

ILLUSTRATED  
GUIDE BOOK



# 4D VISION™ FROG ANATOMY MODEL

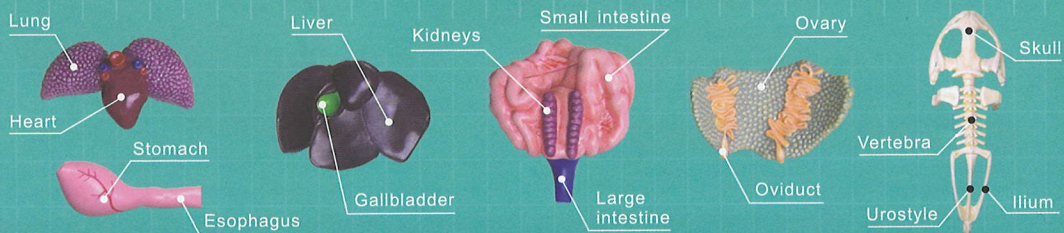
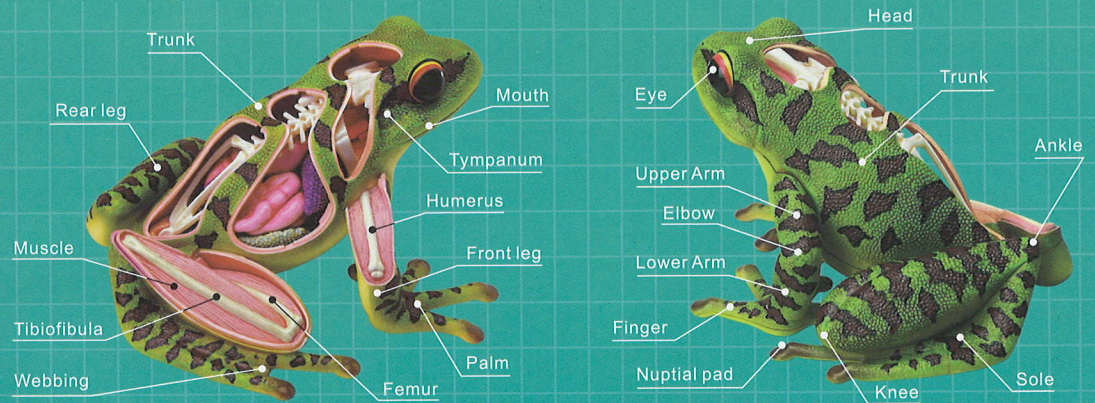


<http://www.4Dmaster.com>

Unit 541, 5/F., Sino Industrial Plaza, 9 Kai Cheung Road,  
Kowloon Bay, Kowloon, Hong Kong

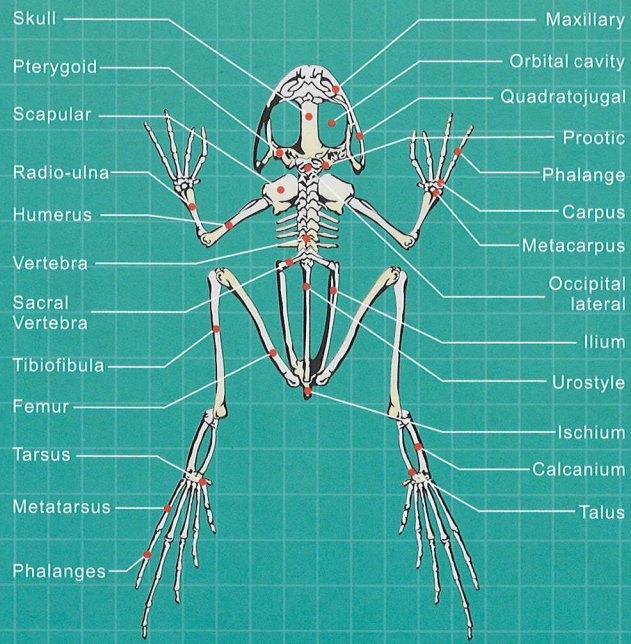
• MASTER SCULPTURING • DETACHABLE PARTS • HIGHLY DETAILED FINISH •

# FROG ANATOMY

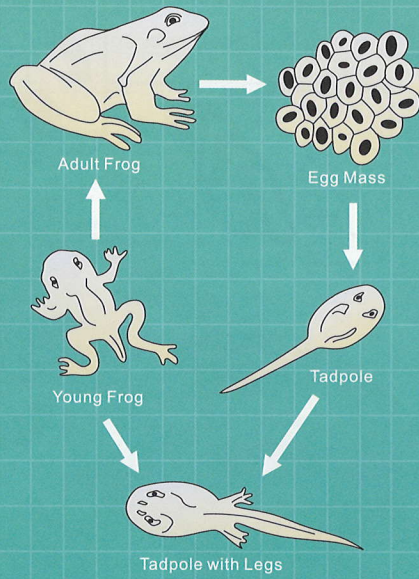




## SKELETON OF A FROG



## LIFE-CYCLE OF A FROG



## EYE



Frogs have variable kinds of eyes different colours in iris and different shapes of pupils too. Their iris can be brown, green, silver, red, bronze, and even gold. The pupils can be in many kinds of shapes, ellipse, round, triangular, even star-shaped pupils too. The eyes are on top of its head, so that they can see what is happening above the water while keeping most of its body still under water.

## TRACHEA



Frogs do not just use their skin to breathe; but also lungs. The trachea is a smooth muscle tube which connects the throat to the lungs.

## STOMACH



The stomach is the first major organ of chemical digestion after a frog swallows its food. It stores food and mixes it with enzymes to begin digestion. The food being broken down will pass to the small intestine for further digestion.

## TONGUE



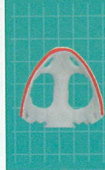
Muscular structure attached to the front of the mouth. Most frogs use their sticky tongue as a weapon to catch the insects. Also, they use the muscles of the tongue and throat as an air pump to force air into the trachea and the lungs too.

## ESOPHAGUS



It is a muscular tube that connects the mouth and stomach. The contracting and expanding of muscles in the walls pushes the food down to the stomach. Frog lacks a neck, so the esophagus is quite short.

## TEETH



Most of the frogs have very small cone teeth around the upper edge of the jaw, which are called Maxillary Teeth. Some frogs also have Vomerine Teeth on the roof of their mouth. Frogs don't have teeth on their lower jaw. Actually, toads do NOT have any teeth.



## LIVER



The largest brown organ of the body cavity, which is composed of three parts. That consist of right lobe, left anterior lobe, and left posterior lobe. Bile is a digestive juice made by the liver and stored in the gallbladder for the proper digestion of fats.

## HEART



The frog's heart is unlike human's, it only has 3 chambers, not four. This triangular structure is located at the top of the liver.

## KIDNEY



As the organs of excretory or urogenital system which filter the blood and remove the waste to make urine.

## LUNG



It is two spongy-like organs located underneath and behind the heart and liver, it is for gas exchanging.

## WEBBING



Most of the frogs have little webbing between their toes. It is mainly for swimming and diving.

## SKELETON



The numbers of vertebrates in frogs are small and they have no ribs too. Actually, the design of the frog's skeleton is fit for jumping and swimming.

## OVARY



The ovary is an organ which produce eggs in a female frog. During the breeding season, a single female frog may lay over 4,000 eggs at one time in the pond or swamp.

## INTESTINE



The principal organ of digestion and absorption of digested food. The first straight portion is the duodenum; the curled portion is called the ileum.

**Q: How long is the lifespan of a frog?**

**A:** It depends on different species. Actually, it's pretty hard to track a frog all its life too. We just know some of the bullfrogs can live over 30 years!

**Q: Can adult frogs breathe underwater?**

**A:** Yes, frogs are amphibians they are able to breathe through their skin while underwater.

**Q: How can frogs hear sound without ears?**

**A:** Actually, frogs have ears, but unlike human's external one. They have big round flat ears on each side of their head called tympanum which means drum.

**Q: Do frogs have teeth?**

**A:** Yes, most of the species do have very small cone teeth around the upper edge of the jaw, which are called Maxillary Teeth. Some frogs also have Vomerine Teeth on the roof of their mouth. Frogs don't have teeth on their lower jaw. Actually, toads do NOT have any teeth.

**Q: How far is the world record for a single leap of a frog?**

**A:** The world record is held by a frog called "Rosie the Ribiter" from California. It jumped more than 6.5 m (21 feet) in 1985.

**Q: Which kind of the frog is the largest in world?**

**A:** The goliath frog which is found in West Africa is the largest species in the world. It can grow up to 33 cm (13 inches) long from head to vent, and weighs up to 3 kg (7 lbs). It is also an endangered species too.

**Q: How to distinct toads from frogs?**

**A:** Toads have stubby bodies with short hind legs, which are for walking instead of hopping. Their skin is warty, dry and has poison glands behind their eyes. Frogs have two bulging eyes, long and strong webbed hind feet that are good for leaping and swimming. Frogs have smooth or slimy skin and frogs' chest cartilage is different from toads too.



**F**rogs are amphibians in the Anura order, which are cold-blooded, semi aquatic vertebrate animals. The order Anura contains over 5,000 species in 33 families, and about 88% of amphibian species are frogs. Frogs have several different stages in their lifecycle: egg, fishlike tadpole, tadpole with legs, young frog, and lastly, adult frog. Adult frogs have long and powerful hind legs, a short body, webbed digits, protruding eyes and are tailless. In the tadpole stage of frogs, they live in water and have gills for breathing.

**F**rogs breathe through their skin as well as their lungs as adult frogs. Almost all species of adult frogs are carnivorous. They primarily eat insects and small animals like earthworms, minnows, and spiders. Most frogs have sticky tongues for catching insects. The frog darts out its tongue quickly, catches the insect and retracts it back inside its mouth within a second. Most of the species likes to hunt at night.





# FROG ANATOMY ASSEMBLY INSTRUCTION

