

II. THE FIVE SENSES

I. Vision

🐾 Cats have exceptional eyesight:

- At dusk & at night they see better than humans
- They can see kinds of light, like ultraviolet, that humans can't

🐾 Cats are more or less colorblind.

🐾 Cats have a layer of cells at the back of the eyeball that reflects light.

- This is the tapetum lucidum, which causes the eyes to glow in the dark (eyeshine)
- This helps the cat see at night.

🐾 Parts of the eye:

- Cornea – transparent covering of the eye
- Sclera – ring of white shiny tissue around the cornea
- Pupil & Iris – hole formed by the iris, which expands & contracts to let in light
- Lens – focuses images on the back of the eyeball
- Retina – at the back of the eye, changes light into nerve impulses.
- Optic Nerve – carries nerve impulses to the brain

🐾 Cats also have a “3rd eyelid”, the nictitating membrane.

- Located at the bottom of the eye
- Protects the eyeball
- When closed, the cat still has partial vision
- If you can see it clearly, your cat might be sick.

🐾 Cats can't focus well on very close objects because of the shape & size of their lenses. They see best at 7-20 feet.

🐾 Kittens eyes are closed at birth & don't open for 7-10 days.

🐾 Kittens don't see as well as adults until they're 3 months old.

II. Hearing

🐾 Cats are very sensitive to sound.

🐾 Their range extends well above & below the range of humans.

🐾 Cats can tell the difference between two sounds as close as 3" & as far as 3'.

🐾 Cats have cup-shaped ears to help focus sound. They turn their heads & move their ears to focus on sounds.

🐾 Some white cats, especially blue-eyed ones, are deaf.

🐾 All cats tend to become deaf in old age.

A. Outer Ear

🐾 The outer part of the ear has small knobs to help protect the inner ear.

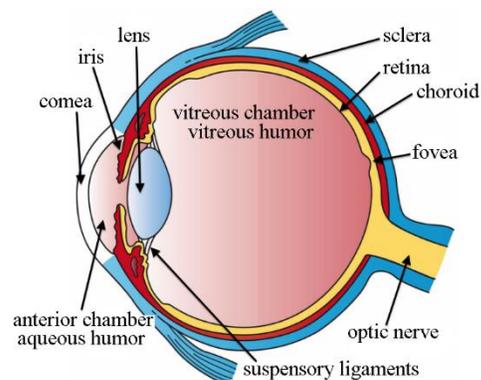
🐾 The outer ear narrows & turns in, ending at the eardrum.

B. Inner Ear

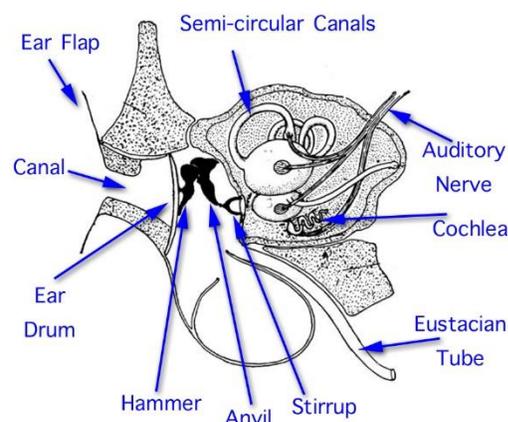
🐾 All of the “hearing parts” are inside the skull:

🐾 Parts of the Inner Ear:

- Hammer, anvil & stirrup – just beyond the eardrum. Named for their shapes. Transmit sound waves to the cochlea
- Cochlea – A snail-shaped canal, contains the auditory nerve which changes sound waves to nerve impulses
- Auditory Nerve – transmits nerve impulses to the brain



Cat's Ear Anatomy



- Semicircular canals & Cilia – 3 horseshoe-shaped tubes. Contain fluid & fine hairs called cilia that help the cat maintain his balance
- Eustachian tube- connects the inner ear to the throat. Its main purpose is to equalize pressure & prevent the eardrum from rupturing.

III. Smell

- 🐾 Cats don't rely on scent as much as most other hunting animals.
- 🐾 Cats dislike many of the same smells as humans.
- 🐾 Smell plays an important part in:
 - Appetite
 - Behavior
 - Protection
 - Reproduction
- 🐾 Cats recognize objects, people, & animals through smell.
- 🐾 Food is tested by smell before it is tasted & eaten.
- 🐾 It's believed that cats like catnip because of the smell. Some cats are crazy for it & others don't care about it at all.

IV. Taste

- 🐾 The sense of taste is closely related to the sense of smell.
- 🐾 The cat's tongue is long & flat with almost parallel sides.
- 🐾 The upper surface is covered with rasp-like papillae. These help the cat keep clean & scrape meat off bones.
- 🐾 The tongue is covered with taste buds, especially at the tip & at the back.
- 🐾 Cats are sensitive to taste & have definite likes & dislikes.
- 🐾 One day old kittens can tell the difference between salted & unsalted.
- 🐾 Most mammals can detect:
 - Sweet
 - Bitter
 - Salty
 - Acid
- 🐾 Not all cats can detect sweet. Cat's digestive systems are very sensitive to sugar, so not liking sweet makes sense.

V. Touch

- 🐾 Touch is the cat's least important sense.
- 🐾 Touch sensations include:
 - Gentle touch
 - Heavy pressure
 - Warmth
 - Cold
 - Pain
- 🐾 The nose & paw pads are especially sensitive to touch.
- 🐾 Paws are used to touch unfamiliar things.
- 🐾 Pads can also feel vibrations, allowing the cat to "hear" with its feet.
- 🐾 Whiskers are also especially sensitive & are used to investigate objects & air currents.