

Prairie Basics

Grade Level: 4-8

Lesson Overview

Illinois is now largely covered by corn, soybeans, and other crops, but it was once covered by tallgrass prairie. This lesson conveys highlights of Illinois' prairie history and reinforces computation skills as students solve a word puzzle about our state prairie grass.

Student Objectives

1. Demonstrate computation skills to answer problems.

Materials

- ✓ Prairie Basics worksheets

Vocabulary

- **acre** – a measure of land area equivalent to 43,560 square feet; about the size of a football field without the end zones.
- **Andropogon gerardii** – the scientific name for the state prairie grass of Illinois, Big Bluestem; also goes by the nickname of “Turkeyfoot.”
- **prairie** – the expansive, temperate North American grassland habitat dominated by more or less drought-tolerant grasses and mixed with various herbaceous broadleaf annuals and perennials; comes from the French word for “meadow” and is often referred to as an “ocean of grass” in historical writings.
- **rhizome** – a thick underground horizontal stem that produces roots and has shoots that develop into new plants; also called rootstock.
- **root** – a plant part that holds the plant in place and soaks up water and minerals.
- **sod** – surface layer of ground containing a mat of grass and grass roots.

Procedure

Have the students complete Prairie Basics worksheets.

Extension Activities

This lesson coordinates with the Prairie Plant Adaptations lesson.

Standards

Illinois Mathematics Standard

CC.7.EE.3 Solve real-life and mathematical problems using numerical and algebraic expressions and equations. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations as strategies to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.

Illinois English Language Arts Standard

ELA.RI.1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

The **M**ultidisciplinary **A**gricultural Integrated Curriculum (mAGic) was created in 2004 under the leadership of the Illinois State Board of Education (ISBE) and the Facilitating Coordination in Agricultural Education Project (FCAE). Funding was made available through the FCAE grant budget from the agricultural education line item of the ISBE budget. This revision, as printed, was developed in January 2021.



These mAGic lessons are designed to bring agriculture to life in your classroom. They address the Illinois Learning Standards in math, science, English language arts and social studies.

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Name _____

Prairie Basics Worksheet 1

Solve the following problems in order to find the missing words that are needed to complete the paragraph on the following page.

Answer Line Numbers	Perform this calculation: (add, subtract, multiply, or find lowest common denominator)	Compare to this calculation:	If the answers are the same, then enter:	If the answers are different, then enter:
1 and 14	$95-19 =$	$19 \times 4 =$	A	W
20	$18/162 =$	$1/9 =$	U	L
5,7,9,26,27,33, and 39	$702+398 =$	$120 \times 10 =$	S	O
24	$4/24 =$	$1/4 =$	M	Y
17, 18 and 31	$127+179 =$	$34 \times 9 =$	I	Z
3 and 16	$33/11 =$	$1/3 =$	H	D
38	$167-88 =$	$80-1 =$	L	F
8 and 11	$30/180 =$	$10/60 =$	G	Y
30	$28 \times 7 =$	$49 \times 4 =$	H	K
25	$28/98 =$	$14/49 =$	F	U
12, 23, and 35	$485-348 =$	$23 \times 6 =$	T	E
32	$10/10 =$	$100/100 =$	Z	I
36	$598+335 =$	$311 \times 3 =$	S	E
2 and 10	$121/11 =$	$11 \times 11 =$	G	N
34	$581-396 =$	$13 \times 15 =$	P	M
6 and 37	$36/54 =$	$6/9 =$	P	O
19 and 28	$678+2,034 =$	$678 \times 4 =$	T	R
22	$200-99 =$	$10+1 =$	D	K
4,13,15,21, and 29	$17/51 =$	$3/27 =$	N	R
40	$684+386 =$	$1,456-386 =$	W	A

Prairie Basics Worksheet 1 ANSWER KEY

Answer Line Numbers	Perform this calculation: (add, subtract, multiply, or find lowest common denominator)	Compare to this calculation:	If the answers are the same, then enter:	If the answers are different, then enter:
1 and 14	$95-19=76$	$19 \times 4=76$	A	
20	$18/162=1/9$	$1/9=1/9$	U	
5,7,9,26,27,33, and 39	$702+398=1,100$	$120 \times 10=1,200$		O
24	$4/24=1/6$	$1/4=1/4$		Y
17, 18 and 31	$127+179=306$	$34 \times 9=306$	I	
3 and 16	$33/11=3$	$1/3=1/3$		D
38	$167-88=79$	$80-1=79$	L	
8, 11 and 35	$30/180=1/6$	$10/60=1/6$	G	
30	$28 \times 7=196$	$49 \times 4=196$	H	
25	$28/98=2/7$	$14/49=2/7$	F	
12, 23, and 35	$485-348=137$	$23 \times 6=138$		E
32	$10/10=1$	$100/100=1$	I	Z
36	$598+335=933$	$311 \times 3=933$	S	
2 and 10	$121/11=11$	$11 \times 11=121$		N
34	$581-396=185$	$13 \times 15=195$		M
6 and 37	$36/54=2/3$	$6/9=2/3$	P	
19 and 28	$678+2,034=2,712$	$678 \times 4=2,712$	T	
22	$200-99=101$	$10+1=11$		K
4,13,15,21, and 29	$17/51=1/3$	$3/27=1/9$		R
40	$684+386=1,070$	$1,456-386=1,070$	W	

Prairie Basics Worksheet 2

Illinois Prairie Basics

In the early 1800's, Illinois was covered by 22 million acres of prairie and 14 million acres of forest. Prairies were found mainly in the northern two-thirds of the state with forest in the southern one-third. Illinois was the first state that settlers from the East traveled to that had such large areas of grasslands. These settlers are responsible for calling Illinois the "Prairie State."

In 1989, Big Bluestem was named as Illinois' state prairie grass. This state symbol has the scientific name of _____, or the

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

nickname of _____ because of the shape of its seed head.

19 20 21 22 23 24 25 26 27 28

Big Bluestem has roots that go deep into the soil. The roots of this grass spread by sending out strong, tough _____.

29 30 31 32 33 34 35 36

and matted sod that early settlers had a difficult time cutting through. The invention of the

steel _____ by John Deere is credited with being the tool that "broke the prairie."

37 38 39 40

The richness of the prairie soil meant that most of this native prairie was converted to agricultural practices. By 1978, less than 2,300 acres of native prairie still existed in Illinois. Most of the undisturbed prairie sites in Illinois today may be found along railroad rights-of way, in pioneer cemeteries, or on sites unsuitable for farming.

Prairie Basics Worksheet 2 ANSWER KEY

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