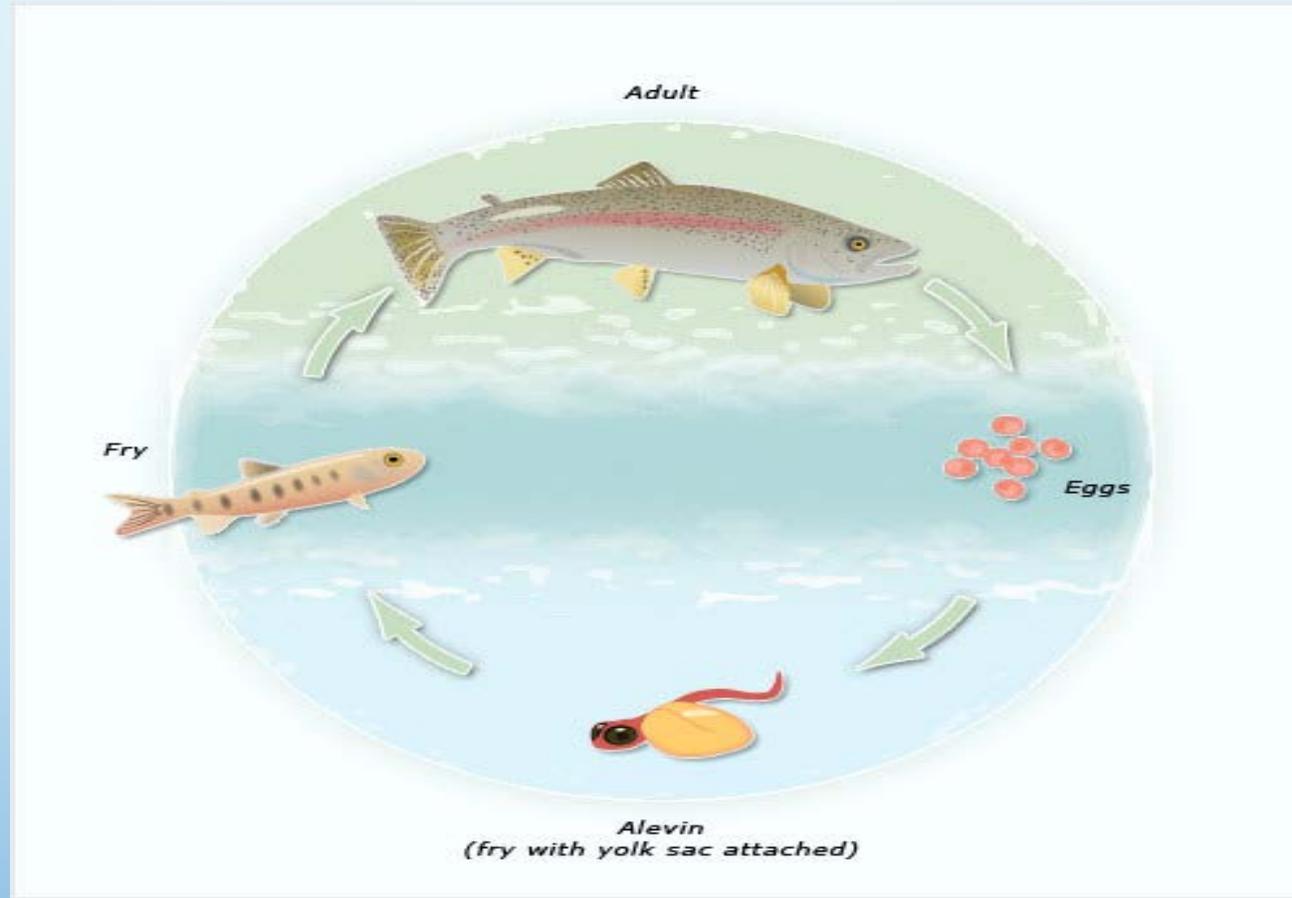


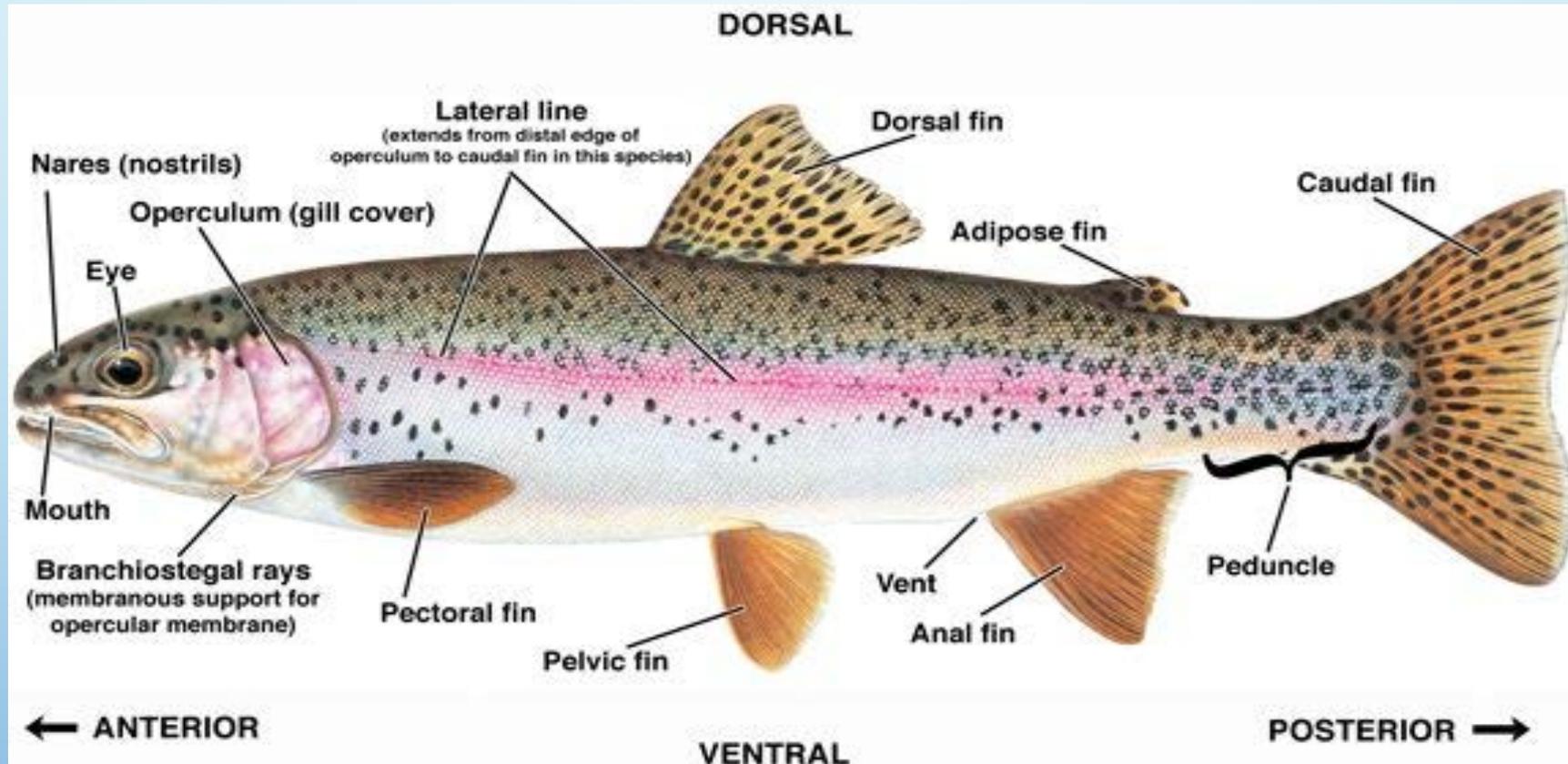


LIFE STAGES OF THE TROUT





EXTERIOR ANATOMY OF A TROUT





EXTERIOR ANATOMY OF A TROUT

- 1. **EYES** – FISH HAVE GOOD EYESIGHT AND CAN SEE COLOR AND MOVEMENT. EACH EYE IS INDEPENDENT AND THEY HAVE WIDE PERIPHERAL VISION WHICH ALLOWS THEM TO SEE EVERYTHING ABOVE AND AROUND THEM UP TO 15 FEET. TROUT DO HAVE TWO BLIND SPOTS, DIRECTLY BEHIND AND DIRECTLY BELOW THEM.
- 2. **NARES (NOSE)** – TROUT HAVE TWO NOSTRILS AND AN EXCELLENT SENSE OF SMELL. FISH DO NOT USE THEIR NARES TO BREATHE, THEY USE THEIR STRONG SENSE OF SMELL TO DETECT FOOD AND AVOID PREDATORS. THEIR SENSE OF SMELL IS 500 TIMES STRONGER THAN OUR SENSE OF SMELL.
- 3. **OPERCULUM (GILL COVER)** – A HARD COVERING THAT PROTECTS THE SENSITIVE GILLS.
- 4. **LATERAL LINES** – EXTREMELY SENSITIVE SENSORY ORGANS THAT HELP A FISH “FEEL” SOUND WAVES. TROUT CAN SENSE ANY MOVEMENT IN THE WATER WHICH HELPS IN FINDING PREY AND AVOIDING PREDATORS.
- 5. **MOUTH (TASTE)** – FISH HAVE AN EXCELLENT SENSE OF TASTE AND USE IT TO FIND FOOD. LIKE SMELL, A FISH’S SENSE OF TASTE IS 500 TIMES GREATER THAN A HUMAN.
- 6. **INNER EARS** – BECAUSE SOUND TRAVELS WELL IN WATER FISH HAVE NO EAR OPENINGS. THEIR INNER EARS ALONG WITH THE LATERAL LINES HELP FISH DETECT SOUNDS IN THE WATER.



EXTERIOR ANATOMY: FINS

1. **DORSAL FIN** – THE LARGE FIN ON THE BACK OF A TROUT. THIS FIN HELPS TROUT MAINTAIN ITS BALANCE AND REMAIN UPRIGHT.
2. **ADIPOSE FIN** – THE SMALL FIN LOCATED BETWEEN THE DORSAL AND TAIL FIN. ITS PURPOSE IS TO HELP WITH STABILITY AND SENSE WATERFLOW OVER ITS BACK.
3. **CAUDAL FIN** - ALSO CALLED THE TAIL FIN, THIS POWERFUL FIN PROPELS A TROUT TO SWIM AT A HIGH RATE OF SPEED QUICKLY TO CATCH PREY OR ESCAPE PREDATORS. IT HAS BEEN ESTIMATED A TROUT CAN ACCELERATE FROM “HOLDING STILL” TO 23 MPH IN ONE SECOND AND TRAVEL 33 FEET.
4. **ANAL FIN** – THE FIN IS LOCATED UNDERNEATH THE FISH NEAR THE TAIL. IT HELPS WITH STABILITY IN THE WATER.
5. **PELVIC FINS** – A PAIR OF FINS LOCATED UNDERNEATH THE FISH BETWEEN THE ANAL AND PECTORAL FINS THAT HELPS BALANCE THE FISH AND PREVENT IT FROM ROLLING SIDE TO SIDE.
6. **PECTORAL FINS** - A PAIR OF FINS LOCATED UNDERNEATH THE GILLS OF THE FISH. PECTORAL FINS HELP A FISH NAVIGATE, STOP, CHANGE DIRECTIONS AND CONTROL DEPTH AS WELL AS HELPING TO KEEP ITS BALANCE.



EMBRYONIC (EGG) STAGE

WITHIN 10 – 14 DAYS OF FERTILIZATION OF THE EGG, THE ORANGE COLORED EMBRYO HAS DEVELOPED SUFFICIENTLY FOR THE EYES TO BE SEEN. THIS IS CALLED THE “EYED EGG.” EGGS THAT HAVE TURNED WHITE ARE NOT FERTILIZED AND WILL NOT HATCH.





HATCHING STAGE

- THE TIME OF HATCHING DEPENDS ON THE WATER TEMPERATURE. WHEN EGGS ARE READY, AN ENZYME IS SECRETED WHICH SOFTENS THE EGG SHELL AND ALLOWS THE TINY SAC-FRY (ALEVIN) TO BREAK THROUGH. THEY ARE ROUGHLY $\frac{3}{4}$ OF AN INCH IN SIZE.





LARVAL STAGE

- WHEN HATCHED, THE ALEVIN KEEPS ITS YOLK SAC AND REMAINS HIDDEN IN GRAVEL OR PLANTS AS PROTECTION FROM PREDATORS, INCLUDING OTHER FISH.





JUVENILE STAGE

- IN 10 – 20 DAYS THE ALEVIN WILL ABSORB THE YOLK SACK AND EMERGE AS FRY. THEY NOW BEGIN TO FEED ON PLANKTON AND FREE FLOATING ORGANIC MATTER. THE FRY ALSO BEGIN TO GRADUALLY ACQUIRE THE CHARACTERISTIC BODY MARKINGS OF ITS PARTICULAR TROUT SPECIES. THE TROUT ARE USUALLY 2 -3 INCHES IN LENGTH AT THIS POINT.





ADULT STAGE

OVER THE NEXT FEW YEARS THE FRY WILL CONTINUE TO GROW, PRIMARILY EATING AQUATIC INSECTS, TERRESTRIAL INSECTS AND SMALLER FISH. DURING THIS TIME THEY WILL HAVE ACQUIRED THE DISTINCTIVE MARKINGS OF ITS PARTICULAR TROUT SPECIES. AN ADULT TROUT IN THE WILD WILL SURVIVE AN AVERAGE OF THREE TO FIVE YEARS AND CAN GROW AN AVERAGE OF 9 TO 16 INCHES IN NEW MEXICO DEPENDING ON FOOD AVAILABILITY AND HABITAT.





FUN FACTS ABOUT TROUT

- AN ADULT TROUT CAN ACCELERATE FROM “HOLDING STILL” TO AN ESTIMATED 23 MILES PER HOUR (MPH) AND TRAVEL 33 FEET IN ONE SECOND. NO OTHER MEMBER OF THE ANIMAL KINGDOM CAN ACCELERATE THAT FAST.
- A 3 POUND TROUT CAN EASILY BREAK A 6 POUND TEST LINE. THAT’S TWICE THE BODY WEIGHT OF THE FISH.
- A TROUT CAN JUMP OUT OF THE WATER 3 TO 4 TIMES ITS BODY LENGTH. THAT IS EQUIVALENT TO A HUMAN JUMPING 18 TO 24 FEET IN THE AIR OUT OF THE WATER.
- THE SENSORY ORGANS (SMELL, TASTE) OF A TROUT ARE 500 – 800 TIMES BETTER THAN THAT OF A HUMAN.
- TROUT SEE COLOR IN THE RED TO BLUE WAVELENGTHS ABOUT THE SAME AS A HUMAN, BUT CAN SEE YELLOW TO GREEN WAVELENGTHS MUCH BETTER THAN A HUMAN.
- AT 100 YARDS, THE LENGTH OF A FOOTBALL FIELD, A TROUT CAN HEAR AND “FEEL” BAIT BEING CAST INTO THE WATER USING ITS HEARING AND LATERAL LINES COMBINED.