

How Many Deer Are Here?

Lesson Overview

Hunting for meat and sport can be a contentious topic. But the fact is that without natural predators like wolves, hunting is necessary to keep the Illinois deer population at a healthy level. This lesson will reinforce chart-reading, math, and map skills as students work with actual deer population statistics.

Student Objectives

1. Interpret data to solve basic math problems.
2. Understand the need for deer hunting in Illinois.

Grade Level: 4-8

Materials

- ✓ Deer in Illinois
- ✓ Illinois Deer Harvest Statistics
- ✓ Illinois Deer Harvests worksheet
- ✓ Illinois Harvest by County worksheet
- ✓ How Many Deer are Here? Answer Key (Optional)

Vocabulary

- **antlers** – solid, bony, often branched horn of a deer or one of its close relatives that is cast off and grown anew each year; made mostly of calcium.
- **buck** – mature male of various mammals (deer, rabbits, etc).
- **deer** – a ruminant mammal belonging to the family Cervidae.
- **doe** – a mature female of various mammals (deer, rabbits, etc).
- **fawn** – a deer in the first year of its life.
- **harvest** – legal killing of an animal, such as deer.
- **herbivore** – animal that eats only plant material.
- **herd** – a group of animals, especially hooved mammals, that live, feed, or migrate together or are kept together as livestock; all of a species of such animals in a given area.
- **predator** – an organism that captures and feeds on other organisms.
- **ruminant** - a four-footed, even-toed, cud-chewing mammal with four compartments to its stomach.
- **venison** – meat from large game animals; often used specifically for deer meat.

Background Information

Hunting in Illinois is not only for recreation. Hunting is a necessary device to control the wildlife populations and manage their habitats.

Procedure

1. Have the students read the Deer in Illinois either independently or as a class.
2. As a class or in small groups, look at the Illinois Deer Harvest Statistics.
3. Instruct students to complete the Illinois Deer Harvests worksheet using the deer harvest information from the most previous year (2019). *Please note: for schools that cover multiple counties, it will be easier to have the students utilize the information from the county their school is located in.* NOTE: Students may find it helpful to use a highlighter when working with the table of information.
4. Instruct students to complete the Illinois Harvest by County worksheet by using the 2017 – 2019 information provided on the Illinois Deer Harvest Statistics information sheet. Each student should follow the colors on the legend and shade the map accordingly.

Extension Activities

1. Have the students draw conclusions from Illinois Harvest by County about deer hunting in the different areas of Illinois.
2. Have students research historical and most current data. Data can be found at: <https://www2.illinois.gov/dnr/hunting/deer/Pages/AnnualDeerHarvestReports.asp>
[X](#)

Standards

Illinois Mathematics Standard

CC.7.RP.2b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

Illinois English Language Arts Standard

ELA. L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

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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Deer in Illinois

- Male deer are called bucks.
- Female deer are called does.
- Fawns are young deer.

- Antlers are found only on bucks.
- Antlers grow new every year. They are solid and bony and made mostly of calcium.

- Deer are herbivores.
- Deer eat twigs, leaves, bark, buds, bushes, etc.
- Deer eat mostly at twilight.

- A doe is pregnant only one time per year.
- A doe typically gives birth to one or two fawns at a time.

- Fawns generally stay with their mothers for the first year of life.
- When young males leave their mothers, they may never see them again; females may come back to their mothers with their own offspring to form a herd.

- Deer can live up to 18 years.
- If not controlled, herd sizes can double every 2 – 3 years.

- Deer cause significant damage to landscaping, farm crops, and vehicles.
- It is difficult to assign a dollar amount to the damage caused by deer to crops and landscaping.

- In 2018, Illinois ranked 32nd in the number of deer-related vehicle accidents in the United States. (credit: dupageforest.org)
- In Illinois, during 2017, there were 15,004 accidents, which accounted for 4.8% of all crashes. (credit: Illinois Department of Transportation)

- To manage the damage and number of accidents, Illinois allows hunters to harvest deer during controlled seasons each year.
- Hunters must have permits and are only allowed to harvest limited numbers of deer.

- Deer meat is called venison.

Illinois Deer Harvest Statistics

County	2019 Total	2018 Total	2017 Total
Adams	3875	3947	3661
Alexander	733	729	732
Bond	1169	1160	1043
Boone	281	297	288
Brown	2118	2324	2196
Bureau	1758	1864	1732
Calhoun	1838	1710	1585
Carroll	1350	1375	1383
Cass	1317	1395	1303
Champaign	637	601	598
Christian	1166	1174	1073
Clark	1982	2144	2056
Clay	1930	1950	1796
Clinton	1251	1249	1119
Coles	1432	1376	1268
Cook	148	143	121
Crawford	1999	2155	2078
Cumberland	1430	1308	1264
Dekalb	321	306	283
Dewitt	926	968	857
Douglas	335	344	331
DuPage	42	29	37
Edgar	1068	1057	1066
Edwards	714	686	672
Effingham	1685	1541	1350
Fayette	2705	2558	2377
Ford	175	172	171
Franklin	2723	2582	2477
Fulton	4028	3978	4052
Gallatin	739	704	762
Green	2074	1965	1948
Grundy	682	702	682
Hamilton	2171	2027	2044
Hancock	2713	2720	2720
Hardin	1416	1363	1485
Henderson	806	799	851
Henry	992	1032	1038
Iroquois	974	889	929
Jackson	3545	3710	3584
Jasper	1860	1753	1643
Jefferson	3809	3550	3642
Jersey	1326	1256	1168
JoDaviess	2998	3340	3326
Johnson	2266	2302	2355
Kane	360	365	342
Kankakee	558	599	506
Kendall	290	293	282
Knox	2262	2293	2252
Lake	295	310	326
LaSalle	1584	1700	1480
Lawrence	1193	1128	1147
Lee	971	1012	999

County	2019 Total	2018 Total	2017 Total
Livingston	653	682	619
Logan	858	760	666
Macon	770	737	731
Macoupin	3038	2960	2608
Madison	1729	1796	1613
Marion	2947	2833	2798
Marshall	1009	981	946
Mason	894	888	794
Massac	866	813	887
McDonough	1429	1595	1505
McHenry	873	915	842
McLean	1113	1165	1073
Menard	847	802	792
Mercer	1465	1546	1479
Monroe	1544	1533	1456
Montgomery	1712	1581	1469
Morgan	1360	1371	1324
Moultrie	663	604	579
Ogle	1435	1582	1562
Peoria	1888	1755	1821
Perry	2741	2585	2504
Piatt	396	308	286
Pike	4397	4442	4367
Pope	2472	2369	2440
Pulaski	661	531	608
Putnam	654	674	614
Randolph	3794	3587	3683
Richland	1274	1148	1204
Rock Island	1375	1659	1534
Saline	1753	1672	1605
Sangamon	1517	1527	1457
Schuyler	2519	2630	2646
Scott	645	601	592
Shelby	2300	2153	1946
St. Clair	1443	309	332
Stark	311	1428	1346
Stephenson	1216	1252	1342
Tazewell	1220	1143	1098
Union	2342	2372	2438
Vermilion	1514	1423	1447
Wabash	389	397	429
Warren	769	785	844
Washington	1607	1594	1586
Wayne	2618	2418	2565
White	1420	1325	1489
Whiteside	1093	1157	1123
Will	1051	1155	1001
Williamson	3358	3109	3026
Winnebago	831	944	883
Woodford	1381	1179	1216
Totals	153174	151709	147695

Name _____

Illinois Deer Harvests

1. What is the difference between the county with the highest and lowest numbers of deer harvested for each of the 3 years (2017, 2018, 2019)?
2. What is the total number of deer harvested in your county (or one near it) for this 3-year period?
3. List the five counties with the highest amount of deer harvested in 2019. What is the total number of deer harvested for the top 5 counties in 2019?
4. List the five counties with the least amount of deer harvested in 2019. What is the total number of deer harvested for these five counties in 2019?
5. What is the difference in number of deer harvested in 2019 between the top 5 and lowest 5 counties?
6. What is the average deer harvest for your county (or one near it) in this 3-year period? Please round to the nearest whole number.
7. What fraction represents the number of deer harvested in the top five counties in 2019 vs. total number of deer harvested in Illinois in 2019?
8. What fraction represents the five counties with the least amount of deer harvested in 2019 vs. total number of deer harvested in Illinois in 2019?
9. Design a graph for the 3-year deer harvest for your county (or one near it).
10. Using the information provided in the table, make up a question of your own, complete with answer.

Illinois Deer Harvests ANSWER KEY

1. 2019 – 4,355 (4,397 – 42)
2018 – 4,413 (4,442 – 29)
2017 – 4,330 (4,367 – 37)
2. Answer is dependent on the county in which you live.
3. Pike, Fulton, Adams, Jefferson, Randolph; 19,903 (4,397 + 4,028 + 3,875 + 3,809 + 3,794)
4. DuPage, Cook, Ford, Boone, Kendall; 936 (42 + 148 + 175 + 281 + 290)
5. 18,967 (19,903 – 936)
6. Answer is dependent on the county in which you live.
7. 19,903/153,174
8. 936/153,174
9. Answer is dependent on the county in which you live.
10. Answers will vary.

Illinois Harvest by County

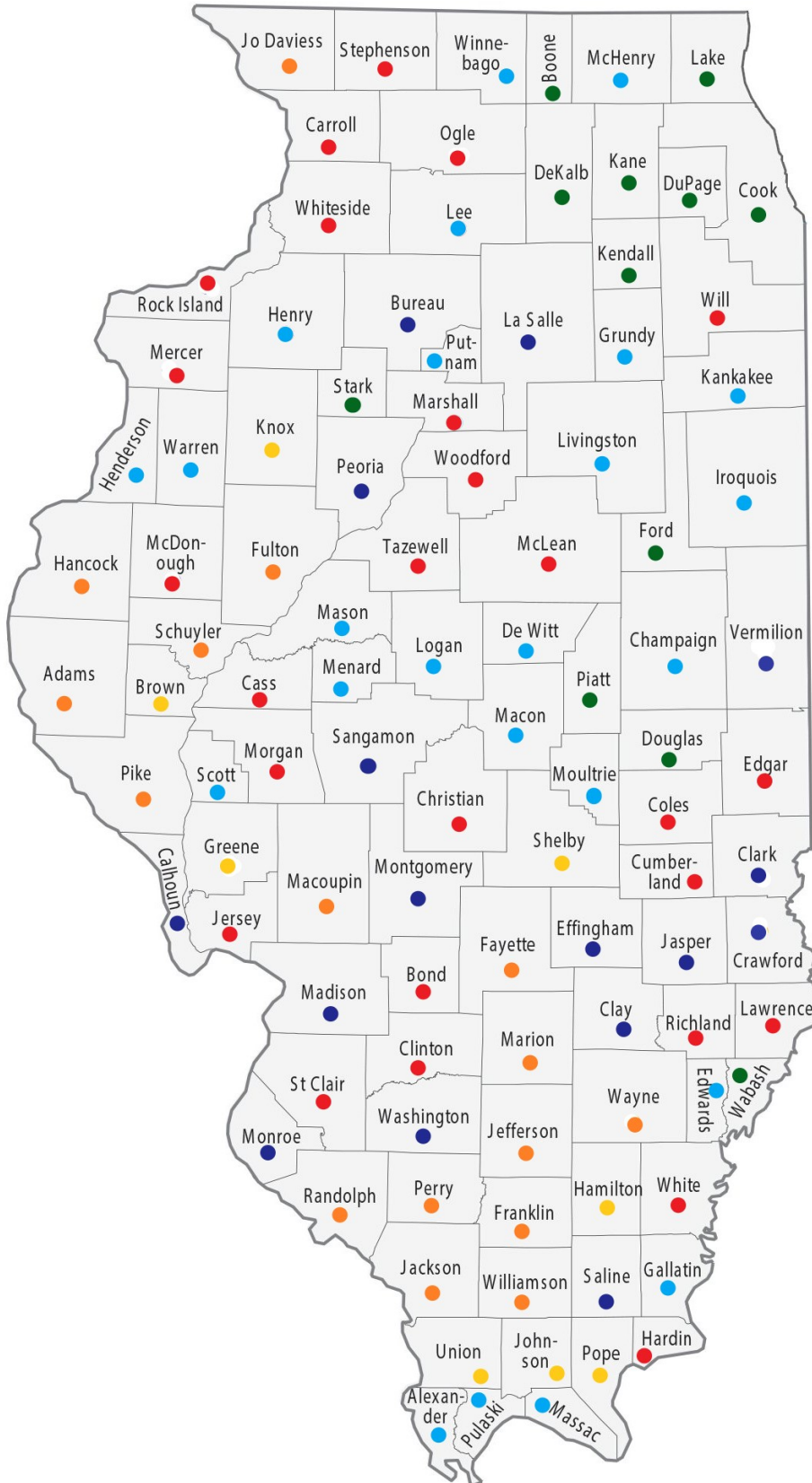
Utilize statistics from most recent year to code the map



Key:

- 1 – 499 (G = green)
- 500 – 999 (B = blue)
- 1,000 – 1,499 (R = red);
- 1,500 – 1,999 (P = purple)
- 2,000 – 2,499 (Y = yellow)
- Over 2,500 (O = orange)

Illinois Harvest by County ANSWER KEY



Green	Blue	Red	Purple	Yellow	Orange
Boone	Alexander	Bond	Bureau	Brown	Adams
Cook	Champaign	Carroll	Calhoun	Green	Fayette
DeKalb	DeWitt	Cass	Clark	Hamilton	Franklin
Douglas	Edwards	Christian	Clay	Johnson	Fulton
DuPage	Gallatin	Clinton	Crawford	Knox	Hancock
Ford	Grundy	Coles	Effingham	Pope	Jackson
Kane	Henderson	Cumberland	Jasper	Shelby	Jefferson
Kendall	Henry	Edgar	LaSalle	Union	JoDaviess
Lake	Iroquois	Hardin	Madison		Macoupin
Piatt	Kankakee	Jersey	Monroe		Marion
Stark	Lee	Lawrence	Montgomery		Perry
Wabash	Livingston	Marshall	Peoria		Pike
	Logan	McDonough	Saline		Randolph
	Macon	McLean	Sangamon		Schuyler
	Mason	Mercer	Vermillions		Wayne
	Massac	Morgan	Washington		Williamson
	McHenry	Ogle			
	Menard	Richland			
	Moultrie	Rock Island			
	Pulaski	St. Clair			
	Putnam	Stephenson			
	Scott	Tazewell			
	Warren	White			
	Winnebago	Whiteside			
		Will			
		Woodford			