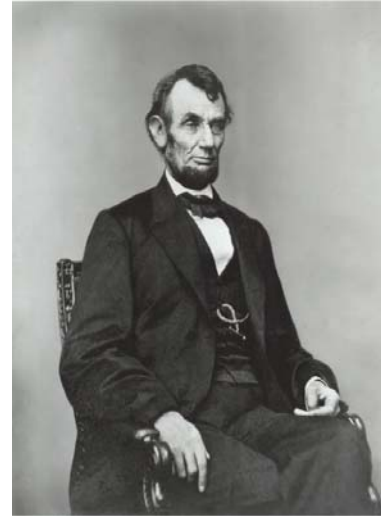


Photo courtesy of Abraham Lincoln Art Gallery and the Library of Congress. <http://abrahamlincolnartgallery.com/archivephoto.htm>.

L

Is for Lincoln!

L is For Lincoln



February 12, 2009 will mark the 200th Birthday of our 16th President, Abraham Lincoln. Lincoln was born in Hardin County, Kentucky but made Springfield, Illinois his home. Throughout Lincoln's life he had a strong connection to agriculture. Raised a son of a carpenter/farmer, Lincoln understood the importance of establishing the U.S. Department of Agriculture in 1861. Lincoln's meager upbringing on the territory of western expansion and the numerous years he served as a country lawyer made him a spokesman for rural life. At the time of Lincoln's presidency, over 48 percent of the population were farmers. With a country so dependent on agriculture and the need for reform to do away with slave labor, Lincoln established the U.S. Department of Agriculture. In 1862, to ensure that young men were getting the best education related to production agriculture, Lincoln signed the Morrill Land Grant College Act into effect. The Morrill Land Grant donated public land to states and territories for colleges of agriculture and mechanical arts. The University of Illinois is our closest Land Grant College.

Photo courtesy of Abraham Lincoln Art Gallery and the Library of Congress. <http://abrahamlincolnartgallery.com/archivephoto.htm>.

Many communities throughout Illinois have connections to President Lincoln and the activities in this booklet should help you make those connections. *The L is for Lincoln* booklet is designed with the student audience in mind. These activities are intended to be used in the classroom as supplemental learning material. Each lesson is correlated to the Illinois State Learning Standards and Assessment Framework. The answer sheet for each activity is provided at the end of this booklet.

Enclosed you will find lessons to accompany the book *L is for Lincoln: An Illinois Alphabet* by Kathy-Jo Wargin. Duplicate copies of this lesson booklet along with numerous other resources can be found on the Illinois Agriculture in the Classroom's website: <http://www.agintheclassroom.org>.

This booklet was written in celebration of Abraham Lincoln's 200th Birthday who gave a lifetime of service to agriculture, government and Illinois.

A is for the Arrowheads

hiding in the ground,
special tools from long ago
waiting to be found.



Peoria Indian Chief
Pah-me-cow-ee-tah

A is for Arrowheads

Native Americans play a large role in shaping the history of our state. Students, teachers and community members who have the opportunity should visit the Illinois State Museum (502 South Spring Street, Springfield) and view the life size dioramas of “People of the Past”. These life-sized dioramas and finely crafted artifacts bring to life Illinois' rich Native American heritage. Posters of these dioramas are available through the Illinois State Museum Store ((217) 782-0979) (ISBN 0-89792-164-X). Exploratory Questions relating to the People of the Past diorama and poster series are available at <http://www.agintheclassroom.org/060605/Teachers/agricultureofthepast.html>.

The Illinois State Museum also offers excellent on-line resources for students and teachers to explore Native American Past on line at http://www.museum.state.il.us/muslink/nat_amer/index.html. Use this link to have your students find answers to the following questions.

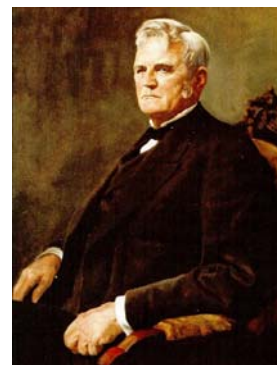
1. Native Americans in Illinois can be divided into two distinct groups, pre-historic and historic. Which pre-historic group shares the most common agriculture features with the historic Native Americans? What are these agricultural features?
2. Read about the Paleoindian era. What animals are still in existence in Illinois today that existed during the Paleoindian era? What impact do these animals have on today's agriculture and environment?
3. The Archaic Period Native Americans moved frequently, but as their early food gathering practices advanced, they were able to move less frequently as they cultivated native plants. How did this cultivation influence their diet, technology, society and beliefs?
4. Native American lifestyles changed dramatically in the Woodland period. How did the development of pottery for containers, the development of the bow and arrow and the cultivation of corn influence their society?
5. Mississippian Period Native Americans lived close together, which could result in the spread of more infectious diseases. They also had a more stable food supply, thanks to continued developments of the work of their Woodland period ancestors. How did each of these impact the longevity of Mississippian era Native Americans?
6. Describe the economy of the Historic Illinois Native Americans. With their reliance on corn, compare and contrast the similarities between these natives and the agriculture producers of today.
7. Describe the division of labor between men and women of the Historic Illinois Native Americans. How do you compare this division of labor to the division of labor in your local area?



Picture of a Mississippian Era
Native American

D is for Mr. Deere,

he knew farming was a toil
so he made a better plow
to slip through Midwest soil.



John Deere agriculture
inventor

D is for Mr. Deere

Born February 7, 1804 a son of a tailor, John Deere was destined to change production agriculture. After a failed attempt to complete college, Deere took an apprenticeship with a local blacksmith in Rutland, Vermont. During his apprenticeship, Deere perfected his skills of working with iron and became a very sought after blacksmith.

The heritage of the John Deere equipment company runs deep in Illinois history. John Deere, the company, was established in 1838 and the national head quarters is located in Moline, Illinois. John Deere's success came from developing a plow that was made of steel and would clean itself of the tough Illinois prairie soil.

To develop a plow of steel, John Deere had to understand the properties of matter, in order to mold and shape his steel. All materials on earth are in one of the three states of matter-solid, liquid or gas. The "state" of matter is determined by a set list of properties.

After studying matter and its properties perform the lab listed below:

Materials Needed:

- Corn Starch
- Water
- Measuring Cups
- Clear Plastic Cups
- 1 Popsicle Stick per group

Directions:

Measure 1/4 cup (level) of corn starch into the paper cup.
Measure 1/8 cup (level) of water into the paper cup.
Stir quickly until the mixture is smooth.

1. Does the material look like a solid or liquid? Explain.
2. Poke your finger into the material. Does it behave like a solid or liquid? Explain.
3. Take a spoonful of the material in your hand and roll it into a ball. Then place it on the desk. How did it behave when you tried to roll it into a ball?
4. On the desk?
5. Pick it up again and hold it for a few minutes. Do you observe any changes that demonstrate the presence of a gas?
6. Do you conclude that this material is a solid, liquid or gas? Why?



1837 Steel Plow

Activity adapted from "What's a Matter" website.

Eastern Ribbon Snake starts with **E**

striped with yellow do you see?
 Ssssss. Ssssss. In the grass.
 Ssssss. Ssssss. Moving fast.



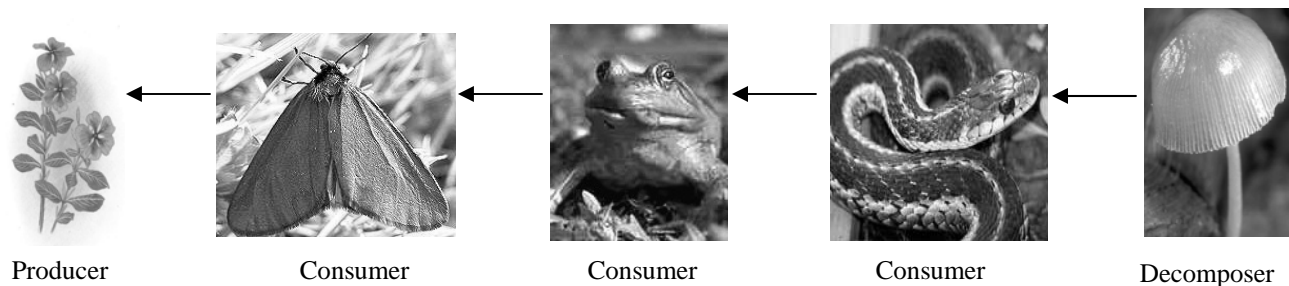
Eastern Ribbon Snake

E is for Illinois Ecosystems

Every living thing in Illinois depends in some way on other living things. This complex relationship can be learned by creating an ecosystem food web. An ecosystem is a collection of living things and the environment in which they live. For example, a prairie ecosystem includes coyotes, the rabbits on which they feed, and the grasses that feed the rabbits.

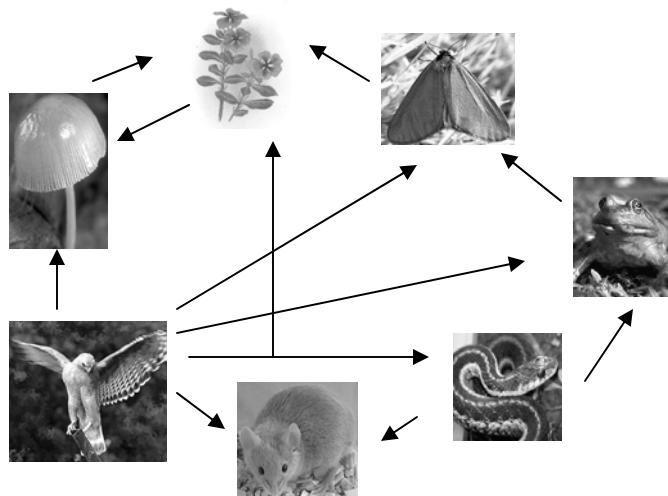
The relationships between Illinois wildlife can be viewed in two ways; through a food chain or a food web. A food chain is a simplified linear view of an ecosystem’s feeding relationships. A food web is more detailed model of all the possible feeding relationship within one ecosystem. Below are samples of each.

Food Chain



In all food chains and food webs the arrows are always drawn towards the plant or animal that is being consumed. The above food chain would then be described as: the plant is consumed by the moth, the moth is consumed by the frog, the frog is consumed by the snake and all animal waste is consumed by the decomposer.

Food Web



Ecosystem Questions

Define the following vocabulary words:

- Consumer
- Decomposer
- Habitat
- Herbivore
- Carnivore
- Omnivore
- Prey
- Predator

1. List three things that all living things need to survive?
2. How do living things obtain energy?
3. How do plants use the sun?
4. Describe how decomposer are helpful to the ecosystem.

Assignment:

In the boxes provided below create a food chain and a food web. You may use the same animals for both drawings or use different animals on each.

Directions:

1. Research Illinois ecosystems and select one of the following ecosystems: Prairie, Forrest, Wetland or River.
2. From your selected ecosystem choose five to seven animals and one to two native plants for your food chain. If you are using a different ecosystem for your food web, also select seven more animals and two different plants. Remember every organism should connect with another of your selections to make the chain and web work.
3. Now collect pictures from the sources suggested by your teacher. Obtain a picture of each organism in your ecosystem.
4. Layout each of your organisms in the order in which they consume.
5. Once you have your organisms in the correct order glue them down. Now draw the arrows to complete the chain and the web.

Illinois Food Chain

Illinois Food Web

Now the letter **I** stands for this:

**The Illinois and Michigan Canal,
it opened up the wilderness
for every guy and gal.**



I is for Illinois Geography

Illinois became the 21st state on December 13, 1818 and stands strong with the motto of “State Sovereignty National Union.” The word Illinois comes from a Native American word meaning “tribe of superior men.” The topography of Illinois was formed by the movement of a Cenozoic glacier. To find Illinois on a United States map, look between Lake Michigan to the northeast and the Mississippi River to the west. Illinois is largely made up of prairies, which gave rise to our state nickname, the “Prairie State.” Illinois is a leading producer of corn and soybeans as well as other agricultural commodities such as pumpkins and dairy products.

On the Illinois map provided, place the symbol or mark listed in the question, on the correct location for each Illinois town. With each location record the Latitude and Longitude, use Google Earth to help find your answers. (<http://earth.google.com/>). Also the internet will prove helpful for finding the answers to all questions.

1. Mark the highest point in Illinois with a yellow X. This city is 1,235 ft above sea level and ranks Illinois as the 45th highest state.
2. Mark with a red dot and then label the birthplace of the 40th President of the United States, Ronald Reagan. President Reagan was born February 6, 1911.
3. Mark with a watermelon the city that was christened by President Abraham Lincoln and bears his name. Why is this city marked with a watermelon?
4. What city is marked by the star? It is where Illinois government resides.
5. Mark with a green dot the city in which Ulysses S. Grant lived before the Civil War.
6. Draw a large black dot where the largest city in Illinois is found.
7. Mark the city that is the geographic center of Illinois with a purple dot.
8. Draw a pumpkin symbol where you would find the city that is known as the Pumpkin Capital of the World.
9. With a blue marker or crayon draw in the following rivers: Illinois River, Wabash River, Ohio River and the Mississippi River.
10. Mark the Horseradish Capital of the World with a pink dot.
11. Mark with an orange dot the city that is known as the home of the White Squirrels.
12. Mark the home of Superman with a large yellow S.
13. Mark the 1st Illinois State Capital with a large blue #1.
14. Mark the 2nd State Capital with a large red #2.

Key

X





















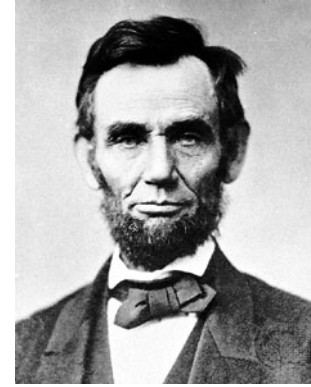
1

2



L is for Lincoln,

**Illinois is his land.
He was president long ago
and known to be fair and grand.**

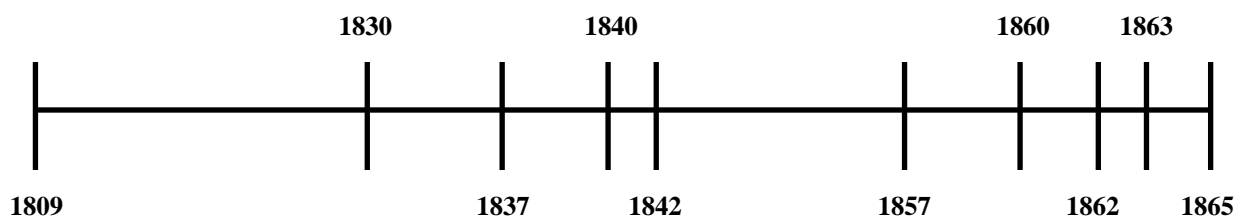


Abraham Lincoln

L is for Lincoln

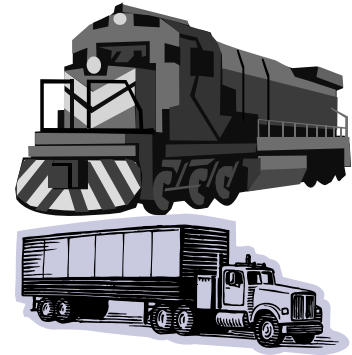
Look at the timeline at the bottom of the page. Next to each statement listed below, write the year that each event took place.

1. Abraham Lincoln is born outside of Hodgenville, Kentucky. _____
2. Lincoln speaks against the Dred Scott decision which ruled that people of African descent, slave or not, could never be citizens of the United States. It also ruled Congress had no authority to prohibit slavery in federal territories, that slaves could not sue in court and that slaves were private property and could not be taken from their owners without due process. _____
3. Lincoln issues the Emancipation Proclamation, which frees the slaves. He also delivers the Gettysburg Address in the same year. _____
4. Lincoln is shot in the temple and killed by actor John Wilkes Booth while attending the play "Our American Cousin" at Fords Theater. _____
5. The Lincolns move to Illinois. The Lincoln family locates 10 miles southwest of Decatur on the north bank of the Sangamon River (now Lincoln Trail Homestead State Park). _____
6. Lincoln marries Mary Todd. _____
7. Lincoln is nominated by the Republican Party for president. Lincoln wins the election, defeating three other candidates: Stephan A. Douglas, John C. Breckinridge, and John Bell. South Carolina succeeds from the Union. Its people did not want Lincoln to be president. Ten other states follow. _____
8. Lincoln moves to Springfield, Illinois. There he becomes junior partner in the law firm with John Stuart. He also makes his first public speech against slavery. _____
9. Lincoln signs the Homestead Act, providing 250 million acres of free land to the settlers on public domain land. The same year, he established the Department of Agriculture and signed into law the Morrill Act which provided for land-grant colleges such as the University of Illinois at Urbana-Champaign. _____
10. Lincoln argues his first case before the Illinois Supreme Court. He also makes a speaking tour around Illinois for the presidential campaign. _____



Now **N** is for the Northern

**Cross, the first railroad in our state
to be drawn by locomotive,
it made transportation great!**



Transportation Issues in Illinois

Transportation is a very important part of the agriculture industry in Illinois. Semi trucks, trains, and barges are used to transport goods throughout the state, across the nation, and to other parts of the world. While the United States does have an advanced transportation system, it hasn't always been that way. There are issues that farmers and those involved in the agriculture industry deal with every day. Read the following scenarios. Then write a short essay response. Be sure to include how each scenario affects agriculture in your area.

1. The United States uses refrigerated rail cars and semi trailers to transport many goods across the nation. The first refrigerator car patent was issued in 1867. Describe how this invention has affected agriculture in your area. Be sure to include goods that are shipped in refrigerated cars as well as how items were shipped prior to this invention.
2. The Illinois Waterway system consists of 336 miles of water from the mouth of the Chicago River to the mouth of the Illinois River at Grafton, Illinois. It is a system of rivers, lakes and canals which provide a shipping connection from the Great Lakes to the Gulf of Mexico via the Mississippi River. There is a series of eight locks and dams that control water flow from Lake Michigan to the Mississippi River System. Discuss how the lock and dam system is utilized in Illinois. Why is the maintenance, upkeep and upgrades to the lock and dam system so important? How has the lock and dam system affected agriculture in your area?
3. Imagine the Illinois Legislature passed a law to reduce the speed limit for semi trucks from 55 miles per hour (mph) to 45 mph. How would this reduced speed limit affect agriculture in your area?



4. Transportation costs continue to soar. How will the projected continuing increase in the prices of gasoline, ethanol and diesel affect agriculture in your area? How do transportation and shipping costs affect the prices of food and other consumer goods?

P is for the Prairie State

that's what people say.
It's great to live in Illinois
where pretty grasses sway.



The Illinois Charm

An interesting part of Illinois history is the selection of our state symbols. Many of our state symbols were suggested by school children and represent the richness and vitality of Illinois.

Use these items to create the Illinois Agriculture Charm. Put a little of each item in a jewelry-size re-sealable bag. Then punch a hole in the top of the bag and use yarn to make it into a necklace.

| | <u>Symbol</u> | <u>Relation to Agriculture</u> |
|------------------------|--------------------------------|--|
| State Soil | Drummer-Flannagan | The fertile soil that grows all our agricultural crops. |
| State Flower | Purple Violet | A native wildflower that blooms in early spring. |
| State Grass | Big Bluestem | Made Illinois soils more fertile and is why our state is known as the Prairie State. |
| Top Crops | Corn, Pumpkins and Soybeans | Illinois ranks #1 in pumpkin production and #1 or #2 annually in corn and soybean production. |
| State Mammal | White Tailed Deer | Whitetail deer graze on native foods and play an important role in the food web of Illinois. Whitetail deer have a preference for farm crops. This does result in the need to balance deer numbers so as to satisfy both hunter demand, landowner tolerance and deer health. |
| State Bird | Cardinal | Consumes insects that can be harmful to crops. |
| State Fish | Blue Gill | Raising fish for consumers in an import market in Illinois agriculture. Fish food contains soybean meal and oil. |
| State Snack | Popcorn | Illinois is the third largest producer of popcorn in the United States. We have 333 popcorn farms that grow about 47,000 acres of popcorn each year. |
| State Tree | White Oak Tree | A native tree to Illinois, it is an excellent source of food for wildlife. |
| State President | Land Grant Universities | Universities provide agriculture career training. |
| State Insect | Monarch Butterfly | Play important role in the pollination of plants. |
| State Slogan | Land of Lincoln | |
| State Dance | Square Dance | |
| State Fruit | Gold Rush Apple | The Gold Rush is a hybrid apple. A hybrid is made by crossing two parents with different characteristics. |
| Soil | craft sand or real soil sample | Slogan penny |
| Flower | paper flower or silk flower | Tree acorn or silk leaf |
| Grass | grass seed | President graduation confetti for land grant colleges |
| Crops | corn, pumpkin and soybean seed | Insect butterfly confetti or paper cut outs of butterflies |
| Mammal | cotton ball | Dance a square piece of cloth in bandana pattern |
| Bird | red craft feather | Fruit apple confetti |
| Fish | blue fish confetti | |
| Snack | popcorn kernel | |

U is for Ulysses S. Grant

a hero from long ago.
He was a general in the war
and our president, did you know?



Ulysses S. Grant

U is for Ulysses S. Grant

At the break out of the American Civil War, Ulysses S. Grant was living and working in Galena, Illinois in his father's leather shop. There are several connections between General Grant and different cities throughout Illinois. From these connections and Grant's fondness for horses the following lesson was created. To access the entire lesson "Hoofing it Through History" visit the AITC website (www.agintheclassroom.org) and download from the link called Teacher's Resources the *Horse Booklet*.

1. On the Civil War map, label each state with its correct abbreviation.
2. Color the Union States **blue** and the Confederate States **gray**.
3. On the Illinois map, label all the locations that are related to General Grant and his horses as discussed in the reading.
4. On the Illinois map, draw in with blue marker the Illinois River and the Mississippi River.
5. On a computer navigate to the website Google Earth (<http://earth.google.com/>). From this site, look at the following locations, when a red or blue balloon appears you can click for a closer look.
 - Type in the "fly to" box the Battle of Belmont, Missouri. This will show the actual field where the fight took place and allow you to connect to several other battle fields where General Grant was involved.
 - What is the latitude and longitude of the **first** Battle of Belmont?
 - Start a new "fly to search." Look up Cairo and Galena, Illinois. Find the elevation, latitude and longitude, but make sure that you place your mouse over the red dot, which is the town's center.
 - On your Illinois map draw a red line beginning at Galena, Illinois and trace General Grant's footsteps to his first battle in the Civil War (Battle of Belmont, Missouri).
 - Place a star on the U.S. Map in the locations of the battles discussed in the reading.
 - Research and report why Southern Illinois was referred to as the *State of Egypt*. This is the area around the town of Cairo, Illinois.

Civil War Map



White Oak

W

starts with letter

A tall and sturdy tree. Acorns falling to the ground, some for you and some for me.



W is for White Oak

Cells are the building blocks of our world. Everything living has cells. Plant cells and animal cells have similarities and differences. This lesson will help students learn the different organelles of the plant and animal cells. After students have been given the general introduction to the different organelles in each cell, have them explore the Illinois Agriculture in the Classroom's Biotech Ag Mag. Once they have read through the Biotech Ag Mag, have them complete the following activity.

Students are going to treat each individual cell as a theme park. Their goal is to create a theme park brochure with a map that will guide them through each cell organelle and its function. The map should detail each of the organelles that you discussed in class and have an illustration and function of each. Students can choose between the animal or plant cell, or you could have them create a project for both.

The theme park maps can be placed on a brochure made from white paper plates. The instructions on how to create the paper plate brochure are included in this lesson.

Directions:

The goal of this exercise is to design a creative and colorful amusement park map. The animal cell or the plant cell will serve as your "amusement park." This brochure will provide visitors with a tour of the cell. Maps at amusement parks always explain the location of each attraction and what it does. Be sure to include this on your map! Each attraction in the map should come from the organelles that make up either the animal or plant cell.

1. Select from the animal or plant cell.
2. Make a list of the organelles found in your selected cell. Each organelle should serve as a stop on your amusement park map. On a scrap piece of paper, create a rough draft on how you want your brochure to appear.
3. Once you have designed your amusement park tour, acquire the paper plates needed to create your brochure.

Paper Plate Booklet

1. Fold the first paper plate in half and cut a narrow window out of the folded edge. Start the window after the ruffled edge and end before the other ruffled edge.
2. Any additional pages should be folded and then reopened. On the fold, cut one slit starting from the edge of the plate and ending at the ruffle (cuts should be no longer than an inch). Make a second slit directly opposite the first one.
3. To assemble the booklet: fold, but do not crease, the paper plate with the slits in half so that the two slits meet. With the plate folded in half, push the plate through the slit. Open the plate, moving one slit to the top of the window and one slit to the bottom of the window.
4. Close the brochure so all the plates are folded in half. Design the front cover to match your cell.
5. Use the inside pages to serve as the maps to the amusement park attractions.

Illinois Learning Standards

| Lesson | Standard | Frame Work |
|--|--|---|
| A is for Arrowheads | 1.B.2a; 1.B.2b-d; 1.C.2a-d; 16.A.2a; 16.A.2c; 16.B.2a(W) | 1.3.14; 1.3.15; 1.3.20; 1.4.16 |
| D is for Mr. Deere | 11.A.2b; 11.A.2d; 12.C.1b; 12.C.2b; 16.C.2b(US) | 1.3.13; 11.4.01; 11.4.02; 12.4.03; 12.4.04 |
| E is for Illinois Ecosystems | 12.A.2a; 12.B.2a; 12.B.2b; 13.B.2e; 17.B.2b | 12.4.01; 12.4.02 |
| I is for Illinois Geography | 13.B.2e; 16.E.2a; 16.E.2c(US); 17.A.2a; 17.A.2b | 13.4.03 |
| L is for Lincoln | 14.F.2; 16.A.2c; 16.B.2a(W); 16.D.2c(US) | No frame work available. |
| Transportation Issues in Illinois | 16.E.2c(US); 17.B.2a; 17.C.2b; 18.A.2a | No frame work available. |
| The Illinois Charm | 14.D.2a; 17.A.2a; 17.A.2b; 18.A.2 | No frame work available. |
| U is for Ulysses S. Grant | 14.F.2; 16.A.2b; 16.B.2d(US); 17.A.2b | No frame work available. |
| W is for White Oak | 12.a.2a; 12.A.3a; 12.A.3b; 12.A.3c | 12.4.04; 12.4.06; 12.7.02; 12.7.03; 12.7.04 |
| Crops for Fuel | 1.C.2d; 1.C.2c; 12.E.2c; 12.E.3c; 1.B.3a | 1.4.09; 1.4.16; 1.4.17; 13.4.12; 13.4.13 |

Student Activities Answer

| | |
|--|---|
| A is for Arrowheads | Short Answer questions are open to the students opinion. |
| D is for Mr. Deere | 1. Opinion but most will say liquid. 2. Slow poke will feel like a solid, hard to the touch as first. Like a liquid because eventually gets sinking feeling. 3 &4. Behaves like a solid and rolls into a ball, but then goes back to a liquid when put on table. 5. & 6. Student opinion. |
| E is for Illinois Ecosystems | Diagrams will vary depending on students' choice of ecosystems. 1. Air, water & food 2. Through food 3. Convert into food 4. Breaks organisms down to make soil more fertile for new plants. |
| I is for Illinois Geography | 1. Charles Mound 2. Tampico 3. Lincoln 4. Springfield. 5. Galena 6. Chicago 7. Chestnut 8. Morton 9. Collinsville 10. Olney 11. Metropolis 12. Kaskaskia 13. Vandalia |
| L is for Lincoln | 1. 1809 2. 1857 3. 1863 4. 1865 5. 1830 6. 1842 7. 1860 8. 1837 9. 1862 10. 1840 |
| Transportation Issues in Illinois | Essay will have varied answers bases on students research and opinions. |
| The Illinois Charm | Each charm will contain material provided by the teacher for each of the Illinois symbols. |
| U is for Ulysses S. Grant | 1. State abbreviations 2. Union States (blue)=Ca, Or, Ks, Mn, Ia, Wi, Il, In, Mi, Oh, Wv, Pa, Ny, De, Nj, Ct, Ri, Ma, Vt, Nh and Me. Confederate State (gray): Tx, Ar, La, Ms, Al, Ga, Fl, Tn, Sc, Nc and Va. 5. Latitude and Longitude of the first Battle of Belmont: 36 degrees 47'00.21" North by 88 degrees 56' 28.49" West with an elevation of 350ft. |
| W is for White Oak | Individual projects will vary. |
| Crops for Fuel | Positives= 1,3,4,8,10,12 Negatives= 2,5,6,7,9,11,13,14,15 Some room for interpretation and discussion. |



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