

Goals and Materials

Goals

Kit users will:

- Trace the route of Lewis and Clark through South Dakota and practice dead reckoning mapping skills.
- Give examples of the plants and animals Lewis and Clark encountered in South Dakota.
- Understand the communication challenges the expedition faced.
- Gain knowledge and experience in learning from objects.

Materials

This kit contains:

Teacher Resource binder

17 color panels

3 photographs

9 laminated track posters

9 name placards

8 animal postcards in opaque sleeves

12 SD Adventure reading cards

6 laminated SD highway maps

5 original journal entry cards

6 color-coded identity cards

4 color-coded word list packs

6 colored measuring ropes

1 12x7' floor map tarp

31 object bags containing:

Bag 1 – keelboat model

Bag 2 – Sounden horn

Bag 3 – Bison figurine

Bag 4 – 2 bison tracks

Bag 5 – 15-stripe U.S. flag

Bag 6 – Jefferson peace medal

Bag 7 – 3 bead strings, 2 mirrors, 3 thimbles

Bag 8 – Pronghorn hide sample

Bag 9 – Pronghorn figurine

Bag 10 – 2 pronghorn tracks

Bag 11 – Prairie dog figurine

Bag 12 – Prairie dog skull

Bag 13 – Elasmosaurus figurine

Bag 14 – Mule deer hide sample

Bag 15 – Deer figurine

Bag 16 – Elk figurine

Bag 17 – 2 elk tracks

Bag 18 – Bison hide sample

Bag 19 – 2 pronghorn horns

Bag 20 – Coyote figurine

Bag 21 – Coyote pelt

Bag 22 – 2 coyote tracks, 1 jawbone

Bag 23 – Surveyor's compass and map

Bag 24 – Spyglass

Bag 25 – 3 bead strings, 2 mirrors,
3 thimbles

Bag 26 – Tobacco twist

Bag 27 – Grizzly bear track

Bag 28 – Grizzly bear jawbone and claw

Bag 29 – 3 bead strings, 2 mirrors,
3 thimbles

Bag 30 – Buffalo shoulder blade bone

Bag 31 – Arikara pot shards

Teacher Resource

The Mission

In the spring of 1801 Thomas Jefferson became the third president of the United States. One of his most notable achievements as president was the Louisiana Purchase. Jefferson wanted to maintain access to New Orleans for westerners to continue shipping crops down the Mississippi. Napoleon offered to sell New Orleans and the entire Louisiana Territory to the United States for \$15 million dollars, about three cents an acre. The territory between the Mississippi River and the Rocky Mountains contained more than 828,000 square miles and its purchase doubled the land area of the United States.

Jefferson was anxious to explore the newly purchased territory and in 1803 he commissioned Meriwether Lewis to explore the Missouri River and its tributaries for a practical water route to the Pacific Ocean. In addition, Jefferson wanted the explorers to establish friendly relations with the native people in the newly acquired territory for the benefit of the fur trade industry. They were to learn everything they could about the language, traditions, territory and intertribal relations of each tribe they encountered. As a naturalist, Jefferson also wanted the expedition to study the land, plants, and animals along the route and record observations in detailed journals. The expedition became known as the Corps of Discovery. Lewis chose his friend, William Clark, as co-leader of the expedition.

The Expedition Leaders

Lewis was born in 1774 in Virginia and joined the army in 1794. While in the service he became a friend with William Clark. Jefferson appointed Lewis his private secretary in 1801. William Clark was born in 1770 in Virginia and joined the army in 1792. In the four years he served he made the rank of captain. Clark left the service to attend family business but he maintained contact with Lewis.

Jefferson sent Lewis to Philadelphia to learn botany, zoology, celestial navigation, and medicine from the nation's top scientists. His studies paid off when one hundred seventy-eight new plants and one hundred twenty-two new animals previously unknown to science were recorded on the expedition.

While Lewis acted as the expedition's naturalist, Clark was its cartographer, or mapmaker.

Lewis was in charge of gathering supplies for the expedition. For making accurate maps, he packed mathematical instruments and surveying tools including a surveyor's compass, quadrants, a telescope, thermometers, two sextants, a set of plotting instruments, and a chronometer used for calculating longitude. Camp supplies like hatchets, fishing hooks and fishing line, soap, and a large stock of "portable" soup made the journey. Six kegs of whiskey were among the provisions. To help the Corps establish friendly relations with the Indians, sewing needles, beads, and bright colored cloth were taken as presents. Extra clothing, muzzle-loading rifles with gunpowder, flints, ammunition and medical supplies also had to be packed. Lewis took books to help him identify and record the plants and animals along the way.

The supplies were loaded aboard a specially designed keelboat. Lewis and a party of eleven hands departed down the Ohio River, recruiting other men along the way. At Clarksville, Lewis was joined by his co-commander, William Clark. The party established its 1803-04 winter camp at Wood River, Illinois, opposite the mouth of the Missouri River.

Heading Up the Missouri

On 14 May 1804 the Corps of Discovery started up the Missouri River. They traveled in the keelboat, a small flat-bottomed canoe-shaped boat called a bateau, two pirogues (a type of canoe), and six large canoes. The party numbered forty-five from Wood River to Fort Mandan and thirty-three from Mandan to the Pacific and back. The thirty-three members included the two captains, three

sergeants, twenty-three privates, two interpreters, Clark's slave, York, and Sacagawea and her infant son. Seaman, a Newfoundland dog belonging to Lewis, also made the journey.

The journey up the Missouri was not easy. On a good day the Corps could travel seventeen miles.

In a letter to his mother written from the 1804-05 winter camp at Fort Mandan, Lewis wrote:

*So far we have experienced more difficulties from the navigation of the Missouri than danger from the savages. The difficulties which oppose themselves to the navigation of this immense river arise from the rapidity of its currents, its falling banks, sand bars and timber which remains wholly or partially concealed in its bed . . .*¹

The expedition had to paddle, use poles, or sometimes wade and pull the heavily loaded boats upstream against the current. It was slow and arduous work.

The expedition held its first council with a western Indian tribe at "Council Bluff" north of present-day Omaha, Nebraska. Here the captains gave presents and peace medals to the Oto chiefs and informed them of the new sovereignty of the United States. By the end of the journey the Corps encountered more than fifty different tribes.

In late August 1804, Sergeant Charles Floyd, the only Expedition member to die on the journey, died from a burst appendix and was buried near present-day Sioux City, Iowa. The men elected Patrick Gass as sergeant to take Floyd's place.

South Dakota

The expedition was in present-day South Dakota from 21 August until 14 October 1804. On their return trip in 1806, the Corps spent only two weeks traveling through the same area.

While in South Dakota the Corps discovered or provided the first scientific descriptions for several animals including prairie dogs, pronghorn antelope, mule deer, coyotes, white-tailed jackrabbits, and the black-billed magpie. Prairie dogs live in large colonies, and Lewis and Clark found these prairie dog "towns" intriguing. Clark wrote in his journal on 7 September 1804:

*... discovered a village of small animals that burrow in the ground (those animals are called by the French petite chien). Killed one and caught one alive by pouring a great quantity of water in his hole . . . [the village] contains great numbers of holes on the top of which those little animals sit erect [and] make a whistling noise and when alarmed step into their hole.*²

The live prairie dog the men caught was sent back to St. Louis and then on to President Jefferson. Lewis and Clark called prairie dogs "barking squirrels" because their warning call sounds like a dog's bark.

Lewis described the pronghorn as having "superior fleetness". The pronghorn is a small ruminant mammal with forked horns. It is the second fastest land animal in the world, only the cheetah is faster. Further along the trail Lewis and Clark encountered a new kind of deer they believed resembled other deer in the way that mules look like horses so they called them "mule deer". It took five weeks for the Corps to catch their first live coyote. The coyote, sometimes called a prairie or brush wolf, resembles a dog with its narrow, pointed face, long, thick, yellowish-brown fur and black-tipped bushy tail. Today, the coyote is South Dakota's state animal.

Another animal the expedition encountered first in South Dakota was the white-tailed jackrabbit; a large hare with long ears and long legs. Lewis describes the hare on 14 September 1804:

¹ Burroughs, Raymond Darwin, ed. *The Natural History of the Lewis and Clark Expedition*. (Michigan State University, 1995), p300.

² Moulton, Gary E., ed. *The Journals of the Lewis & Clark Expedition, Volume 3*. (Lincoln: University of Nebraska Press, 1987), p52.

*. . . extremely fleet and never burrows or takes shelter in the ground when pursued. I measured the leaps of one and found them twenty-one feet. They appear to run with more ease and to bound with greater agility than any animal I ever saw.*³

Lewis and Clark were also astonished at the number of buffalo found on the grassy plains. On 17 September 1804 Lewis wrote, "I do not think I exaggerate when I estimate the number of buffalo which could be compre[hend]ed at one view to amount to 3000."⁴

The expedition noted unusual land formations they saw along their route such as Spirit Mound, just north of present-day Vermillion, South Dakota. Spirit Mound was well known to local tribes, who believed it was the home to small devils that would kill anyone who approached.

Local Tribes

The first local tribe the expedition met in South Dakota was the Yankton band of the Sioux (Dakota, Lakota, Nakota) tribe. The two parties met 30 August 1804 near today's Gavin's Point Dam. The Yanktons expressed their desire to trade with the United States. The meeting featured much song and dance while the Yankton chief attempted to explain his tribe's poverty and need for a good trading partner. Because Lewis and Clark were not traders, they could not meet the Yankton's needs but invited them to send a representative to Washington D.C. to speak with President Jefferson about the matter.

The expedition met with the Teton Lakota at the mouth of the Bad River in central South Dakota on 25 September 1804. The Tetons were an aggressive, powerful tribe that controlled the Missouri in that area and demanded gifts as payment from those wishing to use the river. Without a good interpreter, the meeting with the Tetons was filled with tension. During the expedition's stay, the Tetons held a number of celebrations including scalp dances honoring a recent war victory over the rival Omahas. John Ordway, one of the sergeants, wrote about the trouble the Corps had with the Tetons and their demands for more gifts and for the expedition to stay with them longer.

*The Captains told them that we had a great way to go & that we did not wish to be detained any longer. They then began to act as if they were intoxicated ... the head chief, Black Buffalo, seized hold of the cable of the pirogue and sat down. Captain Clark spoke to all the party to stand to their arms. Captain Lewis who was on board ordered every man to his arms. The large swivel [gun was] loaded immediately with 16 musket balls in it. The 2 other swivels [were] loaded [as] well with buckshot [and] each of them manned. Captain Clark used moderation with them [and] told them that we must and would go on and would go, that we were not squaws, but warriors. The chief said he had warriors too and if we were to go on they would follow us and kill and take the whole of us by degrees or that he had another party or lodge above this [and] that they were able to destroy us. Then Captain Clark told them that we were sent by their great father the president of the U. S. and that if they misused us that he or Captain Lewis could by writing to him have them all destroyed as it were in a moment. They then requested that their women and children see the boat as they never saw such a one.*⁵

The expedition stayed with the Tetons for three days before anxiously moving on up the Missouri.

³ Moulton, Gary E., ed. *The Journals of the Lewis & Clark Expedition, Volume 3*. (Lincoln: University of Nebraska Press, 1987) p73.

⁴ Ibid. p81.

⁵ Ordway, John. Journal entry. Retrieved January 31, 2002 from www.pbs.org/lewisandclark/archive.

Lewis and Clark met the Arikaras in northern South Dakota on 8 October 1804. The relations with this farming tribe were good. The Arikaras were particularly fascinated with Clark's slave, York. They had never seen a black man before and believed he possessed spiritual power. The Arikaras hoped the expedition would open up new trading opportunities.

Wintering in 1804

After leaving the Arikaras villages, the Corps moved upriver to the Five Knife River villages of the Mandan and Hidatsa Indians in North Dakota. The Corps built Fort Mandan as their winter headquarters and spent the winter preparing for the rest of their journey. The commanders gained valuable knowledge of the country west to the Rockies and recruited as interpreters the French-Canadian fur trader, Toussaint Charbonneau, and his Shoshoni wife, Sacagawea. She had been kidnapped by the Hidatsa and taken from her homeland in Idaho to the Knife River villages when she was twelve. Together with their newborn son Jean Baptiste, Sacagawea and Charbonneau traveled with the expedition to the Pacific and back to the Mandan villages.

The chain of communication for the expedition was a complex one. Charbonneau spoke only Hidatsa and French while Sacagawea spoke only Shoshone and Hidatsa. Private Francois Labiche, who was originally hired as a boatman, spoke French and English. By working together, all the members of the party could communicate with each other.

Continuing the Journey

In April 1805 the party continued up the Missouri in the two pirogues and six dugout canoes. They reached the source of the Missouri in August, and met the Shoshoni band where Sacagawea discovered that her brother was the chief. The expedition traded with the Shoshoni for the horses needed to cross the Rocky Mountains. The Shoshoni also provided a guide for the journey. The expedition leaders originally thought it would take only half a day to pass through the mountains, but after eleven long days the weak and famished expedition finally reached the other side of the Bitterroots.

On the other side of the mountains the expedition met the Nez Perce who befriended the travelers. In new dugout canoes, they continued the journey by water, following the Clearwater River as it flowed into the Snake River and the Snake flowed into the Columbia River. They would follow the Columbia all the way to the Pacific Ocean. When Clark saw Mount Hood ahead of them he knew they were close to the Pacific because Mount Hood had been named by a British sea captain in 1792 and was a fixed point on the expedition's map. The Corps finally reached the Pacific on 7 November 1805. When the expedition was still twenty miles from the bay Clark had this to say: "Great joy in camp, we are in view of the Ocean, this great Pacific Ocean which we been so long anxious to see and the roaring or noise made by the waves breaking on the rocky shores (as I suppose) may be heard disti[n]ctly." ⁶

The Corps built Fort Clatsop near present-day Astoria, Oregon as their winter headquarters. During their four and one-half month stay, the captains worked over their field notes, entertained and bartered with Indians for food, and gathered important geographic and ethnographic information. They sent a detail of men to the ocean to make salt by boiling sea water.

Heading Home

On 23 March 1806 the Corps of Discovery began the long trek home. It had taken them two years to reach the West Coast but the return journey to St. Louis took only six months. On the return trip, the

⁶ Moulton, Gary E., ed. *The Journals of the Lewis & Clark Expedition*, Volume 6. (Lincoln: University of Nebraska Press, 1990) p33.

Lewis and Clark in South Dakota

South Dakota State Historical Society Education Kit

group split up and explored other rivers in present-day Montana. Lewis explored the Blackfoot, Sun and Marias Rivers and became engaged in the most serious Indian skirmish of the entire journey. Two Blackfoot Indians were killed. Clark and his group went down the Yellowstone River through Shoshoni tribal lands. The two parties met at the confluence of the Yellowstone and Missouri Rivers. After a short stop at the Mandan villages, where Charbonneau and Sacagawea left them, they made a rapid descent of the Missouri, passing through present-day South Dakota from 21 August to 4 September 1806. On the 23rd of September 1806 the Corps of Discovery arrived in St. Louis where they received a hero's welcome.

The Impact of the Corps of Discovery

Lewis and Clark's journey dispelled all hopes of finding a navigable water route to the Pacific. The expedition traveled more than 8000 miles and its findings contributed vital new knowledge about the western land, its resources, and its native inhabitants. The records of new animals and plants in Lewis's journals increased the understanding of different ecosystems and Clark's maps were relied on for the next fifty years. The Lewis & Clark journals are still among the treasures of our nation's written history. The journey of Lewis & Clark fired the imagination of the American people and made the previously mysterious West real with detailed records of its people, plants and animals.

Bibliography

Note: Libraries holding the books are listed by their South Dakota Library Network PALS code. Book summaries are also from the SDLN PALS database.

Biography

Adler, David A. *A picture book of Sacagawea*. New York: Holiday House, 2000. Summary: A biography of the Shoshone woman who joined the Lewis and Clark Expedition. (unpaged).
Libraries: DSU NSU RCP SDS STG SDD AML HPL RPL WAT ASE MPL YCL

Christian, Mary Blount. *Who'd believe John Colter?* New York: Macmillan Pub. Co. 1993. Summary: Examines the life of the nineteenth-century woodsman John Colter and describes his experiences accompanying the Lewis and Clark Expedition and, later, as an explorer on his own. 64 p.
Libraries: ASE DSU

Gleiter, Jan. *Sacagawea*. Milwaukee: Raintree Childrens Books, 1987. Summary: Traces the life of the Shoshoni Indian girl who was stolen from her tribe at the age of twelve, sold to a French trapper, and served as a guide in the Lewis and Clark expedition. 32 p.
Libraries: SBR AML JHE SPF ASE

Morley, Jacqueline. *Across America: the story of Lewis & Clark*. New York: Franklin Watts, 1998. Summary: Describes the Lewis and Clark Expedition across America, emphasizing the enormous adventure and technological challenges encountered. 32 p.
Libraries: RCP SBR LVE RPL EMS

Seymour, Flora Warren. *Sacagawea, American pathfinder*. New York: Macmillan/ Aladdin 1945, 1959. Summary: Describes how Sacagawea found adventure guiding Lewis and Clark. 192 p.
Libraries: ASE YCL SDH

Steffoff, Rebecca. *Lewis and Clark*. New York: Chelsea Juniors, 1992. Summary: A biography of the two men who led the two and one-half year expedition that explored the Louisiana Purchase territory and the Pacific Northwest from St. Louis to the mouth of the Columbia River. 80 p.
Libraries: MDE HPL WMS ASE

Non-Fiction

Bakeless, John Edwin. *The adventures of Lewis and Clark*. Boston, Houghton Mifflin, 1962. 183 p.
Libraries: DSU SDW AML SGC PHM WAT YCL MHS MDM

Blumberg, Rhoda. *The incredible journey of Lewis and Clark*. New York: Lothrop, Lee & Shepard Books, 1987. Summary: Describes the expedition led by Lewis and Clark to explore the unknown western regions of America at the beginning of the nineteenth century. 143 p.
Libraries: RCP SBR SDS STG USD SDD MMC AML MIT FGH JHE SPF APM PHM WMS WAT MPL YCL DWD MDM

Bowen, Andy Russell. *The back of beyond: a story about Lewis and Clark*. Minneapolis, MN: Carolrhoda Books, 1997. Summary: An account of the 1804-1806 Lewis and Clark Expedition which took the explorers from St. Louis to the Pacific Ocean. 64 p.
Libraries: RCP SDS STG SDD RPL WAT YCL

Lewis and Clark in South Dakota
South Dakota State Historical Society Education Kit

Clark, William. *Off the map: the journals of Lewis and Clark*. Edited by Peter and Connie Roop. New York: Walker and Company, 1993. Summary: A compilation of entries and excerpts from the journals of William Clark and Meriwether Lewis, describing their historic expedition. 40 p.
Libraries: SDS USD AML SPF

De Kay, Ormonde. *The adventures of Lewis and Clark*. New York: Random House, 1968. Summary: An easy-to-read history of the expedition which explored the unknown Louisiana Purchase territory and Pacific Northwest from St. Louis to the mouth of the Columbia River. 86 p.
Libraries: MIT SPF PHM

Fitz-Gerald, Christine Maloney. *Meriwether Lewis and William Clark*. Chicago: Children's Press, 1991. Summary: Describes the expedition made by Lewis and Clark in which they journeyed from Saint Louis to the Pacific. 128 p.
Libraries: ASE YCL

Kroll, Steven. *Lewis and Clark: explorers of the American West*. New York: Holiday House, 1994. Summary: Introduces Meriwether Lewis and William Clark and their expedition of 1804-6 through the Louisiana Territory, opening the land from the Mississippi River to the Pacific Ocean. 32 p.
Libraries: GDS CEB DSU NSU RCP SBR SDA SDB STG USD SDD AML LVE FGH HPL RPL WAT MPL YCL

Schanzer, Rosalyn. *How we crossed the West: the adventures of Lewis & Clark*. Washington, D.C.: National Geographic Society, 1997. Summary: Presents a diary of Lewis and Clark's journey westward from the Mississippi to the Pacific Ocean from May 1804 to November 1805. (unpaged).
Libraries: RCP SBR SDS USD SDD AML MIT LVE HPL SPF WAT MPL YCL JHE

Stein, R. Conrad. *The story of the Lewis and Clark Expedition*. Chicago: Children's Press, 1978. Summary: Follows the Lewis and Clark Expedition as it explores the sparsely populated territory between the Mississippi River and the Pacific Ocean. 31 p.
Libraries: RCP SBR SDB SDF SDH AML MIT JHE SPF YCL

Sullivan, George. *Lewis and Clark*. New York: Scholastic Reference, 1999. Summary: Recounts the story of the Lewis and Clark Expedition to explore the uncharted western wilderness, placing it in its historical context. 128 p.
Libraries: AML LVE ASE

Fiction

Bohner, Charles H. *Bold journey: west with Lewis and Clark*. Boston: Houghton Mifflin, 1985. Summary: Private Hugh McNeal relates his experiences accompanying Captains Lewis and Clark on their 1804-1806 expedition in search of a northwest passage to the Pacific Ocean. 171 p.
Libraries: NSU SBR SDS STG USD SDD AML MIT FGH RHS JHE SPF EMS WMS WAT YCL MHS

Karwoski, Gail. *Seaman: the dog who explored the West with Lewis & Clark*. Atlanta, Ga.: Peachtree, 1999. Summary: Seaman, a Newfoundland, proves his value as a hunter, navigator, and protector while serving with the Corps of Discovery when it explores the West under the leadership of Lewis and Clark. 183 p.
Libraries: SBR SDS SDW SDD AML MIT LVE EMS WMS ASE MMS RPL

Lewis and Clark in South Dakota
South Dakota State Historical Society Education Kit

O'Dell, Scott. *Streams to the river, river to the sea*. Boston: Houghton Mifflin, 1986. Summary: A young Indian woman, accompanied by her infant and cruel husband, experiences joy and heartbreak when she joins the Lewis and Clark Expedition seeking a way to the Pacific. 191 p.

Libraries: RCP SBR SDS STG SDD AML MIT LVE FGH JHE RPL SPF APM EMS PHM WMS WAT
MPL YCL MDM MDE GDS BHS SDA LHS WAT YCL PHM ASE HPL LHS WHS RHS WHS MMS
JFS

Teacher Bibliography

Ambrose, Stephen E. *Lewis & Clark: voyage of discovery*. Washington, DC: National Geographic Society, 1998. 255 p.

Libraries: SDA SDS STG SDD MIT LVE RHS HPL RPL EMS LHS WAT YCL MHS

Ambrose, Stephen E. *Undaunted courage: Meriwether Lewis, Thomas Jefferson, and the opening of the American West*. New York: Simon & Schuster, 1996. 511 p.

Libraries: BHS DSU NSU RCP SBR SDA SDB SDH SDS SDW SMT STG USD SDD MMC AML MIT LVE FGH HPL RPL STI SPF WAT MPL DWD MHS

Bruchac, Joseph. *Sacajawea: the story of Bird Woman and the Lewis and Clark Expedition*. San Diego, CA: Silver Whistle, 2000. 199 p.

Libraries: RCP SDD LVE FGH EMS WMS YCL

Duncan, Dayton. *Lewis & Clark: an illustrated history*. New York: Knopf, 1997. 248 p.

Libraries: BHS DSU RCP SBR SDA SDB SDH SDS USD SDD AML LVE HPL RPL WAT MPL

Fifer, Barbara. *Along the trail with Lewis and Clark*. Great Falls, Mont.: Montana Magazine, 1998. 206 p.

Libraries: RCP SDB SDS LVE RPL

Lewis, Meriwether. *The essential Lewis and Clark*. Edited by Landon Y. Jones. New York: Ecco Press, 2000. 203 p.

Libraries: BHS RCP SDH SDS SMT LVE RHS RPL YCL

Lewis, Meriwether. *The journals of Lewis and Clark*. Edited by Bernard De Voto. Boston, Houghton: Mifflin, 1953. 504 p.

Libraries: BHS SBR SDA SDB SDH SDS SDW SMT USD SDD MMC AML MIT SGC FGH RPL SPF WAT DWD CHS

Schmidt, Thomas. *The saga of Lewis & Clark: into the uncharted West*. New York: DK Pub., 1999. 210 p.

Libraries: DSU RCP SDH SDS SDW USD SDD AML MIT YHS LVE RHS SPF LHS WAT MPL YCL

Thom, James A. *Sign-talker: the adventure of George Drouillard on the Lewis and Clark Expedition*. New York: Ballentine Books, 2000. 466 p.

Libraries: DSU NSU RCP SBR SDB SDS STG SDD AML FGH HPL MPL YCL

Thomas, George. *Lewis and Clark Trail--the photo journal: up the Missouri, down the Columbia and back*. Missoula, MT: Pictorial Histories Pub., 2000. 122 p.

Libraries: SDD AML DWD

Websites

www.pbs.org/lewisandclark/

-Huge site with lots of information and lesson plans

www.americanwriters.org/archives/two.asp

-Video clips available to watch and listen to scholars talk about Lewis and Clark

www.eduscapes.com/42explore/lewisclark.htm

-Website with many categorized links

www.lewis-clark.org/

-Interactive website with good information and graphics

www.lewisclark.net/

-Maps and information about the trail through South Dakota

<http://www.nationalgeographic.com/west/>

-Interactive adventure where the player makes the choices on the expedition

<http://people.we.mediaone.net/danslos/home.html>

-Images of the Voyage of Discovery

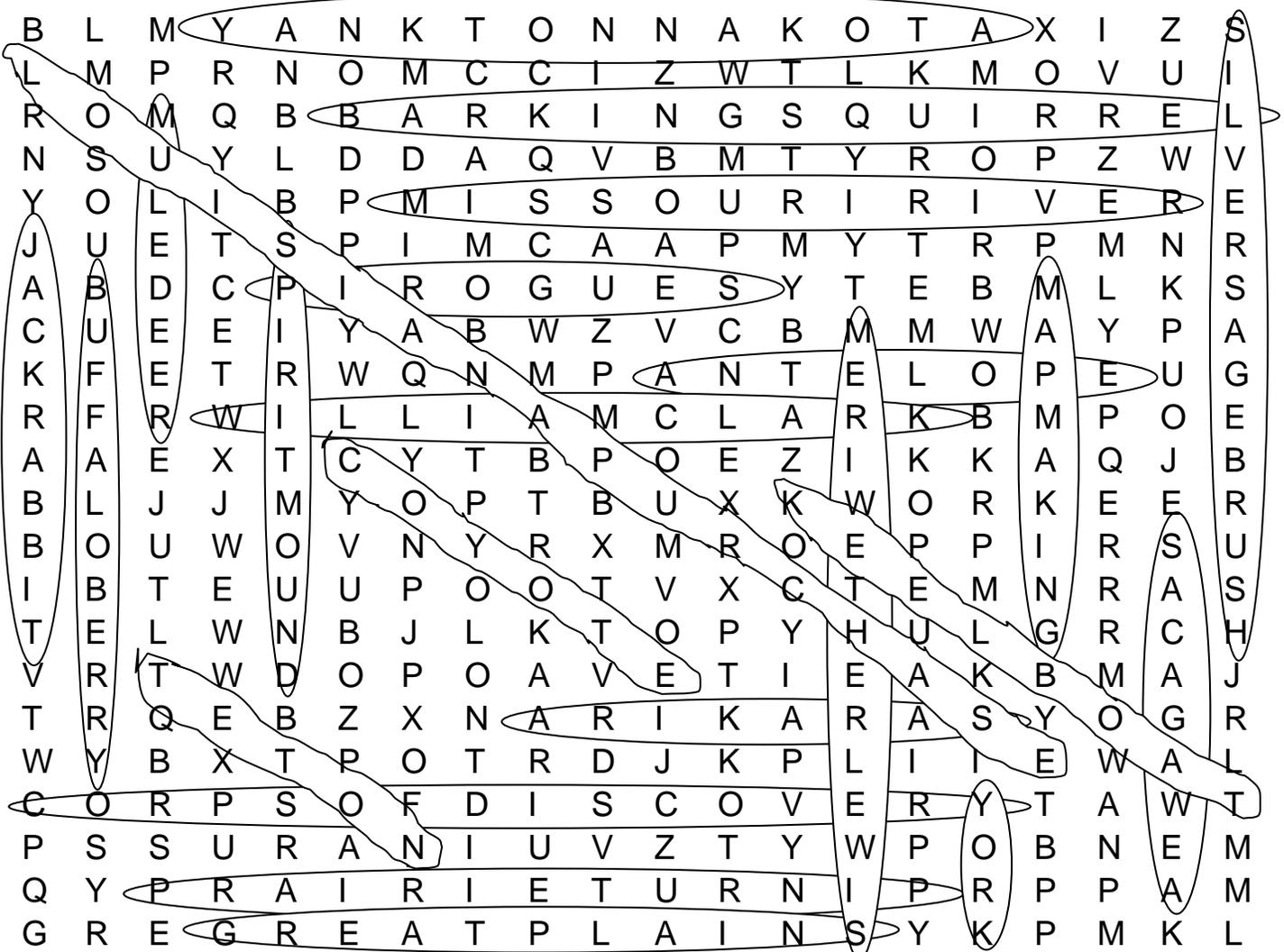
Word Find

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

Words may go across, down, or diagonally, but not backwards

- | | | |
|--------------------|--------------------|------------------|
| ANTELOPE | KEELBOAT | PRAIRIE TURNIP |
| ARIKARAS | LOUISIANA PURCHASE | SACAGAWEA |
| BARKING SQUIRREL | MAPMAKING | SILVER SAGEBRUSH |
| BUFFALOBERRY | MERIWETHER LEWIS | SPIRIT MOUND |
| CORPS OF DISCOVERY | MISSOURI RIVER | TETON |
| COYOTE | MULE DEER | WILLIAM CLARK |
| GREAT PLAINS | PIROGUES | YANKTON NAKOTA |
| JACKRABBIT | | YORK |

Word Find Key



words may go across, down, or diagonally, but not backwards

- | | | |
|--------------------|--------------------|------------------|
| ANTELOPE | KEELBOAT | PRAIRIE TURNIP |
| ARIKARAS | LOUISIANA PURCHASE | SACAGAWEA |
| BARKING SQUIRREL | MAPMAKING | SILVER SAGEBRUSH |
| BUFFALOBERRY | MERIWETHER LEWIS | SPIRIT MOUND |
| CORPS OF DISCOVERY | MISSOURI RIVER | TETON |
| COYOTE | MULE DEER | WILLIAM CLARK |
| GREAT PLAINS | PIROGUES | YANKTON NAKOTA |
| JACKRABBIT | | YORK |

Crossword Puzzle

Word List

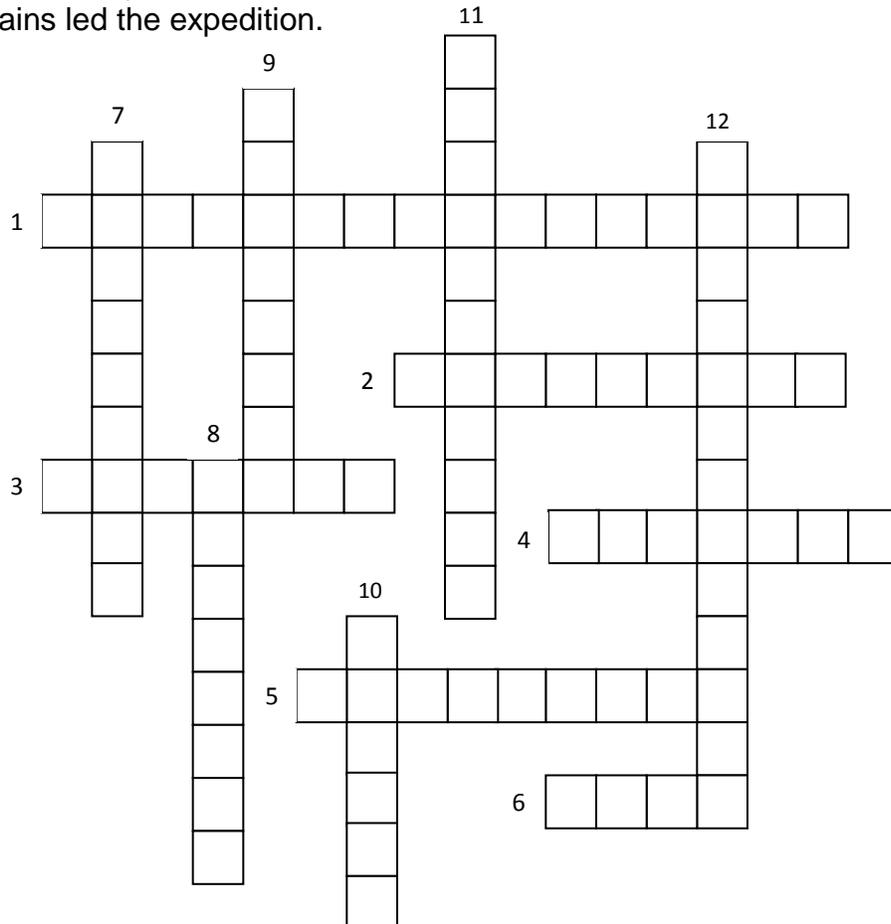
Corps of Discovery	prairie wolf	Lewis and Clark	York	Sacagawea	keelboat
sandbar	Louisiana Purchase	Jefferson	Lakota	Missouri	barking

ACROSS

1. The name given to the expedition.
2. The United States president who sent the expedition.
3. The explorers called prairie dogs _____ squirrels because of the noise they make.
4. A river obstacle that made moving the boats upstream very difficult.
5. She joined the expedition at Mandan and went all the way to the Pacific Ocean and back.
6. The name of Clark's slave.

DOWN

7. The _____ Purchase brought the US the territory between the Mississippi River and the Rocky Mountains.
8. A type of riverboat used for carrying freight. The explorers used one on their journey.
9. The expedition traveled up the _____ River.
10. The expedition met the Teton _____ tribe at the Bad River in South Dakota.
11. Another name for the coyote.
12. These two captains led the expedition.



Crossword Puzzle Key

<u>Word List</u>						
Corps of Discovery	prairie wolf	Lewis and Clark	York	Sacagawea	keelboat	
sandbar	Louisiana Purchase	Jefferson	Lakota	Missouri	barking	

ACROSS

1. The name given to the expedition.
2. The United States president who sent the expedition.
3. The explorers called prairie dogs _____ squirrels because of the noise they make.
4. A river obstacle that made moving the boats upstream very difficult.
5. She joined the expedition at Mandan and went all the way to the Pacific Ocean and back.
6. The name of Clark's slave.

DOWN

7. The _____ Purchase brought the US the territory between the Mississippi River and the Rocky Mountains.
8. A type of riverboat used for carrying freight. The explorers used one on their journey.
9. The expedition traveled up the _____ River.
10. The expedition met the Teton _____ tribe at the Bad River in South Dakota.
11. Another name for the coyote.
12. These two captains led the expedition.

The crossword puzzle grid is filled with the following words:

- Across 1:** Corps of Discovery
- Across 2:** Jefferson
- Across 3:** barking
- Across 4:** sandbar
- Across 5:** Sacagawea
- Across 6:** York
- Down 7:** Louisiana Purchase
- Down 8:** keelboat
- Down 9:** Missouri
- Down 10:** Teton
- Down 11:** prairie wolf
- Down 12:** Clark

Word Scramble

Word List
 mapmaking prairie dog journals Thomas Jefferson expedition explorers
 Pacific magpie

1. A compass helped Clark with this job along the journey. k m p a g n i m a

 _____ 1 _____ _____ _____ _____ 4 _____

2. This president sent Lewis and Clark to explore the Louisiana Purchase. h m o s t a f f r j e n s o e

 6 _____ _____ 10 _____

 17 _____ _____ 2 _____ 9 _____

3. This animal lives in a burrow in the ground. r i p a r e i o g d

 _____ _____ 8 _____ _____ _____ 5 _____

4. Lewis and Clark wrote about their discoveries in these. s l u o n j r a

 7 _____ _____ 11 _____ 14 _____

5. This large black bird has a white belly. g e i a p m

 _____ _____ _____ 13 _____

6. A trip or a journey with goals like the one Lewis and Clark took is called an _____. e d p x t i e n o i

 _____ _____ _____ _____ _____ 12 _____ 15 _____

7. The Corps of Discovery was looking for a water route to the _____ Ocean. c a f i c i p

 16 _____ _____ _____ _____ _____

8. People who travel to new places to learn new things like Lewis and Clark are called _____. r s x p e e r l o

 _____ _____ _____ 3 _____ _____ _____ _____

Fill in the letters from the numbered spaces above to find the answer below.

9. This very fast animal has legs like a deer and small forked horns.

 1 2 3 4 5 6 7 8 9

 10 11 12 13 14 15 16 17

Word Scramble Key

Word List

mapmaking prairie dog journals Thomas Jefferson expedition explorers
Pacific magpie

1. A compass helped Clark with this job along the journey.

k m p a g n i m a

m a p m a k i n g
1 4

2. This president sent Lewis and Clark to explore the Louisiana Purchase.

h m o s t a f f r j e n s o e

T h o m a s
6 10

J e f f e r s o n
17 2 9

3. This animal lives in a burrow in the ground.

r i p a r e i o g d

p r a i r i e d o g
8 5

4. Lewis and Clark wrote about their discoveries in these.

s l u o n j r a

j o u r n a l s
7 11 14

5. This large black bird has a white belly.

g e i a p m

m a g p i e
13

6. A trip or a journey with goals like the one Lewis and Clark took is called an _____.

e d p x t i e n o i

e x p e d i t i o n
12 15

7. The Corps of Discovery was looking for a water route to the _____ Ocean.

c a f i c i p

P a c i f i c
16

8. People who travel to new places to learn new things like Lewis and Clark are called _____.

r s x p e e r l o

e x p l o r e r s
3

Fill in the letters from the numbered spaces above to find the answer below.

9. This very fast animal has legs like a deer and small forked horns.

p r o n g h o r n
1 2 3 4 5 6 7 8 9

a n t e l o p e
10 11 12 13 14 15 16 17

Lewis and Clark's South Dakota Adventure

A Learning from Objects Activity

Objectives:

- Participants will identify the Missouri River as the route used by Lewis and Clark.
- Participants will recognize people, animals, and landscapes the explorers encountered while traveling through what would one day be South Dakota.
- Participants will practice acquiring information from direct observation of objects.

South Dakota Social Studies Standards

K	1st	2nd	3rd	4th	5th	6th
K.E.1.2		2.US.1.2 2.US.2.1 2.E.1.1	3.E.1.1		5.E.1.1	6.E.1.1

South Dakota Communication Arts Standards

K	1st	2nd	3rd	4th	5th	6th
K.LVS.1.2 K.LVS.1.6	1.LVS.1.2 1.LVS.1.6	2.LVS.1.2 2.LVS.1.4 2.LVS.1.5 2.LVS.1.6	3.LVS.1.1 3.LVS.1.2 3.LVS.1.3 3.LVS.1.4	4.LVS.1.1 4.LVS.1.3	5.LVS.1.1 5.LVS.1.2 5.LVS.1.3	6.LVS.1.2 6.LVS.1.3

South Dakota Science Standards

K	1st	2nd	3rd	4th	5th	6th
K.P.1.1	1.E.1.2	2.P.1.1	3.P.1.1 3.E.1.2			

Timeframe: 60-90 minutes

Materials:

Included in kit

- 12x7' SD floor map tarp
- 12 SD Adventure Reading Cards
 - Introduction and 11 map stops
- 31 object bags
- 3 photographs
 - 1. Pirogues (rowboats)
 - 2. Spirit Mound
 - 3. Arikara earth lodge
- Object Identification Sheet

Why Learn from Objects?

There are many way to learn about the world. One way is to listen and hear information – auditory learning. Another way to get information is by reading, watching a TV or video program, or looking at photographs – visual learning. This kit lets participants learn in another important way – by handling three-dimensional objects. This develops kinesthetic skills, or learning by touch. Participants can see

physically how objects are alike and how they are different. They can consider what use an object may have – is it a stand-in for something, like a live animal or a physical place? Is it an object that was made or used by people from a different culture? The kit's written information, photographs and three-dimensional objects allow participants to practice all three learning styles.

Lewis and Clark's South Dakota Adventure uses a large floor map of the Missouri River and information based on the explorers' journal entries to examine some of the people, animals and landscapes they encountered in South Dakota. The objects in the bags add learning from objects to the lesson – and a bit of mystery as participants try to guess what the bags might hold that relates to each stop on the journey.

Activity Steps:

1. Spread the 12x7 foot map of South Dakota on the floor. (It is okay to step on the map.)
2. Instructor can either keep the Adventure Reading Cards and read them aloud at each stop, or allow participants to read the cards aloud. Instructor should keep the Object Identification Sheet.
3. Explain to the group that they will be following the course of Lewis and Clark's journey through South Dakota. Remind the participants to keep their bags closed – no peeking! – when they get them.
4. Distribute the 31 bags in random order to the participants. Be sure that one participant does not get all the bags for stops with more than one bag. The bags for each stop are:

Intro – Bags 1 and 2.	Stop 6 – Bags 14,15,16,17, 18 and 19.
Stop 1 – Bags 3 and 4.	Stop 7 – Bags 20, 21 and 22.
Stop 2 – Bags 5, 6 and 7.	Stop 8 – Bags 23 and 24.
Stop 3 – Bags 8, 9 and 10.	Stop 9 – Bags 25 and 26.
Stop 4 – Bags 11 and 12.	Stop 10 – Bags 27 and 28.
Stop 5 – Bag 13.	Stop 11 – Bags 29, 30 and 31.

When a bag contains more than one item, those items should stay together when the bag is repacked. Three bags contain identical materials showing the gift/trade materials the explorers brought with them. These bags are used at each of the stops where the explorers met with the tribes. The 15-stripe flag used at Stop 2 (meeting the Yankton Nakota) can also be held up at Stops 9 and 11 since the flag would also have been used when meeting the Teton Lakota and the Arikara.

5. Have participants sit/kneel around the edges of the floor map.
6. Read the Introduction Adventure Card aloud. Have participants with Bags 1 and 2 hold the bags up. (These two items are things the explorers had with them from the beginning of the journey). Show Photograph 1 – the pirogues. Have the participant with Bag 1 guess what might be in the bag. After a few tries, have the other participants offer their guesses. Have the participant open the bag and show everyone the item. (The mast on the keelboat can be inserted into the hole in the boat's center). Read the description of the object from the Object Identification Sheet aloud to the group. Have the participant place the item on the floor map in front of them. Repeat with Bag 2.
7. Continue with Stops 1-11. Read the Adventure Reading Card aloud, have the participants guess their contents, open and display the contents and read the description from the Object Identification Sheet aloud to the group. At Stop 1 (Spirit Mound) and Stop 11 (Arikara) show the corresponding photographs.

Lewis and Clark in South Dakota

South Dakota State Historical Society Education Kit

8. When the journey is completed, allow participants to examine and handle the objects from the bags. One method is to pass the objects around the circle so everyone can see and hold them. When the object(s) are back to the original bag holder, have the participant put the items back in their bag. Use the Object Identification Sheet to be sure the right object(s) is in the right bag.

9. As objects are being handled, discuss:

- What river did Lewis and Clark travel on going through South Dakota?
- Name three animals they saw along their journey through the state (bison, pronghorn, prairie dog, coyote, mule deer, elk)
- Name the three tribes they met with. (Yankton Nakota, Teton Lakota, Arikara)
- Compare some of the objects –
 - how are the bison, antelope, elk and deer tracks alike? Different?
 - how are the grizzly bear and coyote tracks alike? Different
 - Compare the mule deer and antelope hides. How are they alike? Different?
- Could some of the objects be used at different stops?
- What was your favorite object and why?

Object Identification Sheet (Kit 1)

BAG 1

T-2011-198

Keelboat model: The keelboat used by the Corps of Discovery was 55 feet long and 8 feet wide. It had 22 oars. In addition to being rowed, the keelboat could be poled like a raft, sailed, or towed along from the shore. The expedition also used two smaller rowboats called pirogues (PER-rogues). These small boats could also be sailed or towed.

BAG 2

T-2002-001

Sounden horn: Captain Lewis bought four “tin blowing trumpets” for the journey. Horns could be used to tell each boat where the others were when they were out of sight of each other on the river. Blowing the horn could also signal men hunting on shore. The Sounden horn sounds like a modern air horn and makes an excellent noisemaker.

BAG 3

T-2011-203

Bison figurine: Lewis and Clark feasted on their first bison on August 23, 1804. The big animals were an important food source for the Corps. Each man ate about nine pounds of meat every day when the hunting was good.

BAG 4

T-2011-146

Bison tracks: Bison can grow up to 6 feet tall at the shoulder and weigh 2000 pounds. They have large, split hooves that leave an upside-down heart-shaped track.

BAG 5

T-2011-170

15-stripe U.S. flag: Between 1795 and 1818, the official U.S. flag had 15 stripes and 15 stars. It was the only official flag to have more than 13 stripes. Lewis and Clark carried this type of flag on their journey and flew it whenever they met with local tribes.

BAG 6

T-2002-017

Jefferson peace medal: Lewis and Clark took three different sizes of 1801 peace medals with them to give to tribal chiefs. This is a replica of the middle-sized medal they carried.

BAG 7

Various numbers

Beads, mirrors, thimbles: The expedition carried beads, tobacco, clothes and other items to give as gifts and use for trading with the Indians they met. Blue beads were especially prized by some tribes.

BAG 8

T-2002-093

Pronghorn hide sample: Lewis and Clark first saw the fast-running pronghorn near the Niobrara River on September 3, 1804. Lewis thought they ran so fast the animals almost looked like birds flying.

BAG 9

T-2011-139

Pronghorn figurine: Pronghorn are the fastest land animal in North America. They can run up to 60 miles per hour.

BAG 10

T-2011-158

Pronghorn tracks: Like deer and buffalo, pronghorns have split hooves and leave tracks that look like upside-down hearts.

BAG 11

T-2011-211

Prairie dog figurine: The expedition worked hard to capture a prairie dog alive by pouring water down its hole. They sent the prairie dog back to President Jefferson. It survived the journey.

BAG 12

T-2007-197

Prairie dog skull: Lewis and Clark collected bones, skins and teeth from the animals they found on their journey. These scientific samples helped people study and learn more about the animals.

BAG 13

T-2011-201

Elasmosaurus figurine: On September 10, 1804, Lewis and Clark found the fossil backbone of a very large animal. They thought it might be some type of fish but it belonged to an elasmosaurus. The elasmosaurus was a marine mammal that lived in the warm seas that covered South Dakota 65 million years ago. They became extinct the same time as the dinosaurs. The backbone Lewis and Clark found was 45 feet long!

BAG 14

T-2002-089

Mule deer hide sample: Lewis and Clark were the first to call this animal a “mule deer.” They collected samples like this hide to send back east for study.

BAG 15

T-2011-209

Deer figurine: Mule deer can run like other deer, but they also “stot” or jump with all four feet off the ground at once. This bounding ability lets them move quickly up steep slopes and over obstacles.

BAG 16

T-2011-205

Elk figurine: Today, elk are only found in small areas of South Dakota. When Lewis and Clark traveled through, elk ranged all across the state. They describe seeing large herds of the animals.

BAG 17

T-2011-154

Elk tracks: Elk are one of the largest species of deer in the world. Like their smaller cousins, they have split hooves.

BAG 18

No number

Bison hide sample: Bison were a common sight on the plains for the Corps of Discovery. Lewis described seeing a herd of about 3,000 animals in one sitting.

BAG 19

T-2002-099, 100

Pronghorn horns: Pronghorn horns have two parts – a permanent bony core that stays with the animal for life and a tough, black outer sheath that is shed every year.

BAG 20

T-2011-207

Coyote figurine: Lewis and Clark first thought the coyotes they saw were some sort of prairie wolf. The expedition first sighted a coyote in September, 1804, and they saw many more along their journey.

BAG 21

T-2002-081

Coyote pelt: It is easy to see from the soft, gray pelt how Lewis and Clark could mistake a coyote for a small wolf.

BAG 22

T-2011-150, T-2011-189

Coyote tracks and jawbone: Coyotes leave tracks that look much like those of our pet dogs. Their teeth look the same, too.

BAG 23

T-2002-013

Surveyor's compass and map: The explorers recorded each day's journey. The compass told them the direction they were traveling. Using their journal notes and maps, Clark drew one large map of their entire journey. Can you find Big Bend on the map?

BAG 24

T-2011-143

Spyglass: Scientific equipment like this spyglass or telescope helped the expedition members explore the terrain around them. Slide the sections to make the longer or shorter to focus the spyglass.

BAG 25

Various numbers

Beads, mirrors, thimbles: As they had when meeting earlier tribes, Lewis and Clark exchanged gifts with the Teton Lakota at the Bad River.

BAG 26

T-2002-039

Tobacco twist: Tobacco was an important gift and trade item carried by the Corps of Discovery. When some young Teton Lakota men held onto the rope of one of the expedition boats and would not let it continue, the captains gave them a carrot or twist of tobacco and the boat was released.

BAG 27

T-2011-173

Grizzly bear track: The explorers developed a healthy respect for these large bears. One time along the journey, a grizzly chased Lewis into a river, but did not attack.

BAG 28

T-2011-185, T-2002-035

Grizzly bear jawbone and claw: Grizzlies can grow up to 7 feet long and weigh over 700 pounds. Their claws can grow to over 4 inches long. Lewis and Clark provided the first scientific data about grizzly bears.

BAG 29

Various numbers

Beads, mirrors, thimbles: Lewis and Clark gave the Arikaras beads, mirrors and other gifts when they met them in their villages along the river.

BAG 30

T-2011-213

Buffalo shoulder blade: The Arikaras lived in earth-lodge villages and raised corn, tobacco, beans and other food. They traded their crops with other tribes. With a handle tied on, a buffalo shoulder blade made a useful hoe.

BAG 31

T-2011-193

Arikara pot shards: The Arikaras made pottery from the clay along the riverbank. These shards are from a modern pot made in the Arikara style from Missouri River clay.

The South Dakota Journey

Objectives:

- Participants will acquire information about some of the experiences Lewis and Clark had traveling through South Dakota Territory.
- Participants will organize information and plot it onto a South Dakota map.

South Dakota Social Studies Standards

K	1st	2nd	3rd	4th	5th	6th
K.E.1.1		2.US.1.2 2.E.1.1	3.E.1.1	4.US.1.2 4.G.2.1 4.E.1.1		6.E.1.1

South Dakota Communication Arts Standards

K	1st	2nd	3rd	4th	5th	6th
K.LVS.1.6	1.LVS.1.6	2.LVS.1.4 2.LVS.1.6		4.LVS.1.2	5.LVS.1.3	6.LVS.1.3

Timeframe: 30-60 minutes

Materials:

Included in kit

South Dakota Journey worksheet master
 South Dakota Journey map master
 6 Laminated SD Highway maps

Provided by instructor or participants

Non-permanent markers
 Crayons

Activity Steps:

1. Make a copy of the SD Journey worksheet and the SD Journey map for each participant.
2. Split the group into 6 small groups and give each small group a laminated SD Highway map.
3. Have the groups find each of the ten locales described on the South Dakota Journey worksheet. Mark each locale on the laminated map with the non-permanent marker or crayon.
4. Using the marked map as a guide, have participants match the number of each locale on the worksheet to its corresponding dot on the SD Journey map.
5. Participants can color their SD Journey maps, adding in features they know – the Black Hills, other rivers, their hometown, etc.

Discussion Questions

- What transportation method were Lewis and Clark using through South Dakota? Why did they use that method? (boat travel on the Missouri)
- Did their route take them through the Black Hills? How did they learn about the Hills?

The South Dakota Journey Worksheet

1. Elk Point

The party elects Patrick Gass as sergeant to replace Charles Floyd. Floyd had died two days earlier of appendicitis.

2. Vermillion

The explorers go to see Spirit Mound. Area tribes believe the Mound is home to small “devils” who will kill anyone who goes near it.

3. Yankton

The expedition meets with a group of Yankton Nakota at Calumet Bluff.

4. Charles Mix County

The party spots antelope for the first time. They call them wild “goats”.

5. Gregory County

The expedition sees prairie dogs for the first time. All of the men haul water to flood one of the prairie dogs out of its hole. They catch it alive to send back to President Jefferson.

6. Oacoma

The expedition spends two days in a camp they call Camp Pleasant. In this area they first see black-billed magpies.

7. Big Bend of the Missouri River

The expedition gets to a big loop in the river. The distance across land to the river on the other side of the loop is a little over one mile. Traveling on the river to the same spot the distance is 30 miles.

8. Fort Pierre

At the mouth of the Bad River, the expedition meets with the Teton Lakota tribe. The Tetons try to make the party leave one of their boats as a toll for using the river. The situation is tense, but is resolved without fighting.

9. Moreau River

The party saw the tracks of “white bear”, or grizzly at the mouth of this river.

10. Corson County

The party finds three Arikara villages in this area. They meet peacefully before continuing up the Missouri into North Dakota.

South Dakota Journey Map



Mapping the Terrain

Objectives:

- Participants will recognize how important mapmaking was to the Lewis & Clark Expedition.
- Participants will identify eight directional points on a compass and their relationship to each other.
- Participants will create a simple map using “dead reckoning” mapping skills.

South Dakota Social Studies Standards

K	1st	2nd	3rd	4th	5th	6th
K.G.1.3	1.G.1.1	2.US.1.2 2.US.1.3 2.G.1.1 2.G.1.2	3.G.1.1 3.G.1.2	4.US.1.1 4.C.1.1	5.US.1.2 5.G.1.2 5.G.2.2	

South Dakota Mathematics Standards

K	1st	2nd	3rd	4th	5th	6th
K.M.1.4 K.N.1.1	1.A.2.1 1.G.2.1 1.N.1.1 1.S.1.2	2.N.1.1 2.S.1.1 2.S.1.3	3.S.1.1 3.S.1.2	4.N.3.1 4.S.1.1	5.G.2.3 5.S.1.1 5.S.2.2	6.M.1.1 6.M.1.2 6.N.3.1

South Dakota Communication Arts Standards

K	1st	2nd	3rd	4th	5th	6th
K.LVS.1.6	1.LVS.1.6	2.LVS.1.4 2.LVS.1.6		4.LVS.1.2	5.LVS.1.3	6.LVS.1.3

Timeframe: 60-90 minutes

Materials:

Included in kit

- Mapping the Terrain Worksheet master
- Compass Rose master
- Panel 5 “Recording the Route”
- 8 Directional Cards
- Surveyors Compass (optional)

Provided by instructor/participants

pencil or pen

Background Information:

One of the most important tasks undertaken by Lewis and Clark was making accurate maps. They made about 140 maps on the trail and collected about 30 more from Indians, fur trappers and traders. William Clark drew most of the expedition’s maps.

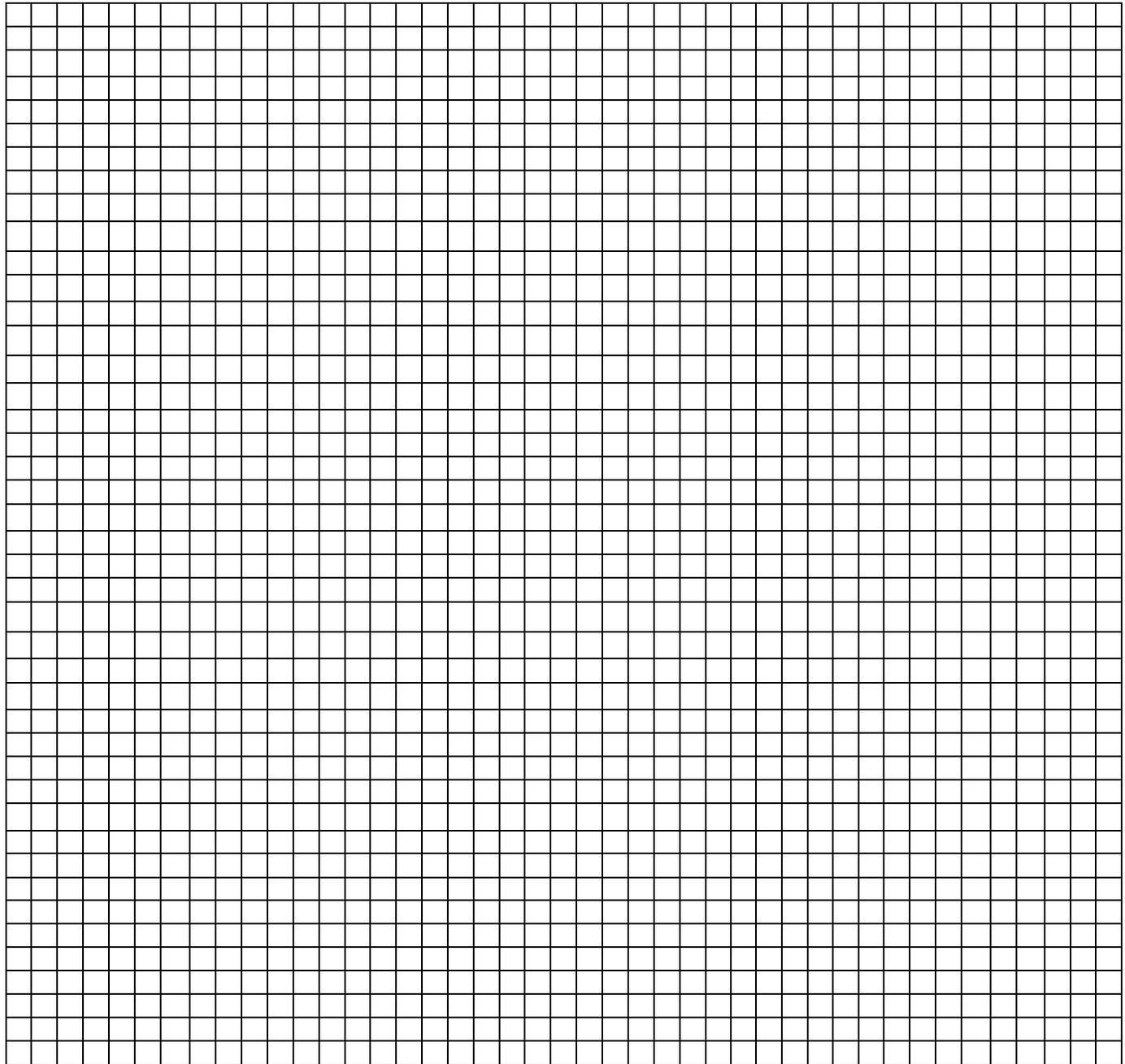
The explorers used celestial navigation, or observation of the sun, moon and stars, and compass route mapping or “dead reckoning” to record their route. In dead reckoning mapping, an explorer tracks his position by measuring the course and distance traveled from some known point. Each day’s ending position is the starting point for the next day’s measurement. Lewis and Clark recorded the direction and distance for each segment of their trip every day in table form in their journals. The first column of the table recorded the direction traveled, the second column recorded distance, usually estimated in miles, and the third column noted landmarks. A surveyor’s compass or circumferentor told them the direction they were moving. Using these daily course-and-distance tables, Clark plotted their route on gridded field sheets. In this activity, participants will use dead reckoning to create a map of their own.

Activity Steps:

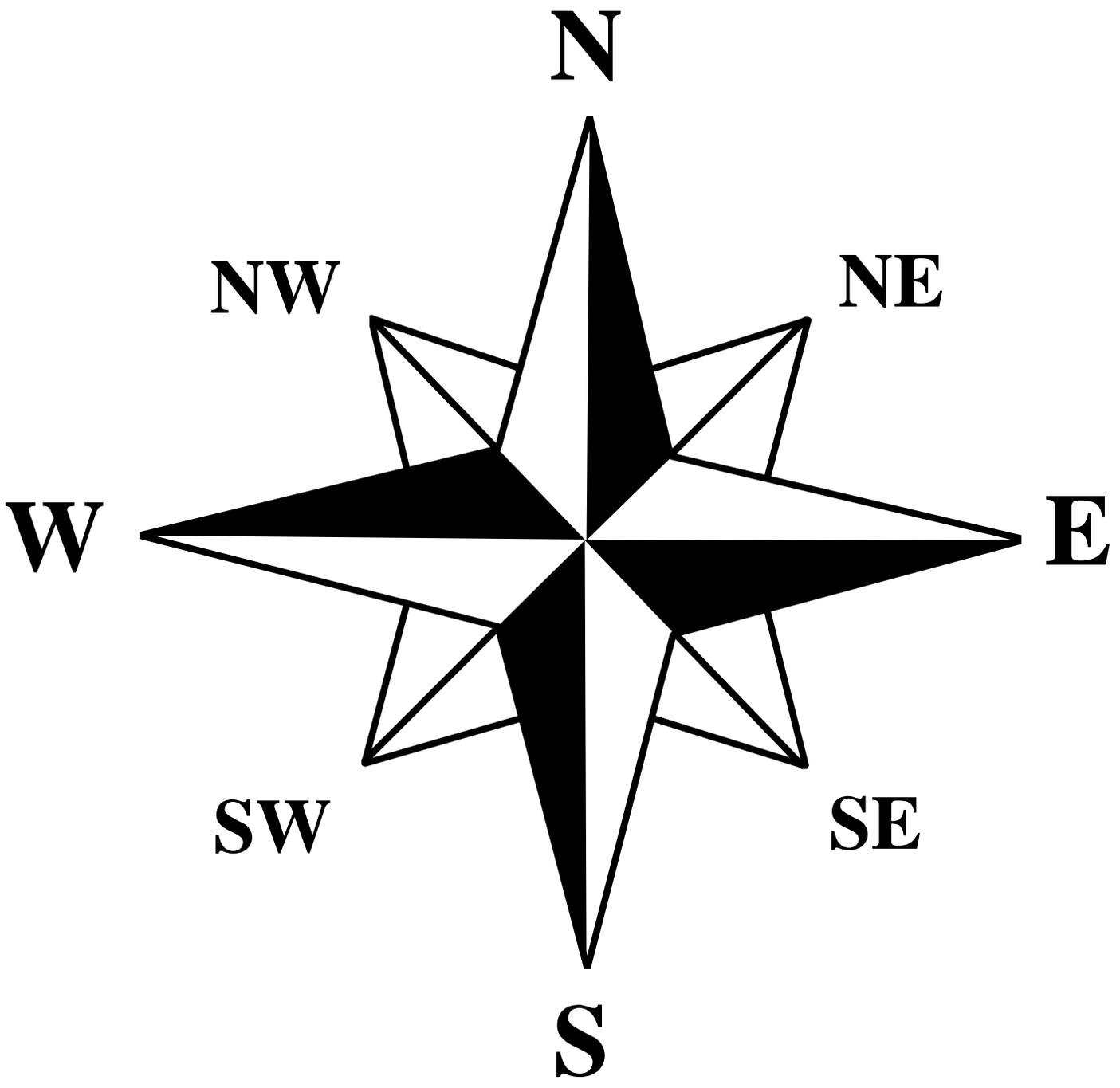
1. Before the activity begins, the instructor should choose an area – playground, schoolyard, gym, or some other space – for the group to move around and map in.
2. Review Panel 4 “Recording the Route” with the group and discuss why making maps was so important to the Lewis & Clark expedition.
3. Divide the group into small working groups of three or four individuals. Give each small group a copy of the Mapping the Terrain Worksheet and the Compass Rose sheet.
4. Review the directions on the Compass Rose with the participants so they all understand the relationship of the directions to each other.
5. Have each small group draw five directional cards one at a time and record the directions in the order drawn on their Mapping the Terrain Worksheet. This information goes in the first column of the table at the top of the sheet.
6. Move to the mapping area. Show the participants which direction is North. (Use the surveyor’s compass if you want to). One person in each small group must be responsible for holding the group’s Compass Rose with the N facing North at all times.
7. Choose a starting point for the mapping and have each group begin at that point. From that point the groups should move in the first direction recorded on their worksheet until they come to a “landmark” or noticeable feature. The groups need to keep track of the number of steps they take. The landmark can be obvious like a tree, piece of playground equipment or pavement marking, or as subtle as a clump of weeds or a bare patch on the ground. Once a landmark has been reached, the group should record the distance traveled from the starting point (the number of steps) and a brief description of the landmark on their worksheet. Working from the first landmark, the group then moves in the second direction on their worksheet until a second landmark is reached and recorded, and so on. They should also record any landmarks or noticeable features they pass along the route. (Option: Instructor can assign a specific distance each group should travel in each of their directions, i.e. 20 steps, 50 steps, etc. and have the group record any landmarks they pass along the way)
8. Once their “journey” is completed, each group can plot their map on the grid section of the worksheet. Depending on the size of the mapped area, the instructor should decide what distance each graph square represents – 1 step, 5 steps, etc. Be sure to include the landmarks the group stopped at and any landmarks they passed along the way on the map.
9. Have each group share their map with the entire group. Discuss:
 - How difficult was it to make an accurate map?
 - Could another person or group read their record of landmarks and distances and follow their route to the same places?
 - Would it be easier or harder to make a map of unfamiliar territory? Why?

Mapping the Terrain Worksheet

Direction	Distance	Landmark



Mapping the Terrain Compass Rose



Packing for the Journey

Objectives:

- Participants will identify six different categories of supplies taken by Lewis and Clark on the expedition.
- Participants will select supplies to take on a journey and justify their choices.
- Participants will compute supply quantities and make adjustments as needed to stay within established guidelines.

South Dakota Social Studies Standards

K	1st	2nd	3rd	4th	5th	6th
K.E.1.2 K.E.1.3	1.E.1.2	2.US.1.2 2.E.1.1 2.E.1.2	3.W.1.1 3.E.1.1		5.US.1.2 5.E.1.1	6.E.1.1

South Dakota Mathematics Standards

K	1st	2nd	3rd	4th	5th	6th
K.A.2.1	1.A.2.1 1.N.1.1 1.S.1.2 1.S.2.1	2.N.1.1 2.S.1.1 2.S.2.1	3.A.2.2	4.S.1.1	5.M.1.3	6.M.1.1

South Dakota Communication Arts Standards

K	1st	2nd	3rd	4th	5th	6th
K.LVS.1.1 K.LVS.1.6	1.LVS.1.1 1.LVS.1.6	2.LVS.1.1 2.LVS.1.4 2.LVS.1.6	3.LVS.1.1	4.LVS.1.1 4.LVS.1.2	5.LVS.1.1 5.LVS.1.3	6.LVS.1.3

Timeframe: 30-60 minutes

Materials:

Included in kit

Packing for the Journey Supply List master
 Packing for the Journey worksheet master
 Kit objects – compass, beads, tobacco,
 peace medals, thimbles, etc.

Provided by instructor/participants

paper
 pencil or pen

Background Information:

Meriwether Lewis was responsible for gathering supplies for the expedition. He used the \$2500 Congress had allotted to purchase guns, ammunition, medical supplies, scientific and mathematical instruments, and provisions for the journey. His hand-written list can be viewed on the website http://dorgan.senate.gov/lewis_and_clark/graphics/supplies. The Supply List for this activity includes items from the expedition’s original list.

When planning and packing for an extended journey, decisions must be made. What should be taken? What is there room to pack? What can be found along the way? In this activity participants must consider these questions and choose what they would take on a long journey.

NOTE: The “value” for supply list items used in this activity does not reflect the real monetary value of the item.

Activity Steps:

1. Make a copy of the Packing for the Journey Supply List and Worksheet for each participant. This activity can be done individually or working in small groups.
2. Share the background information with the group and look at the kit objects – compass, beads, etc.
3. Have participants imagine they are in charge of outfitting a group for a 2-year journey through unknown territory. They must decide what supplies and equipment to take, choosing their items from the Packing for the Journey Supply List.
4. Participants can choose their supplies and record them on their Worksheets. They need to keep track of the value of their supplies, because the **total value of what they take cannot exceed 100**. Consider the different categories of supplies – will they take some of each, or leave some categories behind? Participants can add and delete items from their worksheet list as needed to keep their value under 100.
5. When the participants have finished their worksheets, discuss:
 - Did they take items from all the categories? Why or why not?
 - How did they decide what to take and what to leave behind? Did everyone make the same choices?
 - What did they hope to find along the journey?
 - Can you prepare for everything when you are planning an expedition, or will some things take you by surprise along the way?
6. As a group, work together and choose supplies for a journey you are all taking together. How will you decide what to take and what to leave?

Packing for the Journey
Supply List
 Page 1 of 2

Food and Clothing

Amount	Item	Value
193 lbs	portable soup	3
6 kegs	wine	2
36 pairs	stockings	2
30	shirts	1
20 pairs	shoes	3
15	coats	2
15	overalls	1
15	blankets	3
2 boxes	candles	2
2 lbs	tea	1

Amount	Item	Value
9 bags	meal	2
30 half-barrels	flour	3
7 bags	biscuit	2
50 lbs	soap	1
7 bushels	salt	2
50 kegs	pork	3
1 bag	coffee	1
1 keg	hog's lard	1
2 bags	sugar	2
600 lbs	grease	3

Camp Equipment

Amount	Item	Value
8	oil-treated tents	2
6 papers	ink powder	3
4	tin horns	1
2	tin lanterns	2
100	quills	3
1	corn mill	2
3 doz.	gimlets	1
4 doz.	pkgs. needles	2
20 yards	oil-treated cloth	1
1	whetstone	3

Amount	Item	Value
6	brass inkstands	2
125	large fish hooks	3
8	receipt books	2
6	brass kettles	2
2 doz.	table spoons	2
17 doz.	files and rasps	3
2 pair	shears	1
2	hatchets	2
2	hand saws	2
9	chisels	1

Packing for the Journey
Supply List
 Page 2 of 2

Arms & ammunition

Amount	Item	Value
1 pair	pocket pistols	2
420 lbs	sheet lead	3
30	powder horns	1
176 lbs	gun powder	1
18	tomahawks	2
500	rifle flints	2
15	gun slings	3
52	lead canisters	1
30	brushes & wires	3
15	knapsacks	2

Medical supplies

Amount	Item	Value
½ lb	powdered rhubarb	1
50 doz.	Dr. Rush's pills	2
1	tourniquet	3
3	lancets	3
5 lbs	ointments	2
1 set	pocket instruments	2
1 set	teeth instruments	1
6 lbs	Epsom salts	2
4 oz.	laudanum	3
2 oz.	cloves	1

Indian presents

Amount	Item	Value
47 ½ yds	red flannel	2
4 doz.	butcher knives	3
27 doz.	looking glasses	2
73 bunches	beads	1
2 doz.	earrings	1
2800	fish hooks	3
130 rolls	tobacco	2
1 doz.	ivory combs	3
8	kettles	2
4600	needles	1

Mathematical & scientific instruments

Amount	Item	Value
4	pocket compass	3
1	magnet	1
1	sextant	2
1	microscope	2
2	thermometers	3
1	pocket telescope	2
1	chronometer	1
1 case	plating instruments	2
1 copy	Barton's Botany	1
1	Hadley's quadrant	3

Passing the Message: Communicating on the Journey

Objectives:

- Participants will identify four languages used by the Lewis and Clark expedition.
- Participants will determine the order in which they must communicate with other group members to pass a message along.
- Participants will devise an original message and transmit it along the established communication chain.

South Dakota Social Studies Standards

K	1st	2nd	3rd	4th	5th	6th
	1.US.2.1	2.US.1.1 2.US.1.2 2.E.1.1	3.W.1.1 3.C.1.1		5.US.1.2	6.E.1.1

South Dakota Communication Arts Standards

K	1st	2nd	3rd	4th	5th	6th
K.LVS.1.1 K.LVS.1.2 K.LVS.1.6	1.LVS.1.1 1.LVS.1.2 1.LVS.1.3 1.LVS.1.6	2.LVS.1.2 2.LVS.1.3 2.LVS.1.4 2.LVS.1.6	3.LVS.1.1 3.LVS.1.2 3.LVS.1.4	4.LVS.1.1 4.LVS.1.3	5.LVS.1.1 5.LVS.1.2 5.LVS.1.3	6.LVS.1.2 6.LVS.1.3

Timeframe: 30-60 minutes

Materials:

Included in kit

- Color-coded identity cards
- Color-coded word lists

Background Information:

Not all the members of the Lewis and Clark permanent party spoke or understood the same language. The party had to develop an effective chain of communication in order to speak with each other and with the tribes they encountered. Interpreters played a crucial role in this process. Interpreting is the process of transferring meaning from speech in one language to speech in another language.

Expedition members who played an important part in the chain of communication included Private Francois Labiche, who spoke English and French. Toussaint Charbonneau was hired as an interpreter and spoke French and Hidatsa. Charbonneau's wife Sacagawea also joined the party. She spoke Hidatsa and Shoshone. Her ability to speak Shoshone would be critical since the party needed to purchase horses from the Shoshone to get across the Bitterroot Mountains. Getting a message through the entire communication chain started with Captain Lewis or Captain Clark speaking to Labiche in English. Labiche would then translate the remarks into French and pass them along to Charbonneau. Charbonneau would translate the message from French into Hidatsa and pass the message along to Sacagawea. Finally, Sacagawea would translate the message from Hidatsa into Shoshone.

This activity lets participants see a complicated chain of communication in action, and helps them understand how difficult it could be for Lewis and Clark to make themselves understood.

Two versions of this activity are outlined below. Version One is designed for participants who may not have mastered reading yet. It uses color-coded identity cards to set up a communication chain for passing along a spoken message. Version Two uses color-coded synonym word lists. Participants compose and send simple written messages back and forth across the communication chain.

Identity Cards:

Cameahwait (One Who Never Walks) Shoshone chief, Sacagawea's brother.

Captain Lewis One of the two co-leaders of the Lewis and Clark Expedition.

Captain Clark The other co-leader of the Lewis and Clark Expedition.

Charbonneau A French trader who joined the expedition as an interpreter.

Sacagawea Charbonneau's wife. Sacagawea had been raised as a Shoshone but had been kidnapped as a girl by the Hidatsas.

Labiche One of the members of the permanent party. He spoke several Indian languages, and both French and English.

Activity Steps:

Version One

1. Divide the group into six smaller groups.
2. Explain who the six individuals on the identity cards are, and give one card to each group.
3. Explain that the groups can talk **ONLY** to another group whose identity card has a matching color on it. For example, Captain Lewis can talk to either Labiche or Captain Clark since both have yellow on their cards.
4. Have the groups imagine they are out on the trail with Lewis and Clark. They need to get a message from one person to another, but may not be able to speak directly to the group that needs to get the message. Have the groups come up with spoken messages to send along the communication chain. The message chains below can be used, or the groups may make up their own.

a. Captain Lewis to Charbonneau

e. Captain Clark to Cameahwait

b. Sacagawea to Captain Clark

f. Cameahwait to Labiche

c. Labiche to Charbonneau

g. Sacagawea to Cameahwait

d. Charbonneau to Captain Lewis

h. Charbonneau to Captain Clark

5. Discuss:

- How many steps are in each communication chain?
- How does having more steps in the communication chain affect the message? Does the same message arrive at the end of the chain as started out at the beginning?
- What kinds of information do you think the members of the party shared? Was it all vital, or did they talk about everyday things, too?
- Are there ways of communicating with someone without using words?

Version Two

1. Divide the group into four smaller groups and give each small group a packet of colored word cards. If possible, have each group located in a different area of the room.
2. Explain the following communication chain:
 - YELLOW can only be understood by GREEN
 - GREEN can be understood by YELLOW or BLUE
 - BLUE can be understood by GREEN or RED
 - RED can only be understood by BLUE
3. The YELLOW group needs to get a written message to the RED group. Have them compose a short 2 or 3 line message using their word cards. No other words may be used. The messages will be cryptic, not grammatically correct. The important thing is to pass along the gist or meaning of the message from one group to another as accurately as possible.
4. Have the YELLOWS decide which group they need to give their message to so it can eventually be understood by the REDS. (the GREENS) The GREENS must then translate the YELLOW message using their green word cards. From the GREENS, the message passes to the BLUES and must be translated using the blue word cards. The BLUE translation is given to the REDS, who must translate it using the red word cards.
5. Have the groups compare all of the messages. Did the gist of the message change through the translation process? How difficult is it to send a message when you cannot use the same words?
6. Have the groups compose and send other messages to each other following the communication chain rules above.

In Their Words: Comparing Journal Entries

Objectives:

- Participants will compare their written descriptions of animals with those of Lewis and Clark.
- Participants will consider differences between original journal entries and edited entries.
- Participants will recognize that language is always evolving and grammar rules change over time.

South Dakota Communication Arts Standards

K	1st	2nd	3rd	4th	5th	6th
K.W.1.1 K.LVS.1.6	1.W.1.1 1.W.1.2 1.LVS.1.6	2.R.4.1 2.LVS.1.4 2.LVS.1.6	3.W.1.2 3.W.1.3 3.R.2.2 3.R.4.1 3.LVS.1.1	4.W.1.2 4.R.1.2 4.R.4.1 4.LVS.1.1 4.LVS.1.2	5.W.1.1 5.R.4.1 5.LVS.1.1 5.LVS.1.3	6.W.1.1 6.R.4.1 6.R.5.1 6.LVS.1.2 6.LVS.1.3

Timeframe: 20-60 minutes

Materials:

Included in kit

Exhibit panels 9,10,12, 13
 Postcards of coyote, prairie dog,
 pronghorn, mule deer, jackrabbit
 5 original journal entry cards

Provided by instructor/participants

Paper
 Pen or pencil

Activity Steps:

This activity can be done by individual participants, or in small groups. Five individuals or groups can work at one time.

1. Give each participant or group one of the animal postcards. Have them write a three-sentence description of the animal. Encourage them to use vivid language, as if they were describing the animal to someone who had never seen one.
2. Have participants find their animal on the exhibit panels and read the description of the animal written by Lewis and Clark. (The spelling and grammar in the journal entries on the panels have been modernized.) Compare the two descriptions. How are they the same? How are they different?
3. Give the participants the original journey entry card that describes their animal. Have them compare the original journal entries to the modernized version on the exhibit panels, and find five differences between them (spelling, punctuation, capitalization).
4. Discuss:
 - Can the participants decipher the words in the original journal entries? Is their meaning clear?
 - Why does language change over time?
 - Do standard rules for grammar, punctuation, and spelling make it easier to write clearly? Why?
 - Have participants give examples of language changes they have experienced or heard about, i.e., slang expressions.

Who Am I?

Objectives:

- Participants will identify animals and birds Lewis and Clark encountered in South Dakota.
- Participants will prepare detailed descriptions of animals and birds.
- Participants will recognize the need for detail when scientifically classifying living things.

South Dakota Communication Arts Standards

K	1st	2nd	3rd	4th	5th	6th
K.W.1.1 K.LVS.1.6	1.W.1.1 1.W.1.2 1.LVS.1.6	2.R.4.1 2.LVS.1.4 2.LVS.1.6	3.W.1.2 3.W.1.3 3.R.2.2 3.R.4.1 3.LVS.1.1	4.W.1.2 4.R.1.2 4.R.4.1 4.LVS.1.1 4.LVS.1.2	5.W.1.1 5.R.4.1 5.LVS.1.1 5.LVS.1.3	6.W.1.1 6.R.4.1 6.R.5.1 6.LVS.1.2 6.LVS.1.3

South Dakota Science Standards

K	1st	2nd	3rd	4th	5th	6th
K.L.1.1	1.L.1.3	2.L.1.2	3.L.1.2			6.N.2.1 6.L.1.2

Timeframe: 20-30 minutes

Materials:

Included in kit

8 animal postcards in opaque sleeves

Activity Steps:

1. Break the group into pairs and have each pair decide who will be the one describing and who will be the one guessing.
2. Have each pair sit back to back. Give the describer one of the animal postcards. Caution them to be sure the guesser does not see the picture.
3. Have the describer verbally describe the animal or bird in the picture to their partner, without using the animal or bird's name. Encourage participants to use lively descriptive words. Describers can also write brief descriptions out and give them to their partner.
4. The guesser should try and figure out what animal/bird the describer is describing. You may provide a list of animals/birds for participants to choose from.
5. The prairie dog, coyote, pronghorn antelope, jackrabbit, and mule deer are described in the journal entries on the exhibit panels. Have the partners compare their description to those written by Lewis and Clark.
6. Discuss:
 - What makes for a good description?
 - How important are details? Would it make a difference if you left details out? (leaving the white plumage off of the magpie description, for example)
 - Can how an animal or bird behaves be part of a good description? What about the sounds it makes?

Track Identification

Objectives:

- Participants will recognize the variety of living things Lewis and Clark encountered in South Dakota.
- Participants will analyze tracks to determine characteristics of the living thing that made them.
- Participants will compare and contrast the tracks made by different living things.

South Dakota Communication Arts Standards

K	1st	2nd	3rd	4th	5th	6th
K.LVS.1.6	1.LVS.1.6	2.LVS.1.3 2.LVS.1.4 2.LVS.1.6	3.LVS.1.1 3.LVS.1.2	4.LVS.1.1 4.LVS.1.2	5.LVS.1.1 5.LVS.1.3	6.LVS.1.3

South Dakota Science Standards

K	1st	2nd	3rd	4th	5th	6th
K.P.1.1 K.L.1.1	1.P.1.1 1.L.3.1	2.P.1.1 2.L.1.2	3.P.1.1 3.L.1.2	4.L.2.1		6.N.2.1 6.L.1.2

Timeframe: 30-60 minutes

Materials:

Included in kit

9 laminated track posters
 9 name placards

Provided by instructor/participants (optional)

Drawing paper
 Pencils/pens/crayons

Activity Steps:

1. Display the name placards so the group can see them, or read the names aloud to the group. Discuss what the group may know about the living things named.
2. Show the group one track poster at a time and brainstorm about what living creature made the track. Consider track size (the tracks on the posters are life-size) and other noticeable characteristics – claws, hoof shape, etc.
3. Have the group decide which name placard goes with the track under discussion (the tracks are all identified on the back) and explain the reasons for their choice.
4. Once all the tracks have been correctly identified, lay the track posters on the floor. Compare the tracks and discuss:
 - Are some of the tracks similar to each other? Sort similar tracks together.
 - Do creatures with similar tracks have other things in common? (hoofed animals eat plants, digging is important to both big and small creatures with claws)
 - How are the tracks different? What conclusions can you draw about a living thing based on the track it leaves?
5. Optional step: Have participants trace their footprints on drawing paper and compare their footprints to the tracks. Compare size and other characteristics.

Big and Small: Measuring Animals

Objectives:

- Participants will identify six animals that Lewis and Clark found living or from the past in South Dakota.
- Participants will compare the size of each of the animals using measuring ropes.
- Participants will use themselves and other students as measuring tools to determine how many are needed to measure each of the six animals.

South Dakota Math Standards

K	1st	2nd	3rd	4th	5th	6th
K.M.1.4	1.M.1.5	2.M.1.6	3.M.1.4	4.M.1.3	5.M.1.4	
K.M.1.5						

Timeframe: 45-60 minutes

Materials:

Included in kit

6 measuring ropes

Bag 3 – Bison figurine

Bag 9 – Antelope figurine

Bag 11 – Prairie dog figurine

Bag 13 – Elasmosaurus figurine

Bag 15 – Deer figurine

Bag 16 – Elk figurine

Provided by participants/instructor

Long hallway or gym

Background Information:

Lewis and Clark described in their journals different animals they encountered along their journey. They also found fossils from animals that had lived in the past. In this activity, participants will identify six animals or fossils that Lewis and Clark found in South Dakota. They will compare the size of the animals.

Activity Steps:

1. Set the bison, antelope, prairie dog, elasmosaurus, deer and elk figurines out.
2. Divide the group into six teams. Give each team one measuring rope. Move into the hallway or gym. Bring the animal figurines along.
3. Have each group spread out their measuring rope and decide which animal the rope corresponds with. The ropes are color-coded. (orange-bison, 8 ft; red-antelope, 4.5 ft; yellow-prairie dog, 1.25 ft; purple-elasmosaurus, 45 ft; aqua-deer, 6 ft; green-elk, 8 ft) Have the team choose the animal they think their rope measures from the figurines. Have teams lay the ropes next to each other on the hallway or gym floor.
4. Have participants lie down next to the ropes (if the floor is clean enough) and determine how many of them it takes to measure up to each of the animals. Try it with different classes or groups – how many high schoolers does it take? Kindergarteners? Adults? Reverse the process and use the measuring ropes to see how many prairie dogs or antelope fit in a participant or group of participants.
5. Discuss:
 - Which two animals are the same lengths? (bison and elk)
 - Do the figurines reflect the actual sizes of the animals? (No – the prairie dog figurine is much bigger than the bison figurine, but in real life the reverse is true. How do the others compare?)