

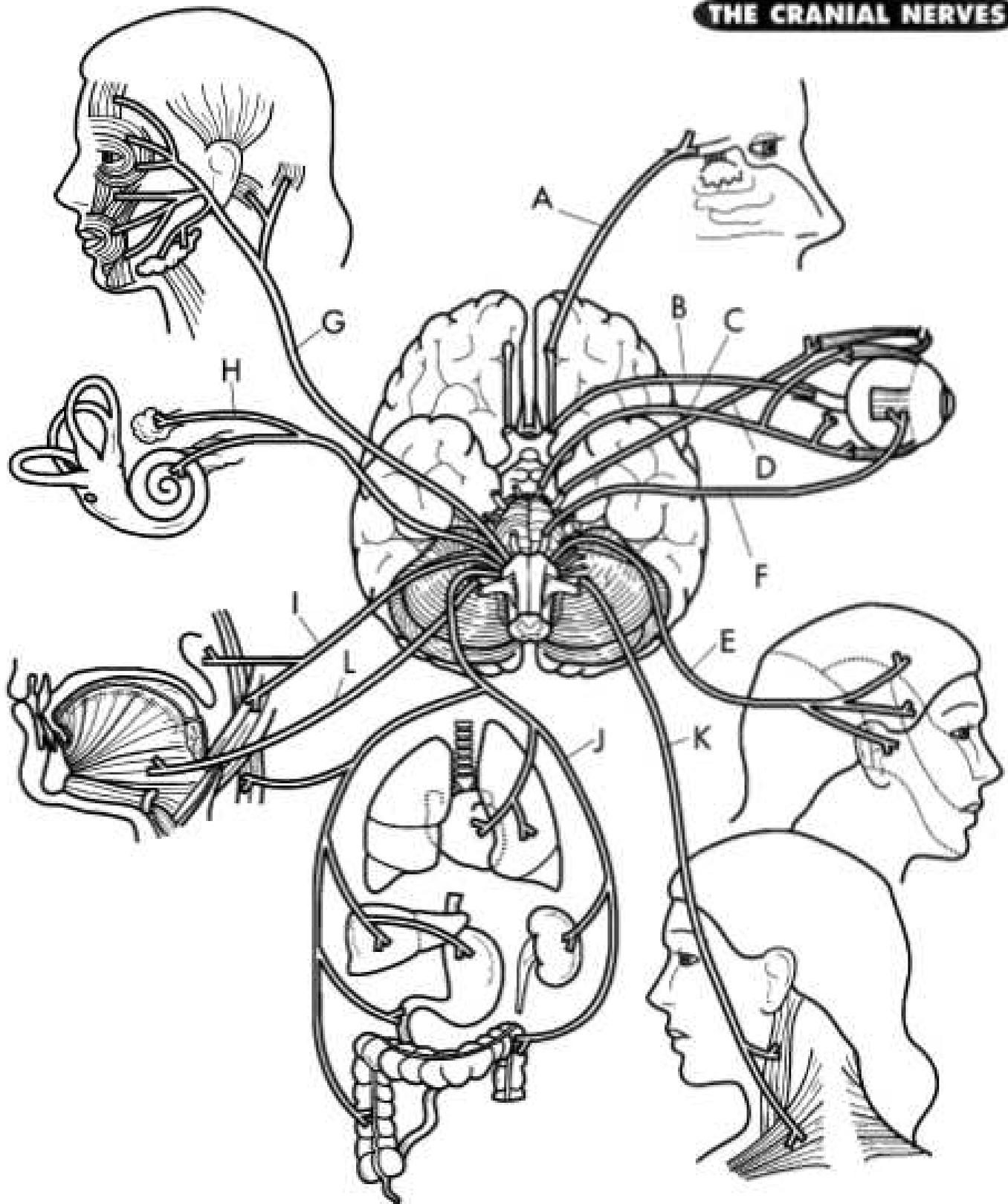
Name: \_\_\_\_\_

Per: \_\_\_\_\_

Oh Once One Takes The Anatomy Final Very Good Vacations Are Here

<u>Cranial Nerve</u>	<u>Motor or Sensory or Both?</u>	<u>Where does the nerve innervate?</u>	<u>Test Performed</u>	<u>Results of tests</u>	<u>Assessment of Nerve Function</u>
Olfactory (I)					
Optic (II)					
Oculomotor (III)					
Trochlear (IV)					
Trigeminal (V)					
Abducens (VI)					
Facial (VII)					
Vestibulocochlear (VIII)					
Glossopharyngeal (IX)					
Vagus (X)					
Accessory (XI)					
Hypoglossal (XII)					

# THE CRANIAL NERVES



- |                  |   |   |                         |   |   |
|------------------|---|---|-------------------------|---|---|
| Olfactory nerve  | A | ○ | Facial nerve            | G | ○ |
| Optic nerve      | B | ○ | Vestibulocochlear nerve | H | ○ |
| Oculomotor nerve | C | ○ | Glossopharyngeal nerve  | I | ○ |
| Trochlear nerve  | D | ○ | Vagus nerve             | J | ○ |
| Trigeminal nerve | E | ○ | Spinal accessory        | K | ○ |
| Abducens nerve   | F | ○ | Hypoglossal nerve       | L | ○ |

# **Cranial Nerve Lab**

**In this lab you will create experiments to test each of the 12 cranial nerves.**

- 1. Read the following descriptions of actual clinical tests and then design 12 experiments to test your lab partners' 12 cranial nerves.**
- 2. Use the data sheet to record the results of your test.**

## **I** **Olfactory** **Function - Smell**

The ability to smell is tested by asking the person to identify items with very specific odors (such as soap, coffee, and cloves) placed under the nose. Each nostril is tested separately.

## **II** **Optic** **Function – Vision and detection of light by the pupil**

The ability to see is tested by asking the person to read an eye chart. Peripheral vision is tested by asking the person to detect objects or movement from the corners of the eyes.

## **III** **Oculomotor** **Function – Eye movement upward, downward, and inward; narrowing (constriction) or widening (dilation) of the pupil in response to changes in light**

The ability to move each eye upward, downward, and inward is tested by asking the person to follow a target moved by the examiner. The upper eyelid is checked for drooping (ptosis).

## **IV** **Trochlear** **Function - Eye movement downward and inward**

The ability to move each eye downward and inward is tested by asking the person to follow a target moved by the examiner.

## **V** **Trigeminal** **Function - Facial sensation and chewing**

Sensation in areas of the face is tested using a wisp of cotton. The blink reflex is tested by touching the cornea of the eye with a cotton wisp. Strength and movement of muscles that control the jaw are tested by asking the person to clench the teeth and open the jaw against resistance.

## **VI**

**Abducens**  
**Function - Side-to-side (lateral) eye movement**

The ability to move each eye outward beyond the midline is tested.

**VII**  
**Facial**  
**Function - Facial expression and taste in the front two thirds of the tongue**

The ability to move the face is tested by asking the person to smile, to open the mouth and show the teeth, and to close the eyes tightly. Taste is tested using substances that are sweet (sugar), sour (lemon juice), salty (salt), and bitter (aspirin, quinine, or aloes).

**VIII**  
**Vestibulocochlear**  
**Function - Hearing and balance**

Hearing is tested with a tuning fork. Balance is tested by asking the person to walk a straight line.

**IX**  
**Glossopharyngeal**  
**Function - Swallowing, gag reflex, and speech**

Because cranial nerves IX and X control similar functions, they are tested together. The person is asked to swallow. The person is asked to say "ah-h-h" to check the movement of the palate (roof of the mouth) and uvula (the small, soft projection that hangs down at the back of throat). The back of the throat is touched with a tongue blade, which evokes the gag reflex in most people. The person is asked to speak to check the voice for hoarseness.

**X**  
**Vagus**  
**Function - Swallowing, gag reflex, and speech; control of muscle in internal organs (including the heart)**

Same as for cranial nerve IX.

**XI**  
**Accessory**  
**Function - Neck turning and shoulder shrugging**

The person is asked to turn the head and to shrug the shoulders against resistance provided by the examiner.

**XII**  
**Hypoglossal**  
**Function - Tongue movement**

The person is asked to stick out the tongue, which is observed for deviation to one side or the other.

