

Dolphin



Learn fascinating facts about dolphins. Read about the different types of dolphins and what they can do. Learn about and create models of a Bottle Nose, Pacific White-sided, Atlantic White-sided, and Common Dolphin, for display.



Skulduggery, Inc.

DOLPHIN CASTING KIT

Dolphin

Read directions thoroughly before starting.

This Eyewitness kit is a fascinating, educational and creative introduction to dolphins. The Bottle Nose, Pacific White-sided, Atlantic White-sided, and Common Dolphin are four intriguing dolphins that peek the interest of people around the world. Discover how these mammals live in the ocean. Learn about their individual habits and life cycles. Cast and paint the bodies of each of these mammals. Add magnets to each cast for display on any metal surface. With additional casting material, unlimited casts can be made as gifts for friends and family.

MATERIALS PROVIDED

- Information about Bottle Nose, Pacific White-sided, Atlantic White-sided, and Common Dolphins.
- Casting (PerfectCast) material to make casts of the dolphins. To make additional animals, PerfectCast is available from your local retailer.
- 2 mold trays containing the animal family.
- Instructions explaining how to use the mold trays.
- Paints and paint brush with which to finish each cast.
- Magnets and glue used to attach animals.
- Bibliography.

MATERIALS NEEDED

- Disposable container to mix PerfectCast. A can or paper cup will work nicely.
- Mixing utensil.

Adult supervision suggested

WARNING: Don't place hand in casting material while it is hardening. Don't pour excess material into drain or toilet bowl. Dispose of excess material in garbage.

INSTRUCTIONS

Find an area with a flat, level, stable working surface, such as a counter-top, desktop or table. Make sure the surface is waterproof; some excess water may spill out of your container. Use a disposable container to mix the PerfectCast and water.

1. Place the mold tray on a flat, stable surface.
2. In a disposable container, mix PerfectCast using a ratio (by volume) of 1 part cold water to 3 parts PerfectCast. *See tip below for suggestion on estimating the amount of PerfectCast to use for your cast.*
3. Stir the PerfectCast/water mixture with a spoon or mixing stick until it is evenly mixed (about 1½ minutes). Tap the container on the table several times to remove air bubbles. There should be no lumps.
4. Pour the PerfectCast mixture into the mold. Tap the mold on the work surface to remove the remaining bubbles.

WARNING: Do not pour excess material into the drain or toilet bowl. Dispose of excess materials in the garbage.

5. Let PerfectCast set for 30 to 40 minutes. If the object is delicate, allow at least one hour before demolding.
6. After the mixture hardens, carefully press each part out of the mold. If a section should break, use glue to repair it or cast additional sections.
7. Read the information about dolphins.
8. Let casts dry for 2 hours before painting. Consult color suggestions for painting the casts. Separate the paint pots from each other with scissors before painting. Your kit comes with one of two possible assortments of paint colors. One assortment includes an attached glue pot labeled GL, the other assortment has a separate glue packet. Adding a small amount of water to the paint will thin it for easier application as well as insure enough paint to cover the complete item.
9. Using the guide in the back of this booklet, glue the magnets on your casts or glue the casts on a background of your choice.

Tip: How to measure the volume of the objects to be cast.

If you have purchased additional PerfectCast or don't want to mix all the PerfectCast included in your kit, follow the instructions below to determine how much PerfectCast to mix.

Fill all the cavities you intend to cast with water and pour into a measuring cup. This is the total volume of the finished casts.

For each fluid ounce needed, mix 1½ fluid ounces of PerfectCast and ½ fluid ounce of water. The mixture should have a consistency of a runny milkshake or melted ice cream.

DOLPHINS

At the mere mention of the word “dolphin” people conjure up the image of the beguiling smile of the beloved Bottle Nose Dolphin. This endearing “smile” of the Bottle Nose along with the fact that it has been featured in TV, movies and the acrobatic aquarium shows, has made this species the most recognizable among all dolphin species. Much of what we know about the dolphin has been learned by observing the Bottle Nose in captivity, but there are 31 other species that exist in all the world’s oceans.

Dolphins are an ocean mammal called cetaceans. Cetaceans share many similarities with mammals that live on land. Like land mammals they are warm-blooded, breathe air, give live birth and feed milk to their young. Unlike land mammals, cetaceans’ anatomy is uniquely suited to exist exclusively under water. Dolphins live not only in oceans and seas, but some species live in rivers far inland.

Although there are 31 different species of dolphin, they all have the same basic body configuration. Their bodies are torpedo shaped with front flippers used to steer, dorsal fin which keeps the dolphin from rolling from side to side, and flukes (lobes of the tail) with which it propels itself.

The snout of the dolphin is called the rostrum. The number of teeth contained in the snout varies among species. A long-snouted spinner dolphin may have more than sixty-five teeth per row while Risso’s dolphins lack teeth in the upper jaw and have only four to six teeth in the lower jaw.

Dolphins breathe through a hole known as a blowhole located at the top of their heads. When the dolphin is submerged, the blowhole is shut tightly by a plug, like a trap door. The plug opens as they come to the surface. In calm seas, dolphins surface with their body arched, exhaling as their bodies roll up and forward out of the water. They inhale as their heads begin to point back down before they plunge back into the water. But in rough seas dolphins must exhale with much more force. The exhale must be so forceful that it clears the air of water droplets from the air about to be inhaled.

The eyes located on either side of the head provide the dolphin excellent vision.

Dolphins do not have external ears. They receive sounds through their lower jaws. Dolphins navigate the waters using a system called echolocation. They make extremely loud clicking noises that echo off objects in front of them. The sounds bounce off objects, creating an echo that returns to the dolphin. By listening to the reflected sound, the dolphin can tell the shape of the object and how far away it is.

The skin of dolphins is very smooth. The outer layer of skin is called the epidermis. This layer of skin is constantly being shed every couple of hours. The shedding of skin helps keep the surface of the dolphin smooth thus minimizing friction as the dolphin propels through the

water. Under the epidermis layer is a layer of blubber which helps the dolphin maintain its proper body temperature and to meet the energy demands for the dolphin's activity. The color of the dolphin's skin can include brown, black, yellow, white, pink and gray.

Dolphins swim in groups or schools. Schools of dolphins consist of adults, juveniles and calves. The structure of dolphin groups (also called herds or pods) is more like that of elephants than humans. The social group is formed by females and her calves — even if they have grown to adults. The females in the pods sometimes care for calves from other females. The fathers of the calves do not live with the pod.

This Eyewitness kit features four interesting and diverse dolphins; the Bottlenose Dolphin, the Pacific White-Sided Dolphin, the Atlantic White-Sided Dolphin and the Long Beaked Common Dolphin.

BOTTLENOSE DOLPHIN

Bottlenose dolphins can vary greatly in appearance. They vary in size, shape, and color, depending on where they live. Most Bottlenose Dolphins weigh 440 to 600 pounds and measure about 8 feet long. However, some individuals grow to be 13 ft. long and weigh up to over 1400 pounds. The female can live to be more than 50 years old while the male lives to be 45 years old.

The head of the Bottlenose is most distinctive. It has a rounded forehead and a deep crease between the beak and the forehead. In general the upper side of the body is of a subdued gray coloring ranging from dark bluish gray to brownish gray. The lower portion of its body is off-white, light gray or pinkish. Its flippers are moderately long, dark gray and are pointed at the tips. The dorsal fin is located in the center of its back and is dark gray and is slightly hooked at the tip.

Bottlenose Dolphins can be found around the world in both cold and tropical waters. They are very lively and powerful swimmers. Their dives can last for more than four minutes offshore and less than four minutes closer to shore.

They live in pods of 10-12 but occasionally join up with multiple pods for a period of time. Sometimes there could be as many as 100 dolphins from different pods swimming together. They can dive down to more than 1000 ft. and jump up into the air 20 ft. They typically swim 3-6 miles per hour but can reach speeds of 21 miles per hour.

This species is generally known to be friendly and very curious about humans. There have been reports of Bottlenose Dolphins rescuing humans from dangerous situations in open seas. In captivity, these amazing dolphins have been taught to do tricks for audiences in aquariums around the world.

PACIFIC WHITE-SIDED DOLPHIN

Pacific White-sided Dolphins have a very small black beak and a dark gray ring around the eyes. They have a black or gray upper side

with a white underside. This dolphin has a very distinguishing light gray streak the length of its body. The streak gets wider toward the tail. There is a pale gray patch located on both sides of the dolphin. Both the fin and flippers are black in the front portion changing to a dark gray in the back. This species of dolphin can grow to be slightly over 8 ft. and can weigh up to 440 pounds. They can live to be 40 years old.

The Pacific White-sided Dolphin lives in the cool to temperate waters of the northern Pacific Ocean, from the South Sea of Japan to the Gulf of California. These dolphins appear to follow some sort of migratory pattern. They are most abundant along the Californian coast in the winter and seem to migrate up the coast to Washington and Oregon in the summer.

Pacific White-sided Dolphins are very active and readily approach boats in open waters. They tend to travel in large groups with an average of 90 individuals.

ATLANTIC WHITE-SIDED DOLPHIN

The Atlantic White-sided Dolphin has a short black beak, a gently sloping forehead, and dark rings around the eyes. It has a dark gray or black upper side and a white underside. There is a band of yellow or tan along each side of the tail and white band below the dorsal fin. These yellow and white patches are sometimes visible when the dolphin surfaces to breathe. There is a pale gray stripe along the length of the body. The male can be as large as 9 feet long, weighing over 510 pounds. They live to be at least 17 years old.

These dolphins can be found in the North Atlantic Ocean. They are most plentiful near the shores of Newfoundland and Cape Cod and in an area between the United Kingdom, Greenland and Iceland.

The Atlantic White-sided Dolphins are highly sociable animals and like to swim in the company of other dolphins, porpoises and whales. They will swim along side slow boats and sometimes bow-ride the faster ones.

They are generally found in larger schools offshore (up to 1000) and smaller groups when swimming closer to shore (5-50).

COMMON DOLPHIN

There are two distinct forms of the Common Dolphin: the long beaked and the short beaked. The mold in this kit is of the long beaked variety. Both kinds of dolphins are easily recognized by the hourglass pattern on their sides. The upper side is dark with a "V" under the dorsal fin. The dorsal fin is triangular and is mostly pale gray with darker borders. There is a yellowish patch on each side with a narrow strip of gray from the beak to the flipper. They can grow up to 8 ft. and weigh up to 245 pounds.

Common Dolphins live in temperate, sub-tropical and tropical waters around the world. They can be found in waters around Baja

California, South America, in some waters around Africa, and in enclosed bodies of water like the Red and Mediterranean seas.

Common Dolphins are found in large and very active schools of 5 to 500. They are very vocal and their high pitched squealing can sometimes be heard above the surface.

Finishing guide and cutting guide for magnets

Experiment with mixing paints for desired color. Add a small amount of water to make the paint go further and the application easier.

Bottle Nose Color Suggestion

The upper side of the body is a gray coloring ranging from dark bluish gray to brownish gray. The lower portion of its body is off-white, light gray or pinkish. Its flippers are a dark gray. The dorsal fin dark gray.



Pacific White-Sided Color Suggestion

Pacific White-sided Dolphins have a black beak and a dark gray ring around the eyes. They have a black or gray upper side with a white underside. This dolphin has a light gray streak the length of its body getting wider toward the tail. There is a pale gray patch located on both sides of the dolphin. Both the fin and flippers are black in the front portion changing to a dark gray in the back.



Atlantic White-Sided Color Suggestion

Dark gray rings around the eyes; dark gray or black upper side and a white underside; yellow or tan along each side of the tail and white band below the dorsal fin; pale gray stripe along the length of the body.



Common Dolphin Color Suggestion

The upper side is dark with a “V” under the dorsal fin. The dorsal fin is mostly pale gray with darker borders. There is a yellowish patch on each side with a narrow strip of gray from the beak to the flipper



IMPORTANT NOTE:

The non-grooved side of the magnet is the side that is most strongly attracted to metal. Magnets should be cut into four 3 inch pieces. Remember to glue the grooved side of the magnet (when in doubt test on metal) to the dolphins.

Bottle Nose	3
Pacific White-Sided	3
Atlantic White-Sided	3
Common Dolphin	3

SUGGESTED READING

- Wilson, Ben (1998) *Dolphins of the world*, Voyager Press.
(2002) *Guide to Marine Mammals of the World*, Alfred A. Knopf, Inc.,
Chanticleer Press Inc..
- Nowacek, Stephanie (2006) *Discovering dolphins*, Voyageur Press.
- Thomson, Sarah L. (2006) *Amazing dolphins*, Harper Collins Publishers.
- Hirschmann, Kris (2004) *Dolphins*, Kidhaven Press.
- Greenberg, Daniel A (2004) *Dolphins*, Benchmark Books.

COLOR MIXING GUIDE

Kits come with different sets of colors depending on the title of the kit. Mixing instructions may include colors not included in your kit.

Acrylic paints can be thinned with water if they get too thick. Be sure to clean brushes with soap and water before the paint hardens or the paint will become permanent.

Primary colors can be mixed to obtain many other colors. Mix a small amount of two or more colors on a non-absorbent surface.

Always begin with more of the lighter color and a small amount of the darker color. To darken or lighten colors, add small amounts of black, brown or white and mix. Take your time and allow the paint to mix thoroughly before adding more paint.

- White skin - add small amounts of red and yellow to white
- Black/brown skin - add small amounts of white, yellow, red & black
- Army green - mix blue and yellow and a small amount of black
- Ammonite green - mix blue and yellow and a small amount of white
- Carmel - mix small amounts of brown and yellow to white
- Tan or beige - add small amounts of red, brown and yellow to white
- Brown - mix black, yellow, red and green
- Orange - add small amounts of red with yellow
- Gray - mix small amounts of black with white
- Pink - mix small amounts of red with white
- Purple - mix red and blue
- Gold - mix small amounts of yellow with silver
- The pot labeled GL is glue
- Some kits come with a pot labeled ST. This is stain that can be used to antique your creation after painting. Paint on and wipe off.

Download other Kit brochures at: <http://skullduggery.com>

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