Your cat will love nothing more than a city of boxes, provided with small holes for entry and exit.

CATS' ILLUSIONS

# Little Houses, Little Boxes

The instinct for hiding runs so deep that cats will sit in shallow boxes or even a square made of colored masking tape. The impression of a box is all they need to feel cozy and safe. **BY JILL NEIMARK**

A cat who can't get inside a box will happily sit on top of it—or even inside the drawing of a box.

Somewhere right this moment, on one of the slopes of Africa's Mt. Kilimanjaro, a powerful lioness is waiting motionless in tall grass, making sure she's hidden until she's ready to pounce on her prey. And somewhere here in America in a city high-rise, a cute little kitten is climbing into a cupboard or squeezing into a cardboard box, staying there for hours, until she, too, is ready to pounce. The two cats share exactly the same instinct for hiding in safe places as they survey their territory and hunt. For the lion, it may be big prey. For the cat, it could be a toy mouse or a rubber ball.

**A recent study found that shelter cats allowed to hide in boxes experienced less stress and adapted more quickly.**

"Our pet cats are truly little lionesses and tigers in our homes," explains Natalie Marks, DVM, a Chicago veterinarian and a host on Vet Scoop, an online site where top veterinarians offer expert guidance. "They retain their ancient drive as successful predators." And nothing pleases a pet cat, says Marks, as much as a nice little cardboard box with a small hole cut in the front to squeeze through. Most cat owners know that all too well, and have photographed their feline companions climbing into boxes, suitcases, plastic containers, large bowls and even vases. In fact, research shows that rescue cats have a better appetite and produce fewer stress hormones if they are simply given a box to hide in inside their cages. And if they are not given boxes, they may try to hide beneath their litter pans.

"Cats are very tactile and spatially aware," says Marks, "and they love to press up against things." Close contact with the interior of a box may release endorphins, the body's own feel-good molecules, according to animal behavior expert Nicholas Dodman, a professor emeritus at Tufts University. And snuggling in a box might remind cats of snuggling with their mom and littermates as kittens.



Cats seek warmth when they sleep and there's no warmer, cozier hideout than a cardboard box.

But here's a strange fact: the instinct for hiding runs so deep that cats will sit in shallow boxes (like the top of a carton) or even inside a representation of an enclosed space—like a square made of colored masking tape on the ground. In 2017, Twitter lit on fire after a tweet by a woman named Danielle Matheson went viral. Her mom had fashioned the illusion of a box with pink tape on the floor, and sent Matheson a photo of her cat happily sitting inside it. Countless cat parents soon posted their versions. And in 2020, at the height of the pandemic, stray cats in the Philippines were photographed sitting one by one inside the white circles painted

The corrugated texture of a cardboard box is the perfect place for indulging the instinct to bite and scratch.

If your cat is plagued by separation anxiety when you return to work post-pandemic, a cardboard box can help to calm him down.

on sidewalks 6 feet apart to keep humans socially distanced.

## THE CAT CONTOUR

If cats will sit in a taped "box" on the floor, what does that say about their ability to comprehend illusions? Gabriella Smith, an animal cognition researcher currently working for the company CleverPet, decided to find out. She was at Hunter College at the time and had just attended a lecture on how dogs react to visual illusions. That evening, as she played with her roommate's cat, she began to wonder if she could test cats' ability to react to illusions by testing their response to illusory squares.

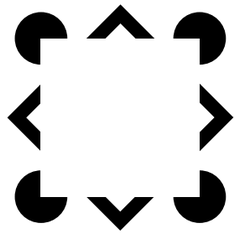
A quick Google search led her to a phenomenon called the Kanizsa contour illusion. In 1976, a scientist named Gaetano Kanizsa arranged lines and Pac-Man shapes in such a way they created the illusion of two bright white triangles, one pointing up and one pointing down. Similar contours can be arranged to look like boxes or disks. Humans easily 'construct' the image from its suggestive shapes, and so do cats, as was shown in a feline experiment in 1988. Because we and other mammals have this ability, we can infer whole shapes from what is hidden—such as part of a building obscured by a tree. It's important to our survival.

The new research took place during the pandemic, so Smith asked cat owners to be citizen scientists and videotape the experiment in their own homes.

"This is the first cat research that used citizen scientists and looked at cat cognition," says Smith.

Cat owners around the country arranged the Kanizsa contours at four corners of an imaginary square—and arranged the contours in a shape that did not give the impression of a box. If cats preferred to sit in the illusory square, it would indicate that they were capable of looking at parts of an image and seeing it as a whole.

Calling the study "If I Fits I Sits," Smith found that indeed, cats will choose to sit within a Kanizsa square illusion—and they'll do so more often than sit in an arrangement of shapes on the floor that *doesn't* suggest a square. Thirty cat owners completed the experiment, which took place over six days. Nine of the 30 cats consistently sauntered over and chose to sit in one of the shapes that implied a square—almost as often as they chose an actual square. This suggests, said Smith, that cats have the ability to look at parts of an image and conceptualize it as a whole. The study was published in the journal *Applied Animal Behavior Science* in May of 2021 and was aptly titled: "If I Fits I Sits: A Citizen Science Investigation into Illusory Contour Susceptibility in Domestic Cats."



The Kanizsa Contour: For cats, lines and Pac-Man shapes create the illusion of a box.



A jungle gym of boxes rising to the ceiling is bound to be nirvana for your feline friend.

Boxes are great, but cats also love tunnels, drawers and other forms of hideaway spaces.

Smith herself has a rescue cat from the streets of Puerto Rico, which she named Pancetta, a type of Italian bacon. "She has stripes like the fat in bacon," says Smith. "She still has a wild streak and she's definitely a mama's girl." Wild streak aside, Pancetta loved sitting inside her own Kanizsa square.

Next up, says Smith, is a study testing both cats and dogs and how they respond to an image that suggests illusory motion. The image, known as rotating snakes, has been shown to trigger hunting behavior in cats, even though it is not actually moving.

ERECTOR SET

## Building a Box Paradise

*Here's a step-by-step primer for creating a city of squares for your homebound pet.*

If you want a happy cat, give your feline lots of boxes, says Chicago veterinarian Natalie Marks. "Cats are incredibly spatially aware," she explains. And they love expressing their innate predatory instincts by hiding in boxes and small safe spaces, so they can survey their territory without risk and prepare to pounce on imaginary prey. And keep in mind, Marks says, that although as humans we live horizontally, cats love vertical layouts. When starting to plan your cat's box haven, think in terms of cubic feet, not square feet. Arrange your cat spaces vertically, not just horizontally. "The higher the space the happier the cat," explains Marks. Think of them surveying their world from the top of a cliff. Remember that cats are incredibly graceful and can leap from on high to easily land on their feet. If you want some inspiration, check out photos of The Cat's House, by artist and photographer Bob Walker, who, with his artist wife, Frances Mooney, created an incredible cat paradise of walkways, spiral staircases, cubbyholes, mouseholes and lookouts in their home.

Here are some ideas for turning your home into a cat haven full of fun hiding places.

- The simplest box for your cat is the last one you got from Amazon. Cut a hole in the front so your cat can squeeze through and add a fleece blanket for plush comfort.
- If you have more than one cat, tape four open boxes together and fill them with plastic balls that your cats can play with. Hide cat treats and kibble in boxes with an open hole for climbing through.
- For kittens, an empty Kleenex box will serve as a short-term hiding place. Because cats love to be up high, put a box or cubby up on the top of a bookshelf.
- Check out Catty Stacks, which offers puzzle boxes with toys and treats and modular cat condos.
- Place boxes strategically where cats like to hide—behind the dresser, in your closet, under furniture.
- Mount a cat bed on the wall if you can. Otherwise, cut a hole in a clean milk carton and place it somewhere your cat can jump up to—a kitchen counter or table, for instance.
- Use decorative wicker baskets, strategically placed and made cozy with blankets, for cats to climb into.
- Stuff a wooden milk crate with blankets or old T-shirts for a cozy cat box.
- Buy soft-sided cat tunnels that are collapsible. Some cat tunnels are shaped like a T, while others are long like pipes; most have holes in the sides so cats can not only creep through them and sleep inside, but can pop their heads out to look around.
- Open a drawer to give your cat a temporary 'hiding' place.