

Illinois Logic Puzzle

Grade Level: 4-8

Lesson Overview

A logic puzzle is a problem that can be solved using deductive reasoning. A deduction is a logical conclusion drawn from two or more true statements. One common type of logic puzzle involves a tool known as an elimination grid. In this activity, students will read about some popular Illinois destinations and then use an elimination grid to solve a puzzle.

Student Objectives

1. Practice logical thinking skills utilizing charts to draw conclusions based on information provided while learning about Illinois destinations.

Materials

- ✓ The Seven Wonders of Illinois Information Sheet
- ✓ The Seven Wonders of Illinois Logic Puzzle worksheet
- ✓ Chicago Illinois Logic Puzzle worksheet

Procedure

Allow students time to complete the Seven Wonders of Illinois Logic Puzzle and/or the Chicago Illinois Logic Puzzle and then compare answers. Please note the Seven Wonders of Illinois Logic Puzzle is was designed to be more basic. The Chicago Illinois Logic Puzzle was designed to be more challenging.

If you have not given your students a logic puzzle previously, you may want to help them understand the steps in finding an answer. Please keep in mind that not all of the information is given. Students should use the information available and the process of elimination to find the answers.

Note: If you are doing the Seven Wonders of Illinois Logic Puzzle, you will need to give the students a copy of The Seven Wonders of Illinois Student Information Sheet so that they will have the information necessary to complete the puzzle.

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.3. Analyze the interactions between individuals, events, and ideas in a text.

The **M**ultidisciplinary **A**gricultural **I**ntegrated **C**urriculum (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.

Illinois mAGic project update writers/reviewers: Rhodora Collins – Dekalb County; Suzi Myers – Kane County; Connie Niemann – Montgomery County; Debbie Ruff – Livingston County; Jennifer Waters – Sangamon County; Dawn Weinberg – Hancock County; and Carrie Winkelmann – Menard County.

The Seven Wonders of Illinois Information Sheet

During the spring of 2007, the Illinois Bureau of Tourism asked people to help determine the Seven Wonders of Illinois by nominating their favorite beautiful, interesting, or just plain quirky destinations around the state. Ten of the top nominations were listed for each of the seven areas of the state. Weekly, people voted for their favorites in each section. The vote was tallied, and sites receiving the least number of votes were eliminated, until the winners were announced on April 30, 2007. The wonders chosen from each of the seven areas are listed below.

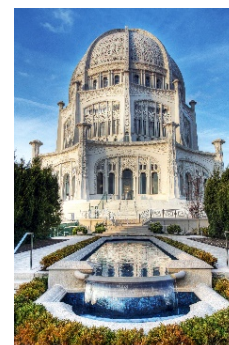
Chicago:

Wrigley Field is baseball's most beloved stadium, recognized worldwide for its charming ivy-covered walls and die-hard fans. The old scoreboard is still operated manually and, even with lights that allow for night games, the park remains one of the last "old-fashioned" open-air ballparks. Built in 1914 to house a baseball team called the Chicago Federals, the North Side ballpark was taken over by chewing gum magnate William Wrigley Jr., when he purchased the Chicago Cubs. The ballpark was officially named Wrigley Field in 1926 and 10 years later the trademark Boston ivy was planted along the park's brick walls.



Chicagoland:

On the shores of Lake Michigan, the awe-inspiring Baha'i House of Worship in Wilmette is one of only seven Baha'i temples in the world. This 20-story temple, completed in 1953 and designed by French Canadian architect Louis Bourgeois, features a nine-sided dome and is surrounded by nine pillars featuring intricate carvings of symbols from the world's major religions in chronological order (the number nine symbolizes completeness in the Baha'i faith). Its interior features walls of exquisite lace-like ornamentation surrounding a sanctuary where guests of all faiths can pray and meditate. Visitors can also spend hours strolling the plant covered grounds, which boast juniper trees, nine fountains, and two dozen varieties of flowers. The Baha'i House of Worship is open to all every day of the year. *(Note: Picture was provided by the Bahá'í National Center.)*



Northern:

In Utica, breathtaking bluffs, lush forests, sparkling waterfalls, and majestic canyons are Starved Rock State Park's primary attractions – and 13 miles of well-marked trails help visitors enjoy them all. Hikers will marvel at the 18 canyons, formed by glacial meltwater, that slice dramatically through tree-covered sandstone bluffs for four miles. Visitors will also learn about the Native American tribes and western explorers who inhabited the area long ago. The outdoor adventure continues with Starved Rock's recreational offerings including picnicking, fishing, boating, horseback riding and camping. Starved Rock Lodge and Conference Center, located on the park grounds, offers guests comfortable guest rooms, a full-service restaurant and an indoor swimming pool.



Central:

Allerton Park and Retreat Center was donated to the University of Illinois at Urbana-Champaign in 1946 by Robert Henry Allerton. The 1,500-acre estate, found near Monticello, was modeled after the 17th century Ham House in Surrey, England. An avid art collector, philanthropist and an artist himself, Robert Henry Allerton used the landscape as his canvas, designing the estate to ensure that earth, sky and water were visible from all the main rooms.



Today, the Allerton Mansion is used as a retreat and conference facility by visitors from around the world. It is surrounded by a magnificent forest, exquisitely manicured formal gardens, and more than 100 unique sculptures commissioned by Allerton and brought back from his travels around the world. Striving to maintain balanced, integrated, and sustainable relationships between people and nature, the public park is used for recreational activities such as hiking, bird watching, picnicking, cross-country skiing, leisurely strolls, and enjoyment of the formal gardens, garden ornaments, and sculptures. *(Note: Picture provided by Allerton Park & Retreat Center)*

Western:

In Rock Island, Black Hawk State Historic Site pays homage to the Sauk and Mesquakie (Fox) Indian tribes that occupied the area as far back as 12,000 years ago. The Hauburg Indian Museum, located in the historic site, interprets the culture of the Sauk and Fox tribes through full-size replicas of Sauk winter and summer houses and numerous artifacts, including Black Hawk's tomahawk, two



of his clay tobacco pipes and a bronze bust. The site features 208 acres of rolling wooded hills in one of the least-disturbed forests in the state. Nature lovers will encounter more than 175 species of birds and 30 species of wildflowers while walking along the four miles of marked hiking trails or picnicking in a designated picnic area along the scenic Rock River. While at the site, visitors can also explore the Singing Bird Nature Center, Bird Observation Area, the Dickson Pioneer Cemetery and an abandoned coal mine. *(Note: Picture provided by the Illinois Department of Natural Resources.)*

Southern:

Built in Benton in the early 1970s, this 18,000-acre reservoir was created to provide a dependable domestic water supply for a two-county area in Southern Illinois. Today, Rend Lake is one of the area's premier vacation spots with a range of recreational activities.



Approximately 13 miles long and three miles wide with 162 miles of shoreline, Rend Lake is stocked with

sport fish such as largemouth bass, crappie, bluegills, channel catfish and white bass. It's become a popular spot for bass tournaments. Beyond fishing, visitors can enjoy golfing, hunting, camping, or just relaxing on the beach. *(Note: Picture provided by www.rendlake.com.)*

Southwest:

The Meeting of the Great Rivers Scenic Byway offers onlookers 33 miles of majestic views, natural wildlife, river attractions, and quaint villages surrounding where the Mississippi, Illinois and Missouri rivers meet to flow to the ocean. The Great River Road not only offers scenic driving views, but also a 20-mile paved bike trail for cyclists to take in the towering limestone bluffs and tour historic towns from Hartford to Alton. Along the way, visitors will pass Camp River Dubois — the “Point of Departure” for Lewis and Clark’s expedition. They’ll also experience the piercing eyes of the Piasa Bird cliff painting, wind their way through Godfrey’s great corn maze, head back in time in Elsay and revel in the natural beauty of Pere Marquette State Park, the largest state park in Illinois.



Name _____

Seven Wonders of Illinois Logic Puzzle

In 2007, the Illinois Bureau of Tourism created a promotion in which people could vote on the Seven Wonders of Illinois. Suzi's grandchildren each wanted to visit one of the sites. Use the clues below to match the child with one of the seven wonders. The chart below helps you identify what you've learned from each clue. In the square where the vertical and horizontal lines meet is where you mark your possible answers. Read each clue and record the information on the chart. When you find a true match put a yes in the appropriate box. When you prove a combination false, put an x in the box. Continue until you find all the answers. When finished, fill in the blanks at the bottom of the page to answer who wanted to visit each of the Seven Wonders.

Note: You will need to use The Seven Wonders of Illinois Student Information Sheet to complete this puzzle.

	<u>Chicago</u> Wrigley Field	<u>Chicagoland</u> Baha'i House of Worship	<u>Northern</u> Starved Rock State Park	<u>Central</u> Allerton Park	<u>Western</u> Black Hawk State Historic Site	<u>Southern</u> Rend Lake	<u>Southwest</u> Meeting of the Great Rivers National Scenic Byway
Andrew							
Audrey							
Colin							
Cordi							
Heidi							
Holly							
Seth							

1. Heidi does not like baseball games, but Colin does.
2. Seth and Andrew are very interested in the Indian history of Illinois.
3. Audrey wants to visit where Lewis and Clark began their expedition.
4. Seth was so excited about seeing Black Hawk's tomahawk.
5. Cordi couldn't wait to try out her new fishing pole during the bass tournament.
6. Heidi was interested in old homes and gardens with statues.

Andrew wants to visit _____. Heidi wants to visit _____.

Audrey wants to visit _____. Holly wants to visit _____.

Colin wants to visit _____. Seth wants to visit _____.

Cordi wants to visit _____.

Seven Wonders of Illinois Logic Puzzle ANSWER KEY

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Andrew	X	X	Yes	X	X	X	X
Audrey	X	X	X	X	X	X	Yes
Colin	Yes	X	X	X	X	X	X
Cordi	X	X	X	X	X	Yes	X
Heidi	X	X	X	Yes	X	X	X
Holly	X	Yes	X	X	X	X	X
Seth	X	X	X	X	Yes	X	X

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Andrew wants to visit Northern. Heidi wants to visit Central.

Audrey wants to visit Southwest. Holly wants to visit Chicagoland.

Colin wants to visit Chicago. Seth wants to visit Western.

Cordi wants to visit Southern.

Name _____

Chicago Illinois Logic Puzzle

The Myers family went on a trip to Chicago. Each of them picked two places that were the highlight of their trip. Use the clues to find out each person's favorite part of the trip. The chart below will help you identify what you've learned from each clue. In the square where the vertical and horizontal lines meet is where you mark your possible answers. Read each clue and record the information on the chart. When you find a true match, put a yes in the appropriate box. When you prove a combination false, put an x in the box. Continue until you find all the answers. When finished, fill in the blanks at the bottom of the page.



1. The person who liked Lincoln Park Zoo also chose Shedd Aquarium.
2. Sawyer did not pick the Hancock Observatory, because he was afraid of heights.
3. Reilly did not pick Millennium Park or Shedd Aquarium.
4. Sawyer did not pick the Art Institute with all the impressionists' paintings.
5. Jessica did not pick Navy Pier or the Museum of Science and Industry.
6. Rick did not pick the Planetarium with the world's first Star Rider Theater.
7. Kerri did not pick the Hancock Observatory with its views of 4 states.
8. The person who picked Millennium Park also chose the Art Institute.
9. Jessica picked either the Art Institute or Shedd Aquarium.
10. Rick did not choose the Museum of Science and Industry, largest in the Western Hemisphere.
11. Jessica did not pick the Hancock Observatory.
12. Kerri did not choose either Millennium Park or the Museum of Science.
13. Rick chose either the Museum of Science and Industry or the Willis Tower.
14. Reilly did not choose the Hancock Observatory or Art Institute.
15. The person who chose the Field Museum did not choose the Planetarium.
16. Jessica did not choose the Shedd Aquarium and its amazing beluga whales.
17. The person who chose Navy Pier also chose the Planetarium.
18. One person chose both museums.
19. Reilly chose either the Willis Tower or the Planetarium.

	Millennium Park	Hancock Observatory	Lincoln Park Zoo	Field Museum	Navy Pier	Art Institute	Shedd Aquarium	Planetarium	Museum of Science & Industry	Willis Tower
Rick										
Sawyer										
Reilly										
Kerri										
Jessica										

Rick chose _____ and _____.

Sawyer chose _____ and _____.

Reilly chose _____ and _____.

Kerri chose _____ and _____.

Jessica chose _____ and _____.

Chicago Illinois Logic Puzzle ANSWER KEY

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Rick	X	YES	X	X	X	X	X	X	X	Yes
Sawyer	X	X	X	YES	X	X	X	X	YES	X
Reilly	X	X	X	X	YES	X	X	YES	X	X
Kerri	X	X	YES	X	X	X	YES	X	X	X
Jessica	YES	X	X	X	X	YES	X	X	X	X

Rick chose **Hancock Observatory** and **Willis Tower**.

Sawyer chose **Field Museum** and **Museum of Science and Industry**.

Reilly chose **Navy Pier** and **Planetarium**.

Kerri chose **Lincoln Park Zoo** and **Shedd Aquarium**.

Jess chose **Millennium Park** and **Art Institute**.