to successfully describe/record the object.

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- a. What were the difficulties in describing an object to someone who had never seen it before?
 - b. Did they obtain information from an outside source, like previous knowledge about the object or objects like it? What other information about the object would have been helpful for description?
 - c. Why was this important for describing the object? If the person reading your description had a different background knowledge, would they have still understood what you were describing?
6. Once students are feeling comfortable with the activity, have the students do the activity, but make it a game this time.
- a. Split the students into two groups. One group has to verbally describe the object or image and the second group has to draw the image based on group one's description. At the end they can compare their drawing to the original image.

Closing discussion

1. Where does knowledge/information come from?
2. What do students think Jefferson was intending to do with this useful knowledge? Does this give insight into Jefferson's larger aims with the expedition?
3. What can we learn about how Lewis & Clark's background knowledge impacted their record keeping? How do students' past experiences contribute to their opinions of what is considered useful or how they record information?
4. Finally, lead students to think about western expansion and the taking of land from the indigenous nations who lived there. Ask students if, based on the lesson, they have new insights into pursuit of useful knowledge in the west.

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