



## OBJECTIVES

- Targeted Life Skills: character, healthy lifestyle choices, and responsible citizenship.
- To provide opportunity for faculty to share educational and career opportunities in the fields of aquaculture, fisheries management and aquatic sciences. Representatives from universities and state agencies will be available to visit with participants and answer questions.
- To create more interest in the pleasure of fishing.
- To increase the participants' knowledge of fish in Arkansas and improve their accuracy in casting through practice.

## ELIGIBILITY

Each County may enter two Junior and two Senior 4-H members at the District 4-H O-Rama.

The top seven (7) Senior 4-H'ers from each District O-Rama will be eligible to enter the State 4-H O-Rama.

## ACTIVITY

Both Junior and Senior activities will be conducted according to the regulations outlined in this document.

Each contestant is encouraged to furnish their own equipment. Spinning, spincast and baitcasting combos up to 8 feet in length are permitted, but all contestants must use a 3/8 oz practice plug. There will be no division for fly fishing. Spincast combos and practice plugs will be available at the District and State activity if you do not have, or want to, use your own equipment. The activity is the same at the County, District and State level for Juniors and Seniors, except that there will be more exam questions at each level for both.

## JUDGING

Each contestant will be judged on casting accuracy. Each contestant will also answer exam questions related to fish anatomy, biology and ecology, Arkansas fish species identification, fishing tackle identification, and fishing regulations, safety and ethics. Study guides specifically for the County, District and State levels will be randomly generated from a master question bank each year and published online with practice answer sheets. The exams will include a subset of questions from the study guide at each level. In general, the County exam will have the fewest questions and the State exam will have the most.

## AWARDS

Ribbons will be awarded to the top 5 finishers in the Junior and Senior divisions at the District 4-H O-Rama, and to the top 5 overall finishers at the State 4-H O-Rama. No ribbons will be awarded for zero scores.

Physical prizes will be awarded to first-, second- and third-place winners at the State 4-H O-Rama.

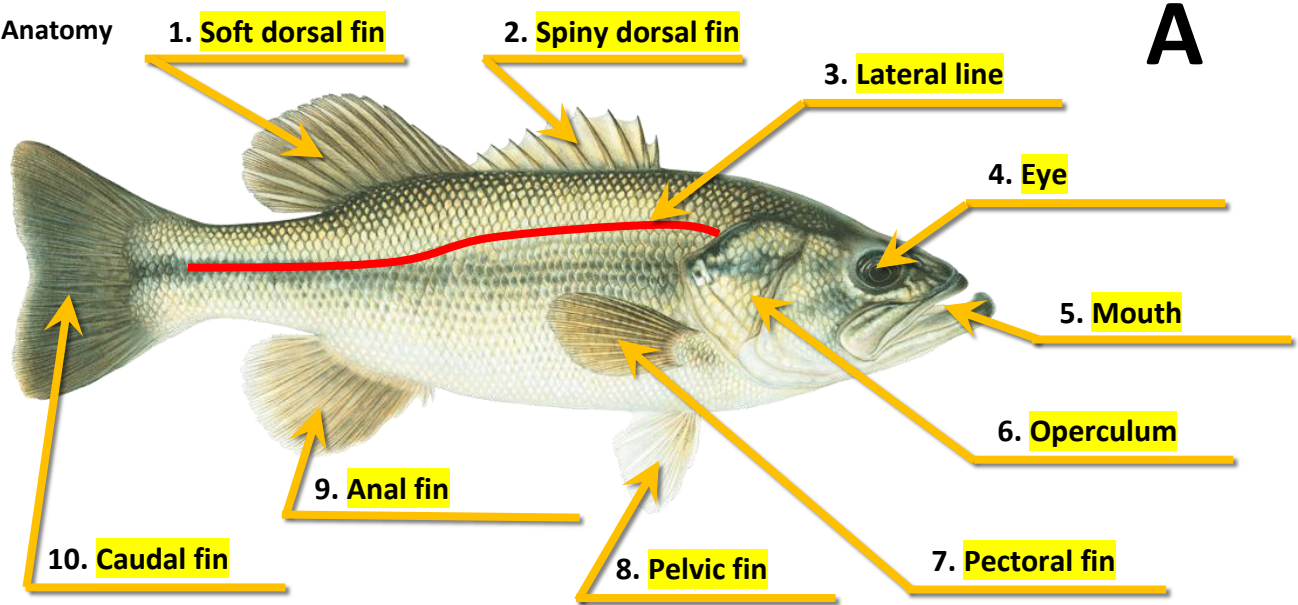
## PREPARED BY

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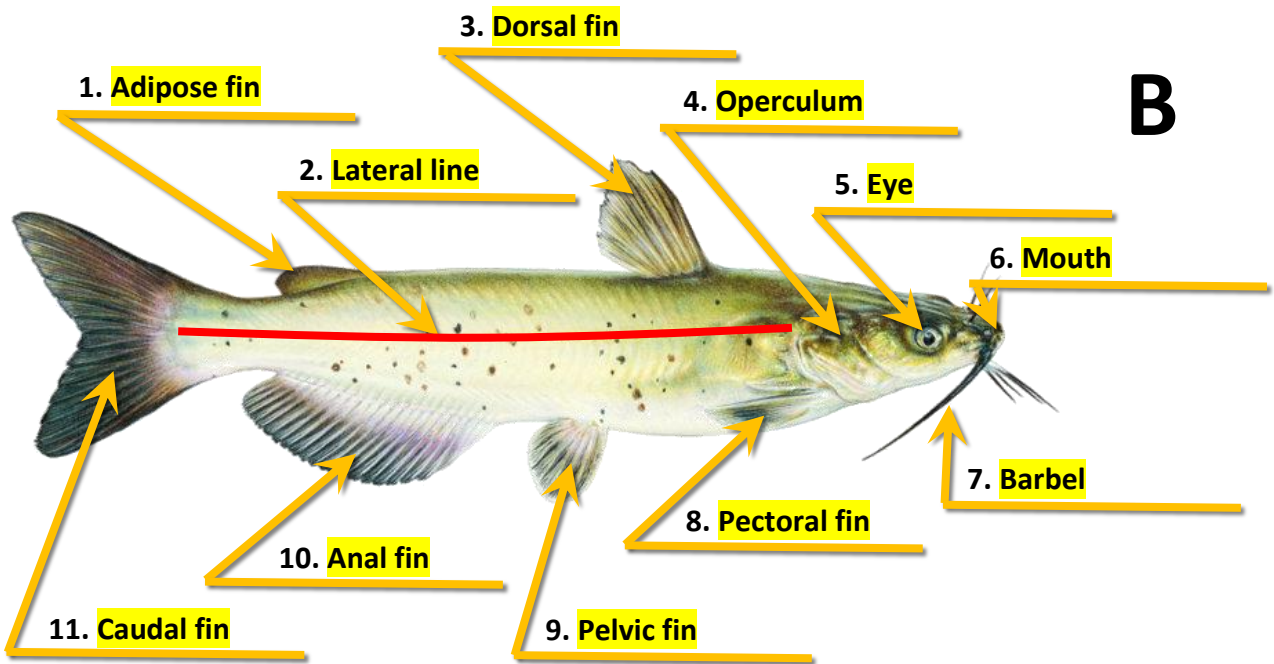
**STATE STUDY GUIDE**

Anatomy



**A**






Word Bank					
Pelvic fin	Anal fin	Operculum	Eye	Spiny dorsal fin	
Caudal fin	Mouth	Lateral line	Soft dorsal fin	Pectoral fin	











**B**

Word Bank					
Pelvic fin	Anal fin	Operculum	Dorsal fin	Eye	Adipose fin
Caudal fin	Mouth	Lateral line	Barbels	Pectoral fin	



## Fish Identification






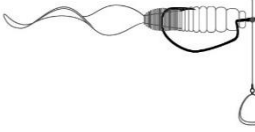






Photos	Identification tips
	<p><b>Bluegill:</b></p> <ul style="list-style-type: none"> <li>• Laterally compressed body</li> <li>• Small mouth</li> <li>• Dark blue flap on edge of operculum</li> <li>• Dark patch near based of soft-rayed dorsal fin</li> </ul>
	<p><b>Green sunfish:</b></p> <ul style="list-style-type: none"> <li>• Laterally compressed body</li> <li>• Larger mouth than similar looking bluegill</li> <li>• Bright blue streaks along cheeks</li> <li>• Most fins tipped with orange/white edges</li> </ul>
	<p><b>Black crappie:</b></p> <ul style="list-style-type: none"> <li>• Laterally compressed body</li> <li>• 7-8 dorsal fin spines</li> <li>• Moderately sized mouth</li> <li>• Silvery to silvery/green coloration</li> <li>• Dark blotches evenly distributed over body</li> </ul>
	<p><b>White crappie:</b></p> <ul style="list-style-type: none"> <li>• Laterally compressed body</li> <li>• 5-6 dorsal fin spines</li> <li>• Moderately sized mouth</li> <li>• Silvery to silvery/green coloration</li> <li>• Vertical bars</li> </ul>
	<p><b>Largemouth bass:</b></p> <ul style="list-style-type: none"> <li>• Jaw extends beyond the back side of the eye</li> <li>• Dorsal fins separated by a notch</li> <li>• Deep olive green back fading to white belly</li> <li>• One row of thick dark splotches down midline</li> </ul>




Photos	Identification tips
	<p><b>Striped bass:</b></p> <ul style="list-style-type: none"> <li>• Long, almost cylindrically shaped body</li> <li>• Defined horizontal stripes usually unbroken</li> <li>• Slightly darker back fading to white belly</li> <li>• Two tooth patches near back of tongue</li> </ul>
	<p><b>White bass:</b></p> <ul style="list-style-type: none"> <li>• Stocky, football shaped body</li> <li>• Stripes faint, only one goes length of body</li> <li>• Slightly darker back fading to white belly</li> <li>• One tooth patch near back of tongue</li> </ul>
	<p><b>Channel catfish:</b></p> <ul style="list-style-type: none"> <li>• Barbels around the mouth</li> <li>• Edge of anal fin rounded</li> <li>• 24-29 anal fin rays</li> <li>• Often spotted, brown-blue back, white belly</li> </ul>
	<p><b>Blue catfish:</b></p> <ul style="list-style-type: none"> <li>• Barbels around the mouth</li> <li>• Edge of anal fin almost straight</li> <li>• 30-36 anal fin rays</li> <li>• Usually slate/blue back, fading to white belly</li> </ul>
	<p><b>Flathead catfish:</b></p> <ul style="list-style-type: none"> <li>• Barbels around the mouth</li> <li>• Lower jaw farther forward than upper</li> <li>• Caudal fin slightly rounded</li> <li>• Yellowish/brown body fading to pale belly</li> </ul>
	<p><b>Rainbow trout:</b></p> <ul style="list-style-type: none"> <li>• Olive-greenish/blue back, white/silver belly</li> <li>• Small dark spots along body and fins</li> <li>• Faintly pink stripe down midline common</li> <li>• Pelvic and anal fins often have white tips</li> </ul>
	<p><b>Brown trout:</b></p> <ul style="list-style-type: none"> <li>• Brownish back fading to often yellowish sides</li> <li>• Dark spots surrounded by blue/grey halos</li> <li>• Few to no spots on caudal fin</li> </ul>

Photos	Identification tips
	<p><b>Spotted gar</b></p> <ul style="list-style-type: none"> <li>• Dark splotches scattered all over body</li> <li>• Moderately long snout with teeth</li> <li>• Dorsal fin far back on body</li> <li>• Rounded caudal fin</li> </ul>

### Tackle Identification

 <p><b>Fly reel</b></p>	 <p><b>Spincast reel</b></p>
 <p><b>Spinning reel</b></p>	 <p><b>Baitcast reel</b></p>
 <p><b>Aberdeen hook</b></p>	 <p><b>Offset hook</b></p>
 <p><b>Circle hook</b></p>	 <p><b>Treble hook</b></p>

 <p><b>Split-shot sinker</b></p>	 <p><b>Bell sinker</b></p>
 <p><b>Bullet sinker</b></p>	 <p><b>Egg sinker</b></p>
 <p><b>Carolina rig</b></p>	 <p><b>Drop shot rig</b></p>
 <p><b>Wacky rig</b></p>	 <p><b>3-Way rig</b></p>
 <p><b>Flipping jig</b></p>	 <p><b>Inline spinner</b></p>
 <p><b>Spinnerbait</b></p>	 <p><b>Topwater popper</b></p>

 <p>Topwater frog</p>	 <p>Crankbait</p>
 <p>Lipless crankbait</p>	

### Multiple Choice Questions

(Correct answers are highlighted in yellow)

#### Regulations:

- How many fish of one species are you allowed to keep in a single day: (Circle all that are true)
  - As many as the Arkansas Game and Fish Commission says in their annual Fishing Guidebook for that location and species in public waters
  - As many as the land owner says for that location and species in private waters
  - As many as I can fit in my ice chest
  - As many as I want
- For species with a length limit regulation, which type of measurement is most often used to determine if the fish is the right size to keep: (Circle one)
  - Standard length
  - Total length
  - Fork length
  - Fin length
- Live baitfish, including crayfish, can only be used when they are: (Circle all that are true)
  - Purchased from a licensed baitfish dealer selling only certified farm-raised baitfish
  - Caught within the same body of water they're being used in
  - Caught in a tributary upstream of the water they're being used in
  - Caught below the dam of the water they're being used in
- It is illegal to: (Circle all that are true)
  - Import, transport, possess or take an endangered species
  - Possess live silver, black or bighead carp
  - Release any sportfish, baitfish or crawfish into public waters unless they were originally caught from that same water source
  - Waste edible fish or wildlife

### Safety:

5. Boats 16 feet or longer must have \_\_\_\_\_ on board (Circle all that are true)
- A) One United States Coast Guard approved personal floatation device for each occupant
  - B) One United States Coast Guard approved throwable personal floatation device
  - C) One United States Coast Guard approved paddle
  - D) One fire extinguisher for inboard boats or boats with built-in fuel tanks
6. Which fins on catfish do you have to be careful about touching due to their large serrated spines: (Circle all that are true)
- A) Pectoral
  - B) Pelvic
  - C) Anal
  - D) Dorsal
7. Fish are done cooking when the internal temperature reaches \_\_\_\_\_ °F: (Circle one)
- A) 80 °F
  - B) 125 °F
  - C) 145 °F
  - D) 160 °F
8. Which of the following should you always consider taking with you on a fishing trip: (Circle all that are true)
- A) Sunscreen
  - B) Weather-appropriate clothing
  - C) Insect repellent
  - D) Drinks and healthy snacks

### Biology:

9. Fish get oxygen from the water through their: (Circle one)
- A) Nose
  - B) Barbels
  - C) Gills
  - D) Skin
10. Fish can feel water movement with their: (Circle one)
- A) Lateral line
  - B) Gills
  - C) Fins
  - D) Operculum
11. Which of the following organs is most commonly used to control buoyancy: (Circle one)
- A) Barbels
  - B) Swim bladder
  - C) Operculum
  - D) Gills
12. Which of the following statements is most accurate: (Circle one)
- A) Most fish can control their body temperature independent of outside water temperatures
  - B) All fish are purely cold blooded and cannot control their body temperatures in any way
  - C) While most fish are cold blooded, some species are able to recycle heat and maintain higher internal temperatures than their outside water temperatures
  - D) While most fish are warm blooded, some species are well insulated so that they don't get too warm internally



**Ecology:**

13. The ideal pH range for fish is between:

(Circle one)

- A) 0.0 - 3.0
- B) 3.0 - 6.5
- C) 6.5 - 9.0
- D) 9.0 - 12.0

14. Piscivores eat: (Circle one)

- A) Fish
- B) Plants
- C) Plankton
- D) Various types of food

15. Planktivores eat: (Circle one)

- A) Fish
- B) Plants
- C) Plankton
- D) Various types of food

16. Omnivores eat: (Circle one)

- A) Fish
- B) Plants
- C) Plankton
- D) Various types of food

**Ethics:**

17. You find someone fishing on your favorite spot on the bank of the Arkansas River. You should: (Circle one)

- A) Go home
- B) Find the next best spot nearby or ask the person politely if you can fish near them
- C) Tell the person to leave because this is your spot
- D) Fight them for exclusive rights to this spot

18. You've accumulated some trash in your boat from retying your line and discarding broken plastic baits. You should: (Circle one)

- A) Collect them and dispose of them in the nearest recycling or garbage container
- B) Toss them in the lake because they decompose
- C) Leave them at the boat ramp for park staff to dispose of
- D) Allow them to accumulate to the point that you can't see the floor of your boat for the trash

19. You catch a fish that you've never seen before but think it might be an invasive species. You should: (Circle one)

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- B) Take a picture and put it back in the water
- C) Put the fish on ice and contact the Arkansas Game and Fish Commission
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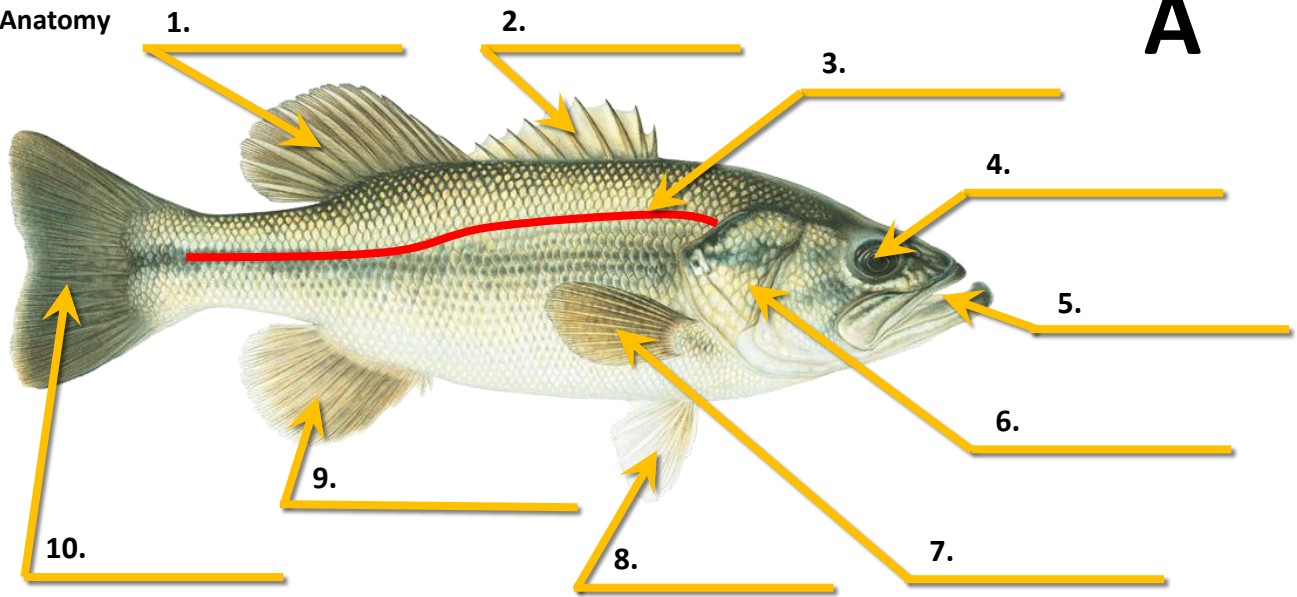
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- A) Panic and run away because the water is clearly toxic
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- C) Collect as many dead fish as you can for a fish fry
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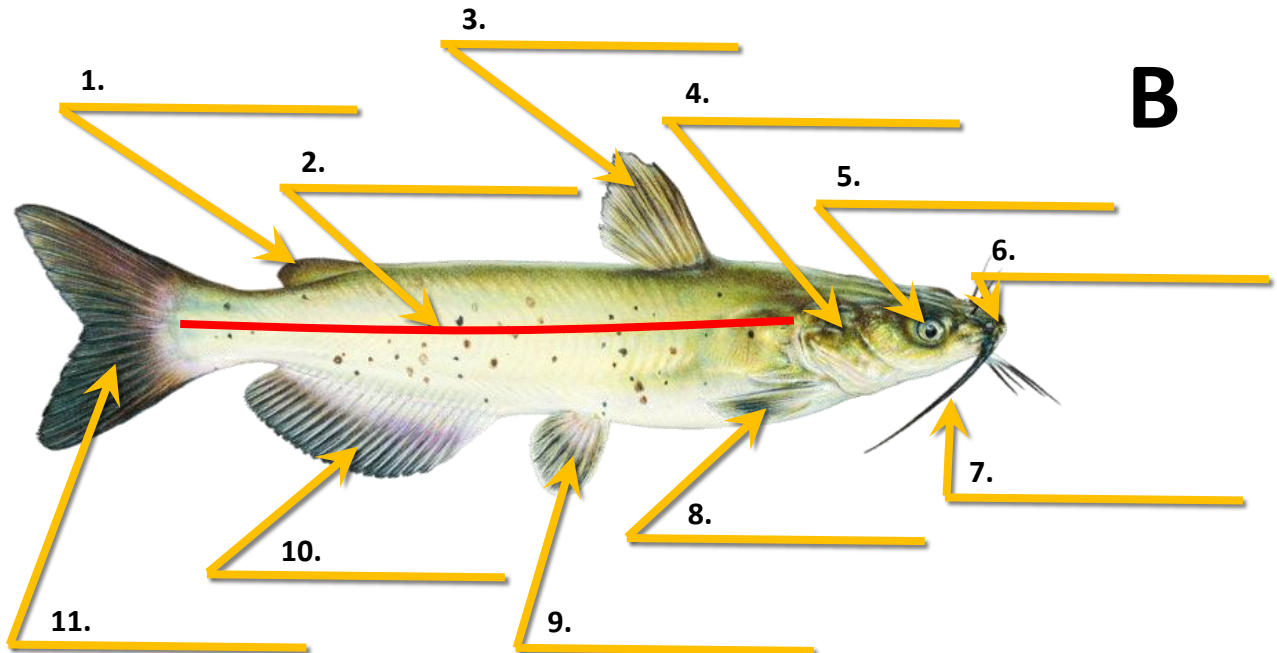
Anatomy



**A**

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Caudal fin	Mouth	Lateral line	Barbels	Pectoral fin	

## Fish Identification













Photos	ID
	1
	2
	3
	4
	5

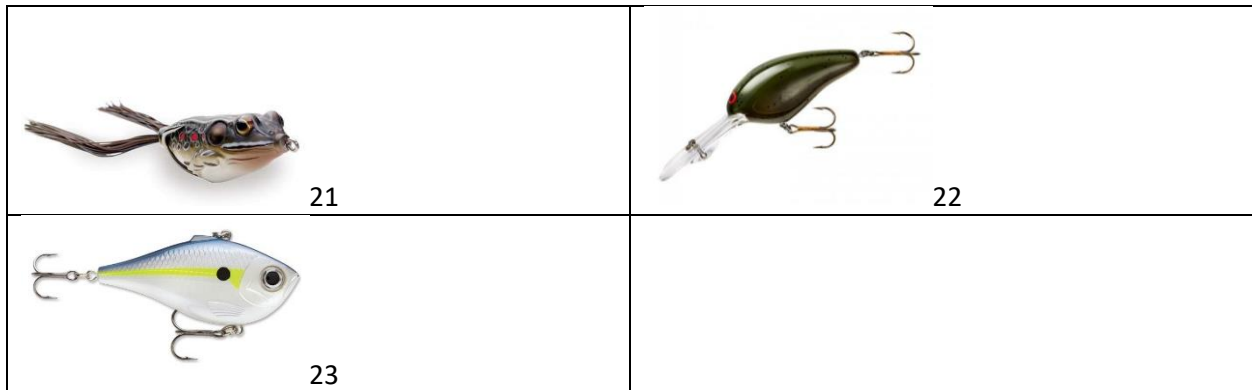
Photos	ID
	6
	7
	8
	9
	10
	11
	12

Photos	ID
	<p>13</p>

**Tackle Identification**

 <p>1</p>	 <p>2</p>
 <p>3</p>	 <p>4</p>
 <p>5</p>	 <p>6</p>
 <p>7</p>	 <p>8</p>

 <p>9</p>	 <p>10</p>
 <p>11</p>	 <p>12</p>
 <p>13</p>	 <p>14</p>
 <p>15</p>	 <p>16</p>
 <p>17</p>	 <p>18</p>
 <p>19</p>	 <p>20</p>



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Name \_\_\_\_\_

District (circle one)

DELTA OUACHITA OZARK

County \_\_\_\_\_

Division (circle one)

JUNIOR SENIOR



**STATE PRACTICE SCORE SHEET**

**Anatomy**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_

**Fish Identification**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_

Each fully correct answer earns 1 point

Total points earned on this page:

### Tackle Identification

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
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18. \_\_\_\_\_
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22. \_\_\_\_\_
23. \_\_\_\_\_

### Multiple Choice Questions

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
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6. \_\_\_\_\_
7. \_\_\_\_\_
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12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_

Each fully correct answer earns 1 point

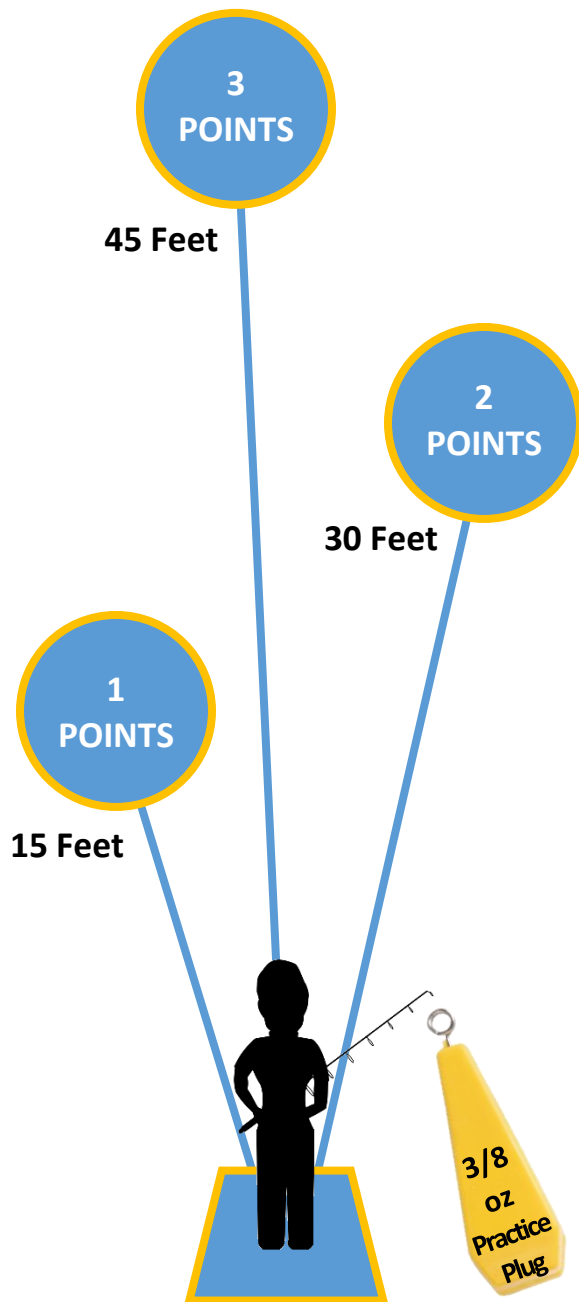
Total points earned on this page:

Grand total points earned:




**CASTING SCORING**

Circle (Score)	Cast 1	Cast 2	Cast 3	Cast 4	Cast 5	Total Score
Close (1)						
Mid (2)						
Far (3)						



- Three equal-sized rings are placed on the ground as shown in the diagram to the left
- Rings can be made of rope, flexible material, or painted on the ground to be 5.0 feet in diameter (15 feet 8 $\frac{1}{2}$  inches in circumference)
- The District and State O-Rama's will have structures within the rings resembling fish habitat, but this is not required at the County level
- Each contestant stands in the same spot on the ground or an elevated platform for all casts
- The distance from the contestant position is 15 feet to the closest edge of the "close" ring, 30 feet to the closest edge of the "mid" ring, and 45 feet to the closest edge of the "far" ring
- Contestants may use their own rod and reel, but they must use the same 3/8 ounce casting practice plugs as everyone else
- Each contestant is allowed one practice cast before their five scoring casts
- Contestants earn points when their plug lands within one of the rings, or hits the structure placed within the rings at the District and State O-Rama's
- Full points are awarded even if the plug bounces out of the ring after the initial impact with the ground or structure
- Landing within the "close" ring earns 1 point, the "mid" ring earns 2 points, and the "far" ring earns 3 points