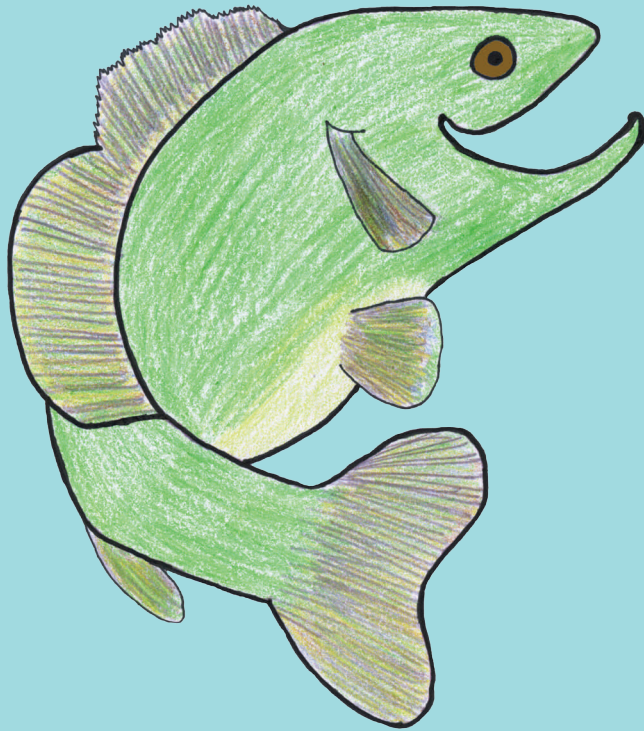


Fish Advisory Activity Book

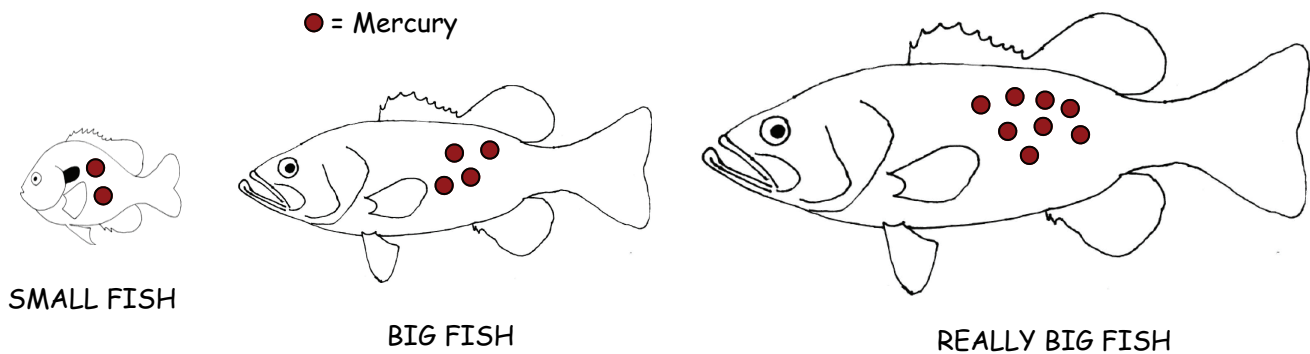


FISH AND MERCURY

Fish can be very good for you. This is because they contain many proteins and vitamins that your body needs. However, eating too much fish may be bad for you. Fish can have things in their bodies that can make us sick if we eat too much of it or eat it too many times.

Mercury - Nearly all fish contain at least a very small amount of mercury. But this does not mean that all fish are bad for you. It depends on lots of stuff like what kind of fish you eat, how much fish you eat, and how big the fish are that you eat.

Little fish have less mercury than big fish. When bigger fish eat the small fish, the mercury from the small fish goes into the big ones. As the big fish eat more and more fish, they get bigger and bigger and get more and more mercury in their body.



Catching really big fish may be more fun than catching small fish. But eating really big fish may not be as good for you as small fish. You should only eat really big bass or walleye once a month. You can eat other types of fish or smaller bass or walleye once a week.

How many words can you make using the letters from:
"fish advisory"

Example: dash, has, far

KEEP LEAD OUT OF YOUR MOUTH

How many times have you heard your parents say "Don't put that in your mouth!" or "Spit that out right now!?" Well, when you go fishing, there are lots of things you should not put in your mouth, like worms and grasshoppers. Some other things that might not sound as gross but can be bad for you are sinkers, weights, shots, jig heads, and weighted hooks. They can be bad for you if they are made out of lead.

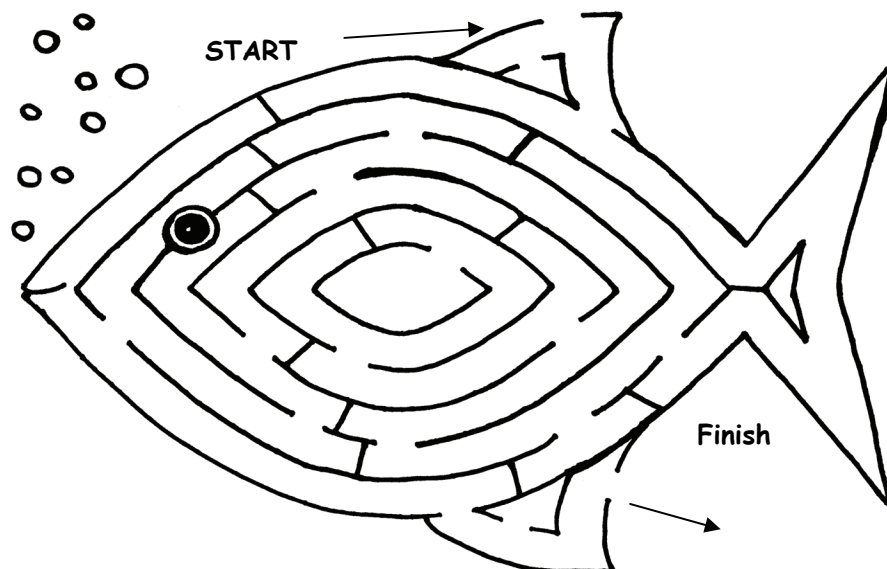
Lead is a very heavy metal that is easy to melt. Because it is so heavy and easy to make into the shape you want, it has been used in fishing for a long time to make weights.

But lead can be bad for you if you are not careful. If a lot of lead gets in your body, it can cause you to grow slower, not hear as well, be hyper, and can even make it harder to learn new things.

Don't worry though!!! There are lots of things you and your parents can do to keep this from happening.

1. The best thing to do is have your parents buy weights and sinkers from the store that are not made out of lead.
2. If you do use fishing weights that are made out of lead or you don't know what they are made out of:
 - a.) Do not put them in your mouth!
 - b.) Wash your hands before eating or drinking.
3. And you should listen when your parents tell you to eat your fruits and vegetables.

Fish Maze: Can you solve this fishy maze?



Fish Sudoku

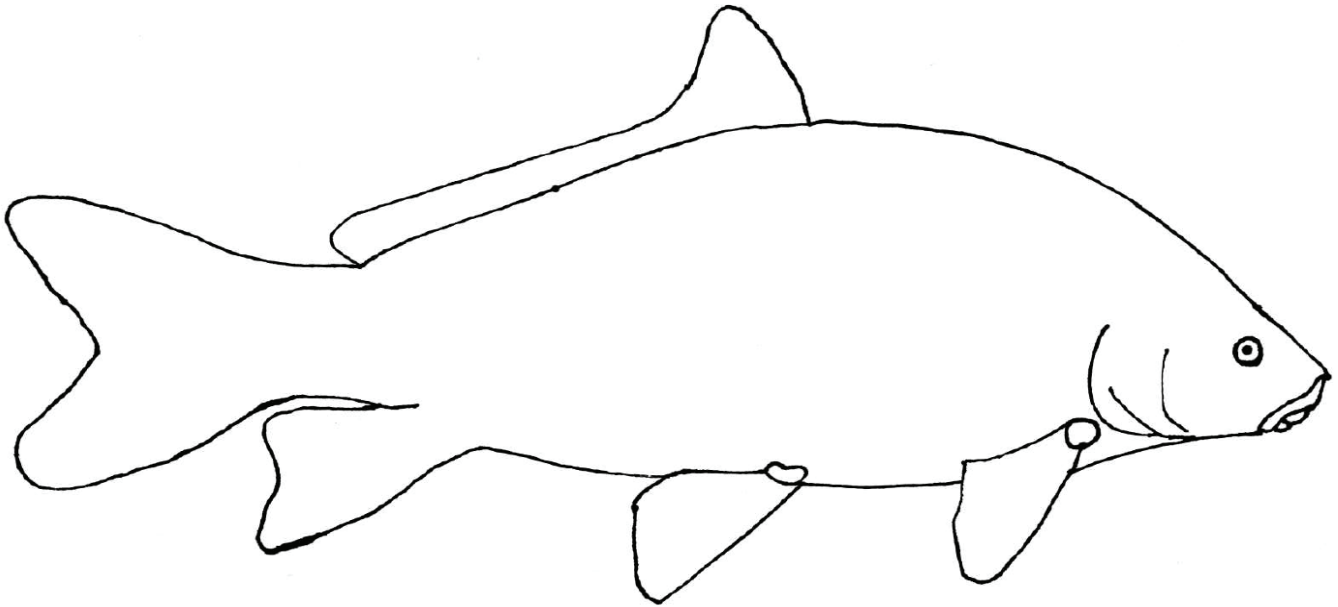
Fish is a good source of protein, vitamins and minerals that are very good for your body. Missouri has lots of different fish that are good to eat and fun to catch. Below is a list of Missouri fish. Write the names down in the boxes to meet the following conditions:

- a. The name of each fish shows up exactly one time in each horizontal row.
- b. The name of each fish shows up exactly one time in each vertical row.
- c. The name of each fish shows up exactly one time in each bold 3x3 box.

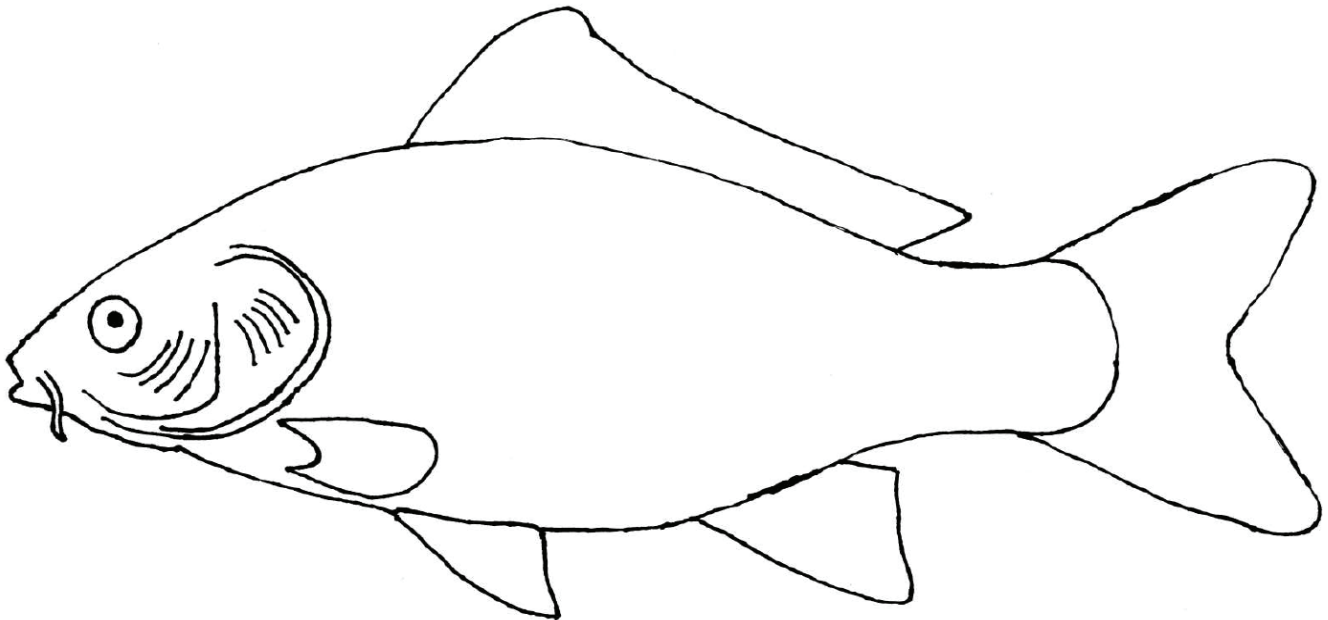
Sunfish Carp Bass Catfish Sucker

Crappie Perch Trout Buffalo

| | | | | | | | | |
|---------|---------|---------|---------|---------|--------|---------|---------|---------|
| Sunfish | | | Trout | | | Crappie | Sucker | |
| | | | Buffalo | Sunfish | | | Carp | |
| | Trout | | | Sucker | | Perch | | Buffalo |
| | | | | | | | Buffalo | |
| | Sucker | Bass | | Catfish | | Sunfish | Perch | |
| | Catfish | | | | | | | |
| Sucker | | Carp | | Buffalo | | | Bass | |
| | Buffalo | | | Perch | Sucker | | | |
| | Perch | Crappie | | | Carp | | | Sucker |



Buffalo - Buffalo are part of the sucker family. The sucker family feeds by sucking up stuff from the bottom of the water body they live in. In this family, Bigmouth Buffalo are special because they are filter feeders. They use their fine grill rakers to filter zooplankton (tiny animals that live in the water). Bigmouth Buffalo can be as long as three feet and weigh more than 80 pounds!



Carp - Carp are part of the minnow family and are related to Goldfish and Koi. No native Missouri minnow is longer than 14 inches. Common Carp are from Asia and were brought into Missouri in 1879 and can weigh up to 40 pounds. Another type of carp is the Silver Carp, which is better known as the Flying Carp. The Flying Carp can jump up to 10 feet in the air when they are scared.

CROSSWORD PUZZLE

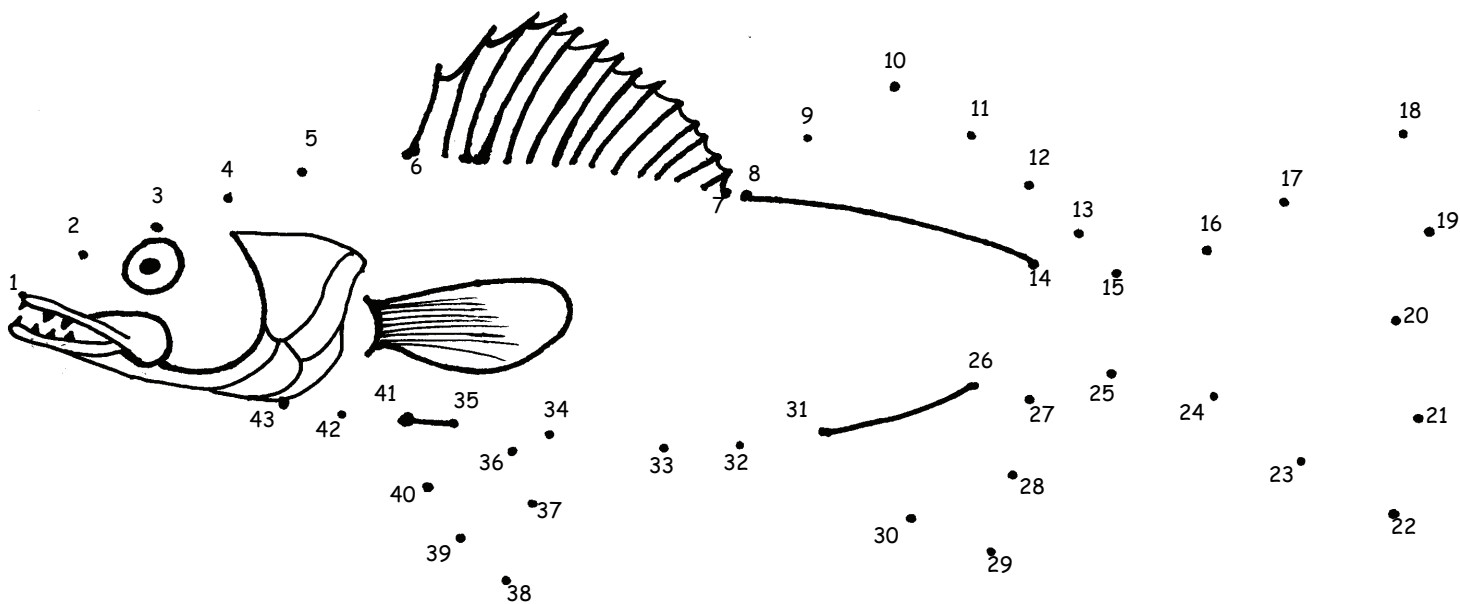
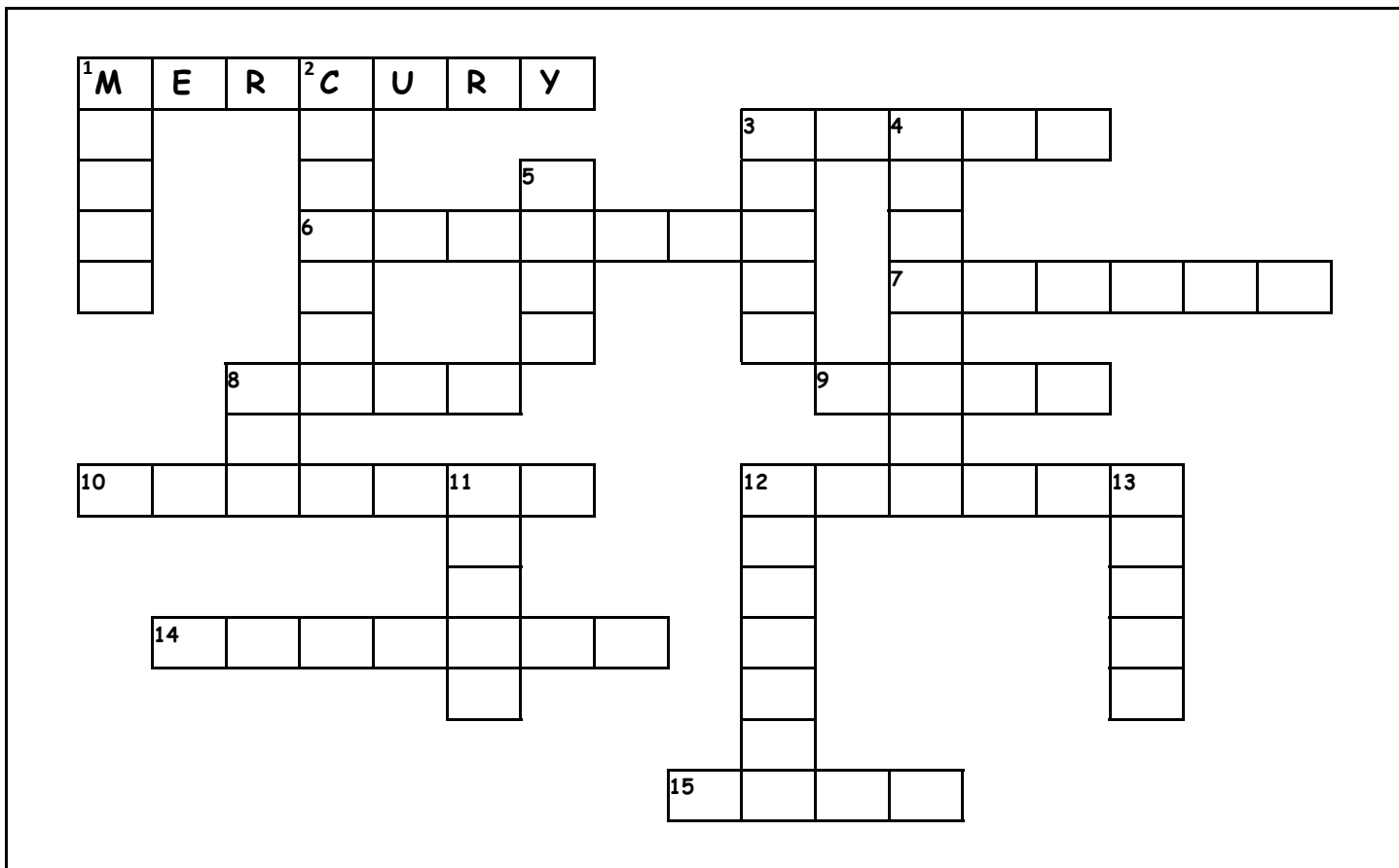
Using the clues below and the other facts from this book, solve the crossword puzzle on the next page!

ACROSS

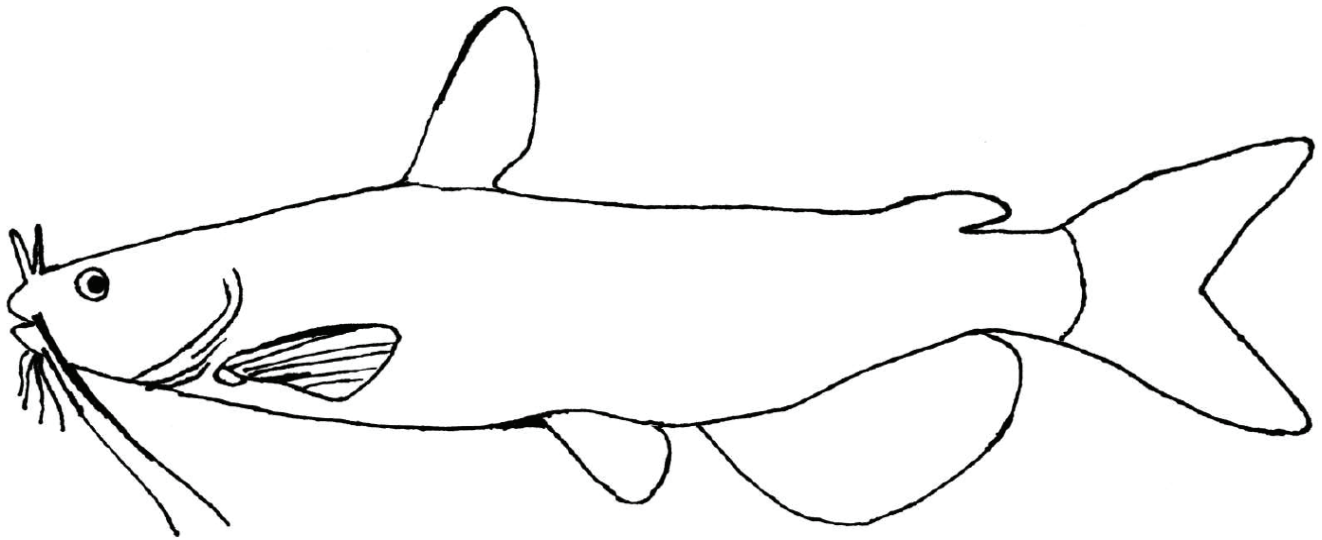
- 1) Nearly all fish contain at least a very small amount of mercury.
- 3) Walleye have eyes that reflect light like cat eyes do, and they have large mouths with many sharp _____.
- 6) You should ask your _____ to buy weights and sinkers from the store that are not made out of lead.
- 7) Common Carp are from Asia and were brought into Missouri in 1879 and can weigh up to 40 _____.
- 8) In the springtime, crappie can be found in shallow water near the shore with their _____.
- 9) When you are fishing, you should _____ your hands before eating, drinking, or putting your hands in or near your mouth.
- 10) There are 15 kinds of _____ in Missouri.
- 12) The sucker family feeds from sucking up material from the _____ of the water body they live in.
- 14) You can eat _____ bass or walleye and other fish not in the Missouri Fish Advisory once a week.
- 15) Catfish have _____ pairs of long barbels that look like cat whiskers around their mouth.

DOWN

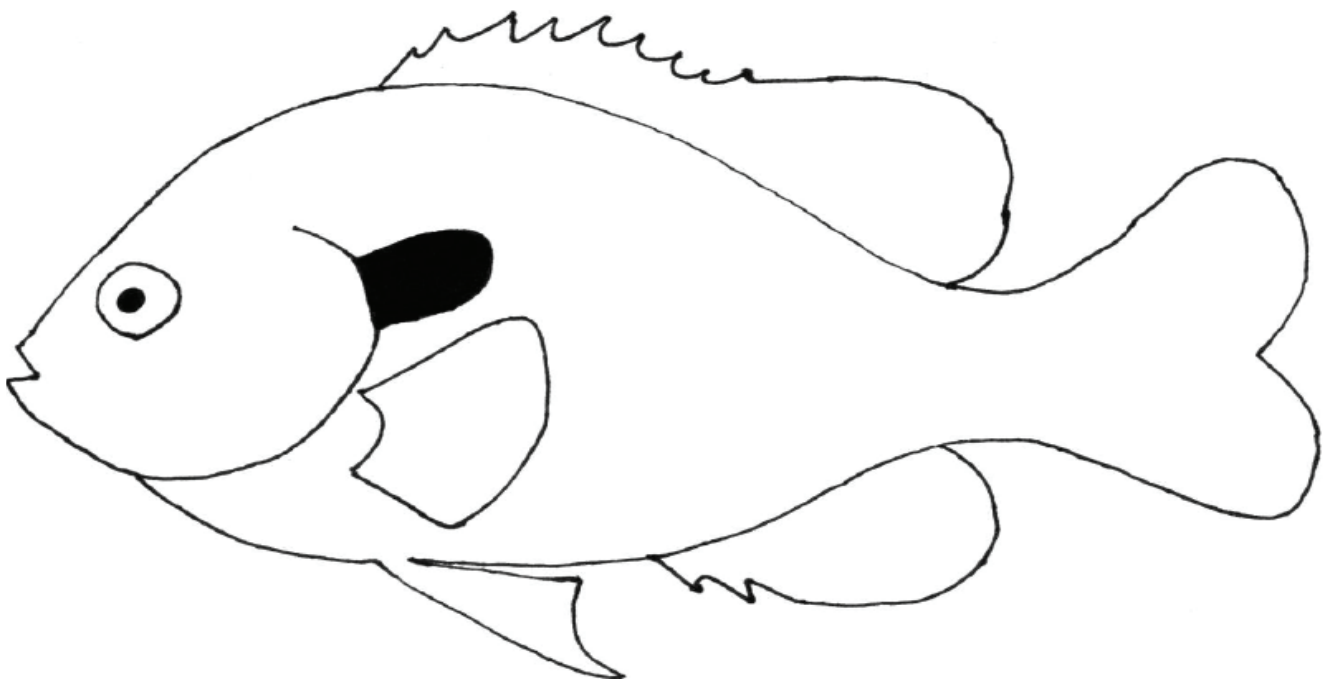
- 1) If you catch a really big bass or walleye, you should only eat them once a _____.
- 2) _____ is the second most popular sport fish in Missouri.
- 3) Catfish use their barbels to _____ with.
- 4) In the spring, bluegill make nests in shallow water that looks like _____ tracks.
- 5) Fishing sinkers, weights, shots, jig heads, and weighted hooks can be bad for you because many of them are made of _____.
- 8) You should _____ put lead sinkers or weights in your mouth.
- 11) The fish with the least amount of mercury are usually the _____ ones.
- 12) Bigmouth _____ can be as long as three feet and weigh more than 80 pounds.
- 13) Keep lead out of your _____.



Walleye - Walleye are found in Missouri in large streams and reservoirs. Walleye usually grow to be 12 to 28 inches long and weigh $\frac{1}{2}$ a pound to 8 pounds, but they can grow to weigh over 20 pounds. Walleye have eyes that reflect light like cat eyes do, and they have large mouths with many sharp teeth. Their eyes help them see other fish when it gets dark, so they can catch them using their sharp teeth.



Catfish - Catfish have four pairs of barbels that look like cat whiskers around their mouth. They use these barbels to taste, which comes in handy because they have bad eyesight. They use taste, touch and smell to find their food. There are 15 different kinds of catfish in Missouri. Some can get to be over 100 pounds, but some catfish in Missouri, called Madtoms, do not grow to be over 6 inches long when they are adults.

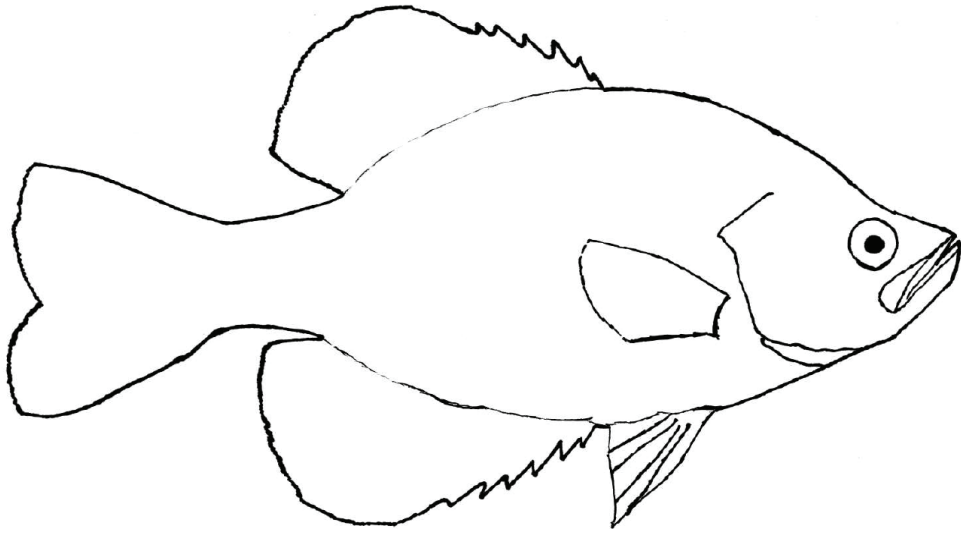


Bluegill - Bluegill have orange bellies and a dark spot on the gill that looks like an ear. The lower part of the gill is blue which is the reason for their name. The top of their body is usually green or brown, and sometimes they have stripes on their sides. They have a small mouth which they use to eat small fish, insects, worms and crayfish. In the spring, they make nests in shallow water that look like elephant tracks.

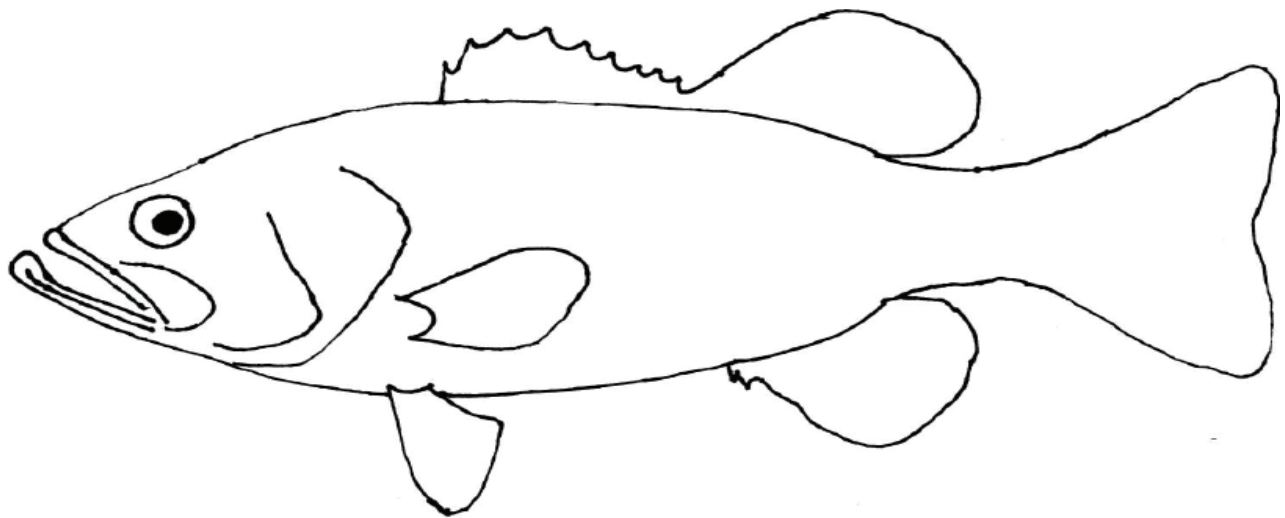
WORD FIND

BAIT, BASKET, BASS, BOAT, BOBBER, BUFFALO, CARP, CAST,
CATFISH, CREEK, FISHING HAT, HAND SANITIZER, HOOK, LAKE,
LEAD, LIFE JACKET, LINE, LURE, MERCURY, PIKE, PERCH, POND, REEL,
REPELLANT, RIVER, ROD, SINKER, SUNFISH, SUNGLASSES,
SUNSCREEN, SWIMMING, TACKLE BOX, TROUT, WALLEYE, WORM

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Y | S | A | O | B | A | S | K | E | T | R | E | C | I | T |
| L | R | C | W | A | L | L | E | Y | E | O | L | H | C | I |
| E | S | U | N | S | C | R | E | E | N | E | G | K | E | A |
| E | U | I | C | V | I | L | E | B | A | A | F | R | R | B |
| R | N | E | K | R | C | X | T | D | J | K | E | Y | P | C |
| O | F | A | P | Y | E | H | O | O | K | Z | I | O | E | T |
| D | I | L | I | N | E | M | N | B | I | J | G | F | R | L |
| R | S | L | K | Q | B | I | V | T | E | H | D | O | C | P |
| K | H | I | E | W | O | M | I | J | L | L | U | B | H | M |
| R | D | L | B | Y | W | N | C | Y | D | T | K | W | B | C |
| W | O | R | M | O | A | L | C | A | R | P | H | C | R | A |
| G | V | T | U | S | B | R | C | T | T | A | B | N | A | S |
| D | S | L | D | X | S | B | D | X | F | F | Z | I | O | T |
| E | S | N | G | T | B | I | E | J | T | I | I | N | K | L |
| W | A | A | S | N | C | L | C | R | M | H | S | S | M | I |
| H | B | O | R | E | P | E | L | L | A | N | T | W | H | F |
| T | O | Y | I | T | A | O | B | L | R | P | S | I | G | E |
| Q | L | U | V | L | L | X | N | M | E | H | J | M | Y | J |
| W | A | U | E | K | A | J | V | D | K | T | R | M | J | A |
| E | F | C | R | E | E | K | S | Z | N | D | O | I | W | C |
| C | F | L | P | E | P | C | E | B | I | G | P | N | C | K |
| S | U | N | G | L | A | S | S | E | S | V | T | G | B | E |
| J | B | T | A | H | G | N | I | H | S | I | F | L | H | T |



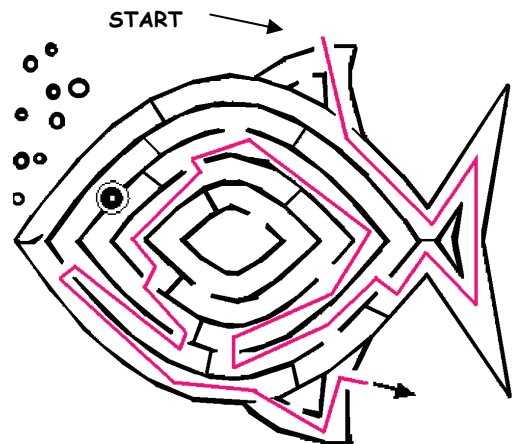
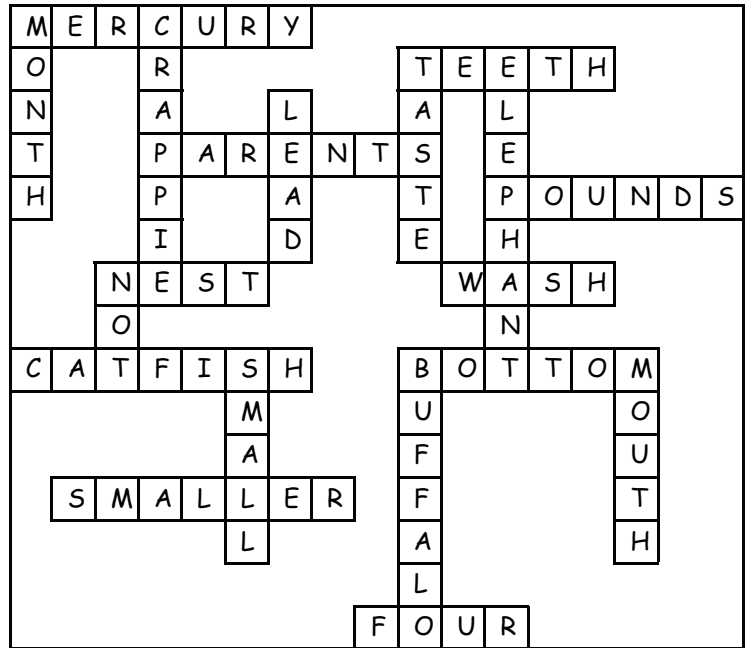
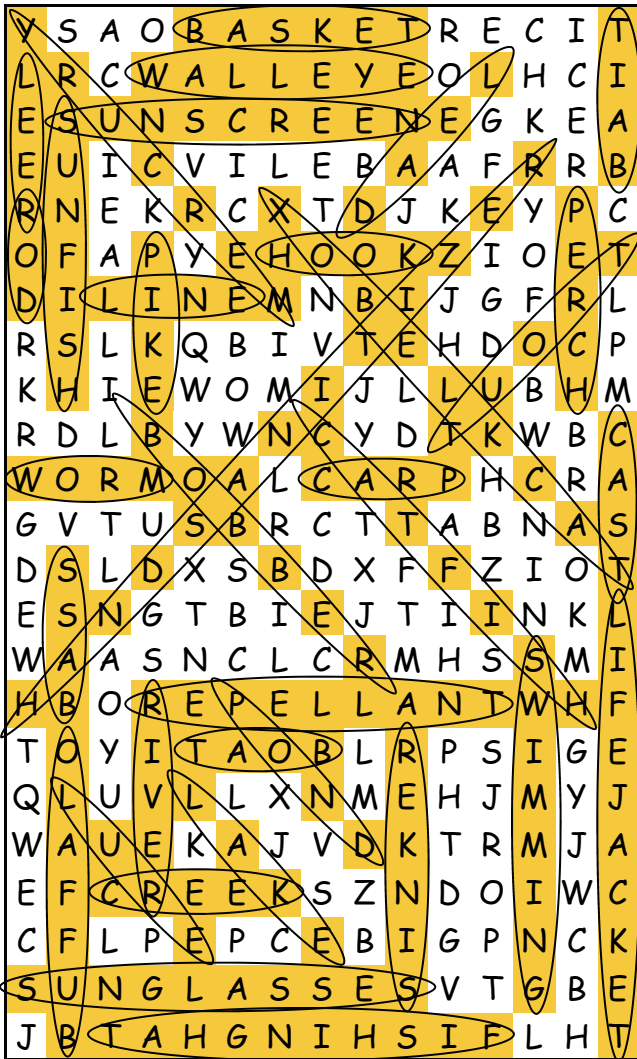
Crappie - There are two types of Crappie in Missouri: the Black Crappie and the White Crappie, which are more common. Crappie are the second most popular sport fish in Missouri; Bass are the most popular. Crappie move to different parts of the water depending on the time of the year. In the springtime, they can be found in shallow water near the shore with their nests. In the summer, they tend to stay in brush located in 15-20 feet of water. In the winter, they will move into water that is 20-40 feet deep.



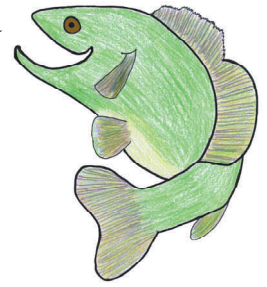
Bass - The most common bass you can catch in Missouri are the Largemouth Bass, Smallmouth Bass and Spotted Bass. These three types of bass are also known as black bass and are actually part of the sunfish family. These bass are often the largest predator fish and can be 10-20 inches long and typically weigh $\frac{1}{2}$ to $4\frac{1}{2}$ pounds. The heaviest recorded bass in Missouri is almost 14 pounds. There are other types of bass that are found in Missouri called Temperate Bass. They are not as common but can get much bigger. In fact, the Striped Bass can weigh up to 100 pounds!

Answer Key

| | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Sunfish | Bass | Buffalo | Trout | Carp | Perch | Crappie | Sucker | Catfish |
| Perch | Crappie | Sucker | Buffalo | Sunfish | Catfish | Bass | Carp | Trout |
| Carp | Trout | Catfish | Crappie | Sucker | Bass | Perch | Sunfish | Buffalo |
| Trout | Carp | Perch | Sucker | Crappie | Sunfish | Catfish | Buffalo | Bass |
| Buffalo | Sucker | Bass | Carp | Catfish | Trout | Sunfish | Perch | Crappie |
| Crappie | Catfish | Sunfish | Perch | Bass | Buffalo | Sucker | Trout | Carp |
| Sucker | Sunfish | Carp | Catfish | Buffalo | Crappie | Trout | Bass | Perch |
| Catfish | Buffalo | Trout | Bass | Perch | Sucker | Carp | Crappie | Sunfish |
| Bass | Perch | Crappie | Sunfish | Trout | Carp | Buffalo | Catfish | Sucker |



**Hey Kids! Play fun games and
learn more about fish at some
of my favorite websites.**



Missouri Fish Identification

www.mdc.mo.gov/fish/fishid/

EPA's Fish Kids

www.epa.gov/fishadvisories/kids/

Parents can find more information at:

Missouri Fish Advisory

www.dhss.mo.gov/fishadvisory/

ToxFAQs for Mercury

www.atsdr.cdc.gov/tfacts46.html

ToxFAQs for Lead

www.atsdr.cdc.gov/tfacts13.html

What You Need to Know about Mercury in Fish and Shellfish

www.epa.gov/waterscience/fish/advice/

Missouri Childhood Lead Poisoning Prevention Program

www.dhss.mo.gov/ChildhoodLead/

MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES

P.O. Box 570

Jefferson City, MO 65102-0570

(573) 751-6102 or toll free (866) 628-9891

The "Fish Advisory Activity Book" was made possible through financial support from the Agency for Toxic Substances and Disease Registry (ATSDR). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of ATSDR.

The Missouri Department of Health and Senior Services is an Equal Opportunity/Affirmative Action Employer
Services provided on a nondiscriminatory basis.