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# TRADITIONAL CRANE

The orizuru, or paper crane, is a design considered the most classic of all Japanese origami. It is often used as a ceremonial wrapper or restaurant table decoration. A thousand orizuri strung together is called senbazuru, meaning "thousand cranes". The orizuru's design is a representation of the Japanese Red-crowned Crane, which represents luck, longevity, and fidelity.



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# RENZURU The term renzuru ("coorigami technique wheel from a single sheet o

The term renzuru ("conjoined cranes") refers to an origami technique whereby one folds multiple cranes from a single sheet of paper, employing a number of strategic cuts to form a mosaic of semi-detached smaller squares from the original large square paper. The resulting cranes are attached to one another at the tips of the beaks, wings, tails or sometimes at the tip of the body. The trick is to fold all the cranes without breaking the small paper bridges that attach them to one another.

Typical renzuru configurations include a circle of four or more cranes attached at the wing tips. One of the simplest forms, made from a half-square (2x1 rectangle) cut halfway through from one of the long sides, results in two cranes that share an entire wing, positioned vertically between their bodies; heads and tails may face in the same or opposite directions. This is known as imoseyama. If made from paper colored differently on each side, the cranes will be different colors.

This origami technique was first illustrated in one of the oldest known origami books, the Hiden Renzuru no Orikata in 1797.

# S'Th ba ho did wi

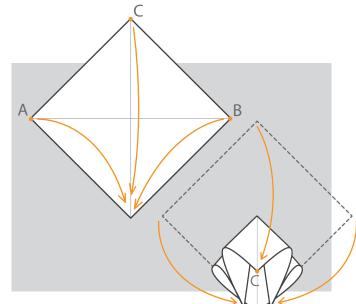
#### STEP 1

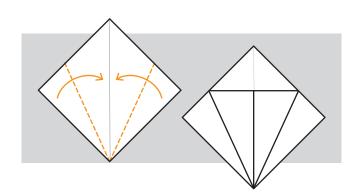
The crane uses a bird base. Steps 1-4 show how to make one.

Fold the sheet along the diagonal, then repeat with the other diagonal.

#### STEP 2

Bring points A and B together at the bottom corner of the paper, and then bring point C down on top of them, creasing the paper well. If you did this part correctly, you should end up with a small square of paper with the opening facing towards you.

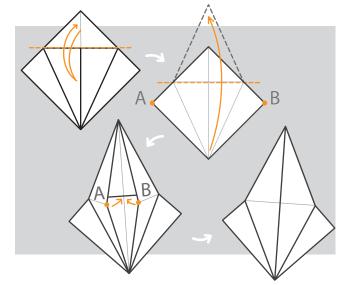


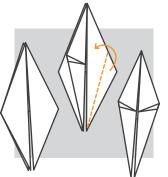


Fold the two opposite corners in towards the center, making the edges closest to you sit flush with the center.

#### STEP 4

Fold down the top corner of the model along the top of the flaps you folded in the last step, then unfold. At the bottom corner, fold the top-most layer up using the horizontal crease you just made, and push points A and B in so they are flush with the centerline. Then repeat this whole step on the other side.



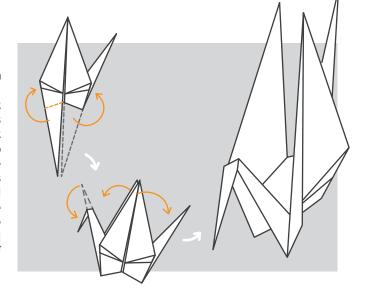


#### STEP 5

Make sure the two "legs" point towards you. Align each edge so it is flush with the inside of each "leg" like in the diagram. Turn the model over, and repeat.

#### STEP 6

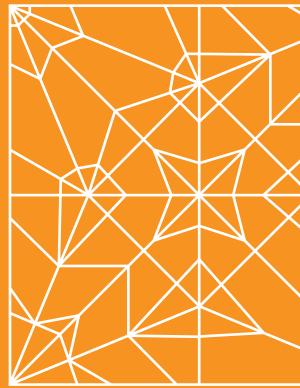
Inside reverse fold both "legs" like in the diagram. Don't worry about folding these exactly as shown, you can adjust the head and tail to taste. Inside reverse fold one of these tips for a head, and pull down and out on the larger flaps to create the wings. It's helpful to grasp at the base of each wing when pulling.



### RAPTOR

Velociraptor is a genus of dromaeosaurid theropod dinosaur that lived approximately 75 to 71 million years ago during the later part of the Cretaceous Period. Velociraptor is one of the most familiar to the general public due to its prominent role in the Jurassic Park movie picture series. In the films it was shown with anatomical inaccuracies, including being much larger than it was in reality and without feathers. Some of these inaccuracies, along with the head's larger dome in the movies may suggest that the dinosaurs in the movies were actually modeled on Deinonychus.





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#### THE TRUTH

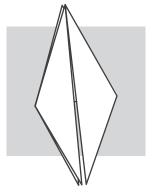
The Velociraptor was remarkably puny: weighing only about 30 pounds soaking wet (about the same as a good-sized human toddler) and achieved an awe-inspiring height of three feet, max.

To date, all of the dozen or so Velociraptor skeletons discovered in Mongolia have been of solitary individuals, and the idea that they hunted in packs stems from Deinonychus remains.

The Velociraptor's claim to "smartest dinosaur" is a farce. Even the supposed smartest dinosaur of the Mesozoic Era, Troodon, was dumber than a kitten.

Rather than hunting in packs and mauling things with razor sharp teeth, Paleontologists surmise that this dinosaur instead stabbed its prey in the gut in surprise attacks, then withdrew to a safe distance as its victim bled to death.

The fact that the Velociraptor actively pursued its prey, and probably had a coat of feathers, leads paleontologists to believe that Velociraptor had a warm-blooded metabolism comparable to that of modern birds and mammals.



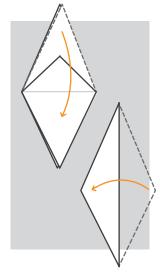
#### STEP 1

Start with a bird base. Instructions are on pages 5 and 6.

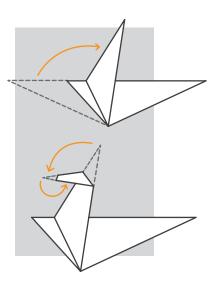
#### STEP 2

With the "legs" of the model pointed towards you, take the top-most layer of the top point and fol it down over the horizontal centerline.

Then fold the whole model in half vertically.

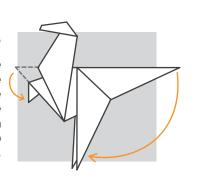


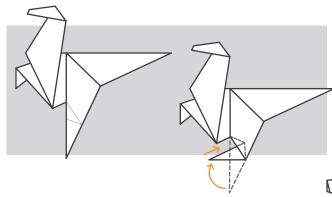
Turn the model so the longer side is on the top. Reverse outside fold the left point so its in a vertical position like in the diagram. Do another reverse outside fold to create the head, and an inside reverse fold to complete the head of the raptor.



#### STEP 4

Inside front fold the left corner to create his arms. Then take the top-most flap of the right, and fold it down like in the diagram. Flip and repeat for the legs.



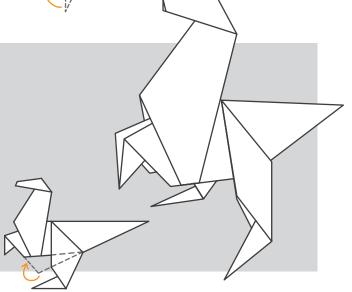


#### STEP 5

Pre-crease each leg on the grey lines shown in the picture, and then crimp fold to give him some feet. You may have to adjust the folds, he'll be a bit wobbly.

#### STEP 6

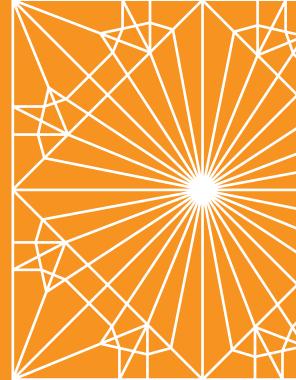
Fold the excess body into the inside of the model to give him a more streamlined look.



# TRADITIONAL

Lilium speciosum, sometimes called the Japanese lily, is a lily native to Japan where it can be found at elevations of 2,000-3,000 ft. The entire plant is 3 ft 11 in by 1 ft in diameter and blooms from August to September. The flowers are white to pink in colour, and strongly scented.





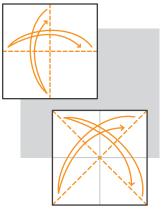


#### LILIES BY CULTURE

Lilies have been known and grown since antiquity. White lilies were cultivated in ancient Crete and Greece. The lily was revered by the Greeks as sprouting from the milk of Hera, queen of the gods. In Christian traditions, the white Easter lily symbolized the purity of the Virgin Mary.

Different lilies have different meanings: Alastroemeria lilies from Peru represent friendship and devotion. Pink stargazer lilies represent wishes for prosperity while white stargazer lilies express sympathy. Day lilies stand for devotion and freedom from worries. Tiger lilies stand for pride.

In America, lilies are the designated May birth flower and the flower for a 30th wedding anniversary.

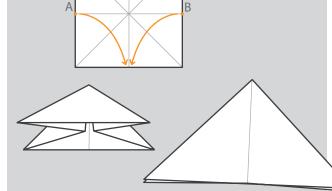


#### STEP 1

To create a lily, we first need to make a waterbomb base like shown in steps 1 and 2.

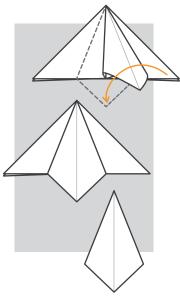


bring points A and B to the bottom of the center crease like shown.



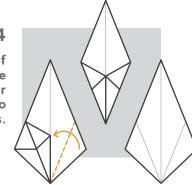
Squash fold one of the four corners of the waterbomb base, making sure to line up the crease of the corner with the centerline.

Repeat this with each of the three other corners.



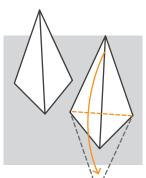
#### STEP 4

Fold the lower edges of the kite in so they are flush with the center line, then unfold. Do this to both sides.



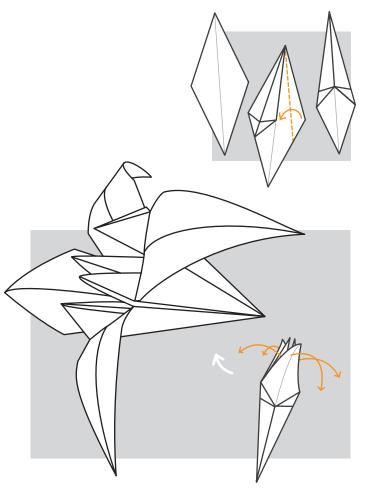
#### STEP 5

Take point A and fold it up towards point B while bringing in the corners of the opening so they lay flush with the centerline. Repeat this with the other sides.



#### STEP 6

Fold down the top-most corner over the horizontal line. Repeat this with each corner.



With the open end facing you, fold the top-most sides in so they are flush with the centerline. Repeat with each side of the model.

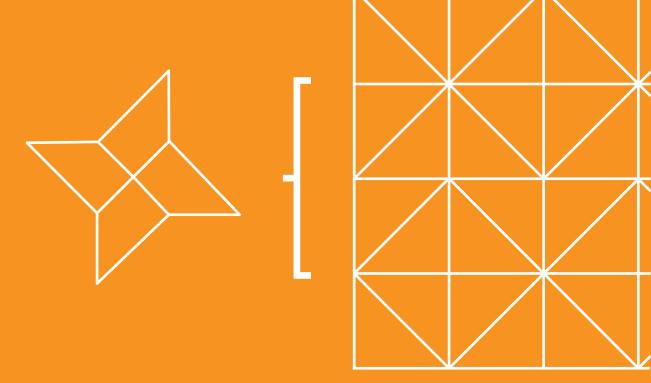
#### STEP 8

Spin the model so the open end is facing away from you, and peel back the top points to open the lily. It helps if you roll each petal around a pencil to give it a curved shape and keep the model open.

## NINJA STAR

Shuriken are commonly known in the West as throwing stars or ninja stars though they took many different shapes and designs during the time they were used. The major varieties of shuriken are the boshuriken (stick shuriken) and the hira shuriken (flat shuriken) or shaken (wheel shuriken).

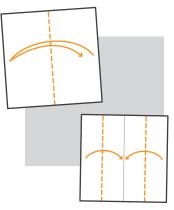
Shuriken were mainly a supplemental weapon to the more-commonly-used sword or other various weapons in a samurai warrior's arsenal, though they often played a pivotal tactical role in battle. The art of wielding the shuriken is known as shurikenjutsu and was mainly taught as a minor part of the martial arts curriculum of many famous japanese schools.



#### **SHURIKENJUTSU**

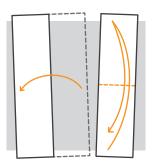
The origins of shurikenjutsu are shinobi in origin, as there is a lack of reliable documentation regarding the art's history when compared to other arts. However, there are various oral traditions peculiar to each school (Ryu), that describe how their art developed and came to be used within their system.

The art possesses many originators and innovators who discovered and developed their own various methods of adapting everyday objects into throwing weapons, hence the wide variety of both schools and blades. Furthermore, the art itself is typically quite secretive, as shurikenjutsu gains its tactical advantage by using stealth and surprise. Shuriken are small and easily concealed, yet they have the versatility of being used as a stabbing weapon at close range (called shoken if used in this manner), as well as a longer range thrown weapon.



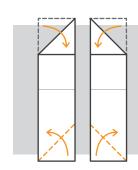
#### STEP 1

Fold and unfold the paper in half vertically, then fold the sides in so they lay flush with the centerline.



#### STEP 2

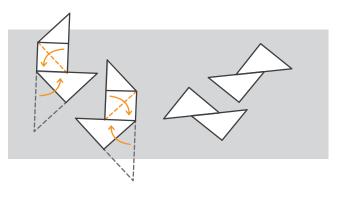
Fold in half vertically, then fold and unfold horizontally.

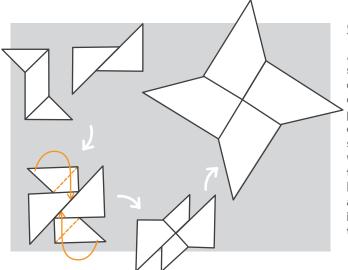


#### STEP 3

Make a second of these strips and fold opposite corners along their diagonals like shown. Do the same for the bottom corners, but use the opposite corners.

Continue folding along the diagonals like shown. You should end up with to models that mirror eachother.





#### STEP 5

Arrange the models like shown, and overlap their centers and fold the corners of the bottom piece under the edges of the top piece. Make sure to press firmly when creasing because the paper can get thick. Flip the model over and repeat. If you did it right, it should stay together firmly.

### PENGUIN

Although all penguin species are native to the Southern Hemisphere, they are not found only in cold climates, such as Antarctica. In fact, only a few species of penguin live so far south. Several species are found in the temperate zone, and one species, the Gal?pagos Penguin, lives near the equator.



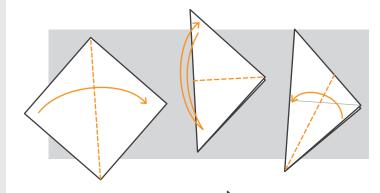




#### **PENGUINS!**

The largest living species is the Emperor Penguin. On average, adults are about 3 ft 7 in tall and can weigh 77 lb or more. The smallest penguin species is the Little Blue Penguin, also known as the Fairy Penguin, which stands around 16 in tall and weighs around 2.2 lb.Some prehistoric species attained enormous sizes, becoming as tall or as heavy as an adult human, and could be found 1250 miles south of the equator in climates that were warmer than today.

Penguins form monogamous pairs for a breeding season, though the rate the same pair recouples varies drastically. Most penguins lay two eggs in a clutch, although the two largest species, the Emperor and the King Penguins, lay only one. With the exception of the Emperor Penguin, all penguins share the incubation duties. These incubation shifts can last days and even weeks as one member of the pair feeds at sea.

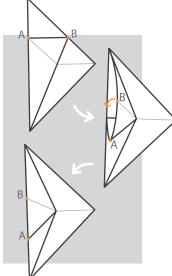


#### STEP 1

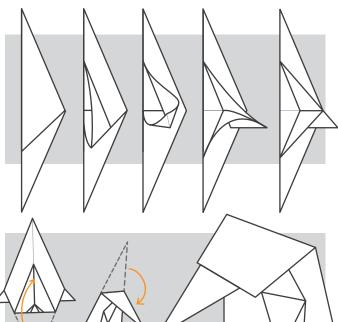
Fold the paper along the diagonal, then fold and unfold along the horizontal. Take the top-most layer and fold it flush with the left side of the model like shown.

#### STEP 2

For the next step, take point A and bring it down along the let side, while folding point B so it touches the left side of the model, creating 3 triangles. Repeat this on the other side.



Take the point you created and squash fold it so that it points to the right like shown, then repeat for the other side of the model.



#### STEP 4

Open the model, and lay it with the folds facing down. Fold up the bottom corner, and then close the model again. Fold the flippers, then outside reverse fold the head. Nex, crimp fold the beak. This is easier ifyou open up the model again and make two horizontal folds - one down and then one back up again.

