

ACROSS

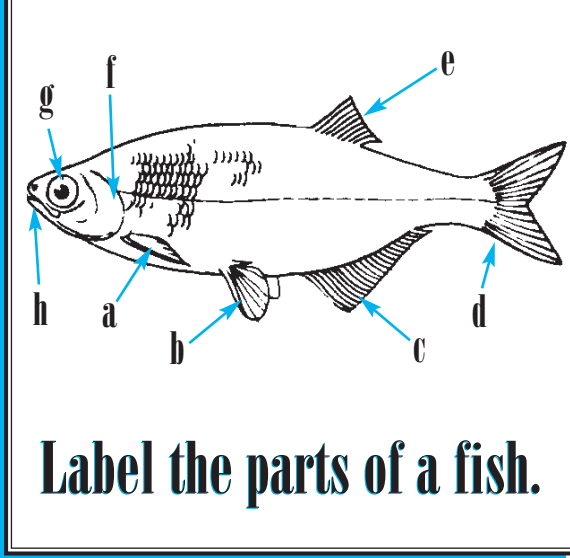
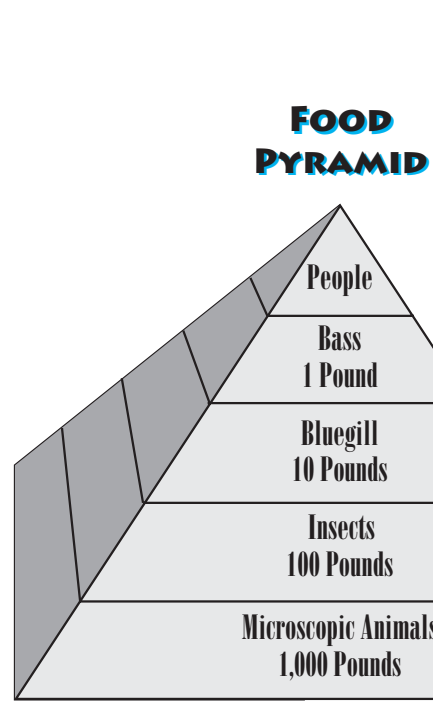
1. Water + space + food + shelter = _____
4. A unique State Natural Area, in Lake County (2 words)
6. Water + soil = _____
7. A _____ land contains water and water-loving plants.
8. The structure that holds and extends your fishing line
10. A Conservation _____ Officer may check your license.
13. A tubular fish with no ventral fins
15. A painted _____ is a reptile of wetlands.
16. A shallow gravel bar in a creek or stream
17. The total number of fish produced in a given period of time
20. Two hydrogen atoms bonded with one oxygen atom = _____
23. A body of water 1 acre or smaller in size
24. Water in a frozen state
25. Largemouth and smallmouth _____ are two fish species.
26. Device used to steer and propel a boat
27. Sense organ found on the side of the head
30. Female-produced reproductive cell
32. An external parasite, this blood-sucking annelid is found in wetlands.
34. This large waterfowl species, the Canada _____, is often seen flying in v-shaped flocks.
35. Tool used to hunt bullfrogs
39. Fin found on the ventral side of the fish, near the caudal fin
40. _____ water has very little salt content.
42. Rainbow, brook and brown are types of _____.
43. The maximum number of fish or ducks that can be harvested per day
45. Structure in a fish to help it control its depth in the water (2 words)
48. A common aquatic crustacean with large chelae
50. This type of tree produces acorns used for food by migrating ducks.
52. Series of pits on the side of a fish to detect vibrations and pressure changes (2 words)
56. Artificial bait used to attract and catch fish
57. Fine soil particles that may be carried and deposited by water
58. The bald _____ needs large wetland areas to hunt and nest.
61. A structure that holds back water, forming a pond or lake
62. A type of goose or frozen precipitation
64. What a predator feeds on
65. The Spanish word for sun
69. This metal has been used in shot and sinkers.
70. Light, heat and electricity are forms of _____.
74. An amphibian with a tail as an adult
75. A diatomic gas in air, soil and water needed by plants and animals to live
77. A primitive fish with diamond-shaped scales
79. A common name for the muskellunge
81. Mussels are _____ feeders—they strain particles from the water.
82. Not common
84. A number of fish of the same species swimming in a group
85. The place where two different habitat types meet
86. A _____ is a device used to help people skim over the water's surface.
87. The gizzard _____ is sometimes used as bait.
88. Water that has condensed from the air and covers the surface of objects
90. Fishing aid that lets you know when you have a bite
93. A sandy spot along a lake
95. Mollusk with a single shell (univalve)
96. Good for catching fish but bad for wildlife when left in the trees or on the shore
97. This mammal appears "masked."
98. The horse _____ is a plant the pioneers used to scour dirty dishes.
101. A measure of how good or bad something is, like water _____
102. The only venomous aquatic snake in Illinois
106. A _____ boat pushes barges on rivers.
109. A series of energy transfers involving producers and consumers (2 words)
111. Structure to help a fish move, maintain position, protect itself or steer
112. Source of all the energy on earth
114. Flotation device that should be worn when in a boat (2 words)
117. Wetlands mammal with luxurious fur
118. _____ Fishing Days are in June
120. An internal organ for gas exchange
121. A female white-tailed deer
122. Device that may be used to mark a captured animal
123. At flood stage the gates of a dam are _____ to let water flow past.
124. The horns in your boat may help you _____ down help in case of trouble.
125. A mollusk having two shells
128. A group of ducks
129. A legless reptile
131. The dragon _____ is an insect of wetlands.
132. A body of water greater than 1 acre in size
133. The eggs of a fish
134. Limb modified to achieve lift (flight)
135. Large reservoir south of Mount Vernon, _____ Lake
137. A large salamander found in water
141. An insect-eating wetlands bird, the spotted _____
143. A type of boat
146. The _____ is a short-billed rail (bird) sometimes seen in Illinois
147. The most numerous group of animals in the world
150. The county where Lusk Creek and the Smithland Lock and Dam are found
151. A unique habitat found along the Cache River
152. The trumpeter _____, a large white bird, winters in Illinois.

DOWN

1. A female duck
2. A large rodent with a flat tail
3. A larval frog
5. A large fish-eating bird of prey with a dark eyestripe
7. An area covered by water at least part of the year
9. The large body of water bordering Cook and Lake counties (2 words)
11. _____ thology is the study of fishes.
12. The _____-winged blackbird is often found in marshes and fields.
14. You must purchase a _____ to fish, hunt or trap.
19. This Illinois mammal likes to "play" (2 words)
20. The muskie is a member of the _____ family.
21. Worms, minnows, liver, spinners, jigs, crickets, etc.
22. A river that flows through Kendall and Kane counties
23. Eats prey
28. Holds your fishing line for easy casting
29. Microscopic organism - when it "blooms" fish kills can occur
31. Structure for gas exchange in a fish
33. The flower spike of this common wetland plant may produce over one million seeds.
34. The sweet _____ is a wetland tree.
36. Opposite of out
37. A flowing body of water smaller than a river
38. The _____ fish, an exotic species, is related to the carp.
41. The thin protective plates covering most fishes
44. A tree of the swamp, used for making caskets
46. A clothing closure previously made from mussel shells
47. This fossil fuel is often found where wetlands once existed.
48. This wetland plant can be used to make a type of fishing pole.
49. A _____ boat uses wind power to move.
51. The state fish
53. Green-winged or blue-winged are types of this duck.
54. A _____ and reel help you to catch fish.
55. A parasitic fish in Lake Michigan
59. A large bird that scavenges for food near water
60. Population numbers so low that extinction is possible
62. Fish, snakes, ducks and people do it.
63. A cavity-nesting duck (2 words)
66. The _____ River borders the western edge of Illinois.
67. _____, made of nitrogen or phosphorous compounds, can pollute a wetland.
68. Nesting area for herons and egrets
71. Scaleless, bottom-feeding fish with barbels
72. The most common duck in Illinois
73. This tiny, energetic bird often nests in wetland vegetation.
76. Going...going.....
78. A deep water area in a river or stream
79. The winding or turning of a river
80. The Mississippi _____ is a bird that nests in southwestern Illinois.
83. The Ohio _____ joins the Mississippi near Cairo.
85. Movement of soil by wind and water
87. It wasn't a great white but one of these fishes was once caught near Alton
89. The Asiatic _____ is an exotic species found in Illinois waters.
91. A small bush found on the edges of wetlands
92. The American _____ is a white-flowered plant with floating leaves.
93. Contains an aft, stern, port and bow
94. The great blue _____ is a common wetland wading bird.
99. This boat uses oar power.
100. The process plants use to capture the sun's energy in glucose
103. The river that flows past Superman's city
104. This dry-skinned amphibian lives on land as an adult
105. The water _____ is an insect that seems to skate across the water's surface.
107. Mollusks use their mantle to secrete their _____.
108. A tree found on the edges of wetlands, its twigs are often used to make baskets.
110. Some people _____ beavers, muskrats and mink for their fur/pelts.
113. This structure is made by a large aquatic rodent with branches it has gnawed from trees (2 words).
115. A belted, fish-eating bird
116. The least _____ is a small, fish-eating bird related to gulls.
119. Leopard, cricket and crayfish are types of this amphibian.
121. The largest frog in Illinois
125. They flowering plants that float as a mat on still water
126. Silver and sugar are types of this tree.
127. The _____ fin is a primitive fish of sluggish waters.
130. Another name for the bottom of a lake, river or other body of water
131. This fish originally came from China and is related to the goldfish.
134. _____ Massac State Park is on the bank of the Ohio River.
136. This type of foot helps beavers and ducks swim.
137. This tool helps you land the monster bass you caught.
138. A member of the catfish family that is rarely over 4" long
149. Device to transport water from a river, lake or well to a water treatment plant
151. Walleye, sauger, logperch and a "yellow" variety are members of this family.
152. River that enters the Ohio River south of New Haven
153. Not the African mammal, but the exotic mussel
154. A structure built to hold eggs
155. Exhibits depicting aquatic areas may be seen at the Illinois State _____
156. A type of small salamander whose immature form is called an eft
159. The time when fish lay their eggs

ILLINOIS AQUATIC RESOURCES

RESOURCES A CROSSWORD PUZZLE



- ___ Mouth
- ___ Dorsal fin
- ___ Anal fin
- ___ Eye
- ___ Caudal (tail) fin
- ___ Pectoral fin
- ___ Pelvic fin
- ___ Operculum (gill cover)

Visit the Dunes at State Park.

GREAT BLUE HERON

BEAVER

GIANT WATER BUG

CRAYFISH

CAT-TAIL

SILVER MAPLE

MONARCH BUTTERFLY

DRAGONFLY

RIVER OTTER

WATER SNAKE

COTTONWOOD

CHANNEL CATFISH

WHITE OAK

ADULT MAYFLY

RED OAK

RACCOON

SKUNK

WATER STRIDER

MAYFLY NYMPH

Support the Wildlife Preservation Fund on Your Illinois State Income Tax Form.

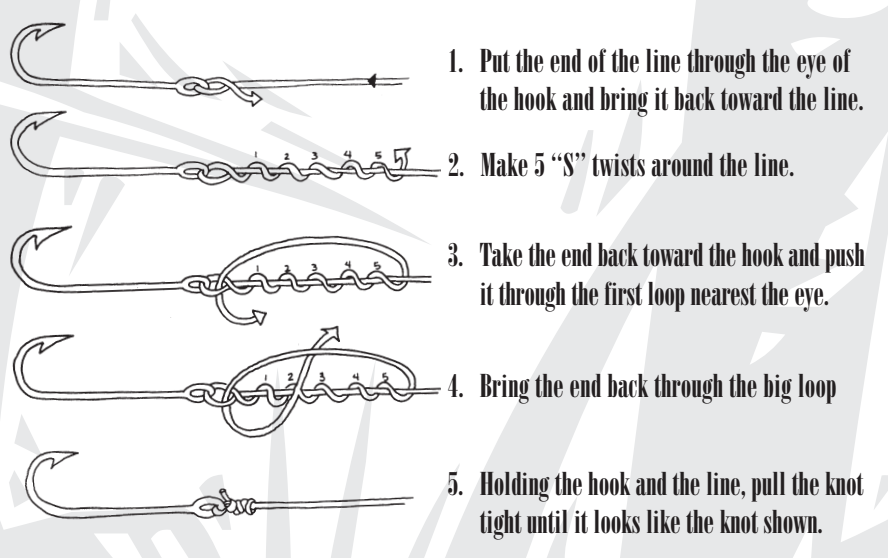
Who Must Have a Fishing License?

- A) 14yrs and over
- B) 15yrs and over
- C) 16yrs and over

Support State Parks. Buy an Environmental License Plate.

Visit Little Grassy Fish Hatchery.

How to Tie a Clinch Knot



If a bluegill lays 18,000 eggs of which 5,000 are eaten by predators and 2,000 die due to being too hot, what percent remain?

Answers found on back.



ILLINOIS AQUATIC RESOURCES

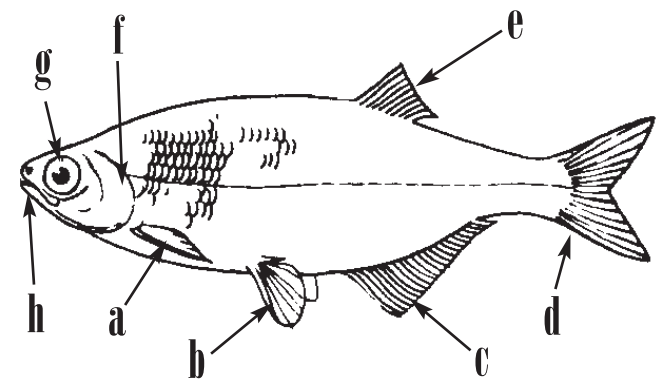
A CROSSWORD PUZZLE SOLUTION

You may wish to provide resource materials for students to use when working on the puzzle. A map of Illinois, field guides, a dictionary and other reference items would be valuable tools.

- | | |
|-----------------|-----------------|
| ACROSS | DOWN |
| 1 Habitat | 86 Ski |
| 4 Volo Bog | 87 Shad |
| 6 Mud | 88 Dew |
| 7 Wet | 90 Bobber |
| 8 Pole | 93 Beach |
| 10 Police | 95 Snail |
| 13 Ed | 96 Line |
| 15 Turtle | 97 Raccoon |
| 16 Rifle | 98 Tail |
| 17 Yield | 101 Quality |
| 18 Water | 102 Cottonmouth |
| 23 Pond | 106 Tag |
| 24 Ice | 109 Food chain |
| 25 Bass | 111 Pin |
| 26 Oar | 112 Sun |
| 27 Ear | 114 Life jacket |
| 30 Egg | 117 Mink |
| 32 Leech | 118 Free |
| 34 Goose | 120 Lung |
| 35 Gig | 121 Doe |
| 39 Anal | 122 Tag |
| 40 Fresh | 123 Open |
| 42 Trout | 124 Flag |
| 43 Limit | 125 Mussel |
| 45 Air bladder | 128 Flock |
| 48 Crayfish | 129 Snake |
| 50 Oak | 131 Fly |
| 52 Lateral line | 132 Lake |
| 56 Lure | 133 Roe |
| 57 Silt | 134 Wing |
| 58 Eagle | 135 Rend |
| 61 Dam | 137 Mudpuppy |
| 62 Snow | 141 Sandpiper |
| 64 Prey | 143 Canoe |
| 65 Sol | 146 Sora |
| 69 Lead | 147 Insects |
| 70 Energy | 150 Pope |
| 74 Salamander | 151 Swamp |
| 75 Oxygen | 152 Swan |
| 77 Gar | |
| 79 Muskie | |
| 81 Filter | |
| 82 Rare | |
| 84 School | |
| 85 Edge | |

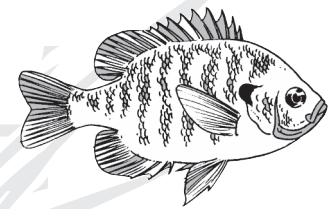
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|--------------------|-----------------|--------------------|
| 80 Kite | 1 Hen | 83 River |
| 83 River | 2 Beaver | 85 Erosion |
| 85 Erosion | 3 Tadpole | 87 Shark |
| 87 Shark | 5 Osprey | 89 Clam |
| 89 Clam | 7 Wetland | 91 Buttonbush |
| 91 Buttonbush | 9 Lake Michigan | 92 Lotus |
| 92 Lotus | 11 Ich | 93 Boat |
| 93 Boat | 12 Red | 94 Heron |
| 94 Heron | 14 License | 99 Row |
| 99 Row | 19 River otter | 100 Photosynthesis |
| 100 Photosynthesis | 20 Pike | 103 Ohio |
| 103 Ohio | 21 Bait | 104 Toad |
| 104 Toad | 22 Fox | 105 Strider |
| 105 Strider | 23 Predator | 107 Shell |
| 107 Shell | 28 Reel | 108 Willow |
| 108 Willow | 29 Algae | 110 Trap |
| 110 Trap | 31 Gill | 113 Beaver dam |
| 113 Beaver dam | 33 Cattail | 115 Kingfisher |
| 115 Kingfisher | 34 Gum | 116 Tern |
| 116 Tern | 36 In | 118 Frog |
| 118 Frog | 37 Creek | 119 Bullfrog |
| 119 Bullfrog | 38 Gold | 121 Duckweed |
| 121 Duckweed | 41 Scales | 125 Maple |
| 125 Maple | 44 Cypress | 126 Bow |
| 126 Bow | 46 Burton | 127 Bed |
| 127 Bed | 47 Oil | 130 Carp |
| 130 Carp | 48 Cane | 131 Fort |
| 131 Fort | 49 Sail | 134 Web |
| 134 Web | 51 Bluegill | 136 Net |
| 136 Net | 53 Teal | 137 Madtom |
| 137 Madtom | 54 Rod | 138 Pipe |
| 138 Pipe | 55 Lamprey | 139 Perch |
| 139 Perch | 59 Gull | 140 Wabash |
| 140 Wabash | 60 Endangered | 142 Zebra |
| 142 Zebra | 62 Swim | 144 Nest |
| 144 Nest | 63 Wood duck | 145 Museum |
| 145 Museum | 66 Mississippi | 148 Newt |
| 148 Newt | 67 Fertilizer | 149 Spawn |
| 149 Spawn | 68 Rookery | |
| | 71 Catfish | |
| | 72 Mallard | |
| | 73 Wren | |
| | 76 Gone | |
| | 78 Pool | |
| | 79 Meander | |

Label the parts of a fish



- | | |
|---------------------|---------------------------------|
| h Mouth | d Caudal (tail) fin |
| e Dorsal fin | a Pectoral fin |
| c Anal fin | b Pelvic fin |
| g Eye | f Operculum (gill cover) |

If a bluegill lays 18,000 eggs of which 5,000 are eaten by predators and 2,000 die due to being too hot, what percent remain?



61% remain

