Title V/ISSA

Cranial Nerves
Important concept – when dealing with motor there is always a motion created by the muscle, so relate motor to muscle.
Olfactory – Sensory (Nose): carries afferent impulses for the sense of smell

Remember that afferent is sensory and efferent is motor.
Optic – Sensory (Eye): carries afferent impulses for vision
Oculomotor – Motor (Eye): muscles that raise the eyelid, directs the eyeball, constricts the iris, and controls the lens shape (the only muscles exempt are the ones supplied by nerves 4 and 6.)
Trochlear – Motor (Eye): directs the eyeball, superior oblique muscle
Trigeminal – Sensory and Motor (Chewing): conveys sensory impulses to two divisions of the face (ophthalmic and maxillary) and supplies motor fibers to one division (mandibular) for mastication.
Abducent – Motor (Eye): innervates the later rectus muscle
Facial – Sensory and Motor (Taste and Expressions): has 5 major branches of mixed nerves, sensory function is taste from the anterior two-thirds of the tongue and the motor functions are facial expressions and the transmittal of autonomic impulses to lacrimal and salivary glands
Mnemonic devices are perfect for these 5 major motor branches of the facial nerve

Temporal, Zygomatic, Buccal, Mandibular, and Cervical

Two Zebras Bit Mr Chris
Vestibulocochlear – Sensory (Inner Ear: Equilibrium and Hearing): composed of two divisions vestibular (balance of linear and spinning movements) and cochlear (hearing)
Glossolopharyngeal – Sensory and Motor (Taste): mixed nerves with sensory and motor functions, the sensory conduct taste and general impulses from the tongue tonsil and pharynx and the motor innervates both parts and provides motor fibers to the parotid salivary gland
Vagus – Sensory and Motor (Taste, Swallowing and Keeping you alive – Heart, Lungs, abdominal viscera, pharynx and larynx): mixed nerves, sensory function is in taste and motor fibers are parasympathetic fibers that supply the heart, lungs, and abdominal viscera and are involved in regulation of heart rate, breathing, and digestive system activity. The only cranial nerve that extends beyond the head and neck. **This Nerve is what keeps you alive.**
Accessory – Motor (Larynx, pharynx, soft palate, trapezius and sternocleidomastoid): supply motor fibers to trapezius and sternocleidomastoid muscles, which together move the head and neck.
Hypoglossal – Motor (Swallowing and Speech): innervates both extrinsic and intrinsic muscles of the tongue
Good with numbers—Good way to relate. Just as the slide shows Mnemonics are also helpful.

<table>
<thead>
<tr>
<th>Cranial nerves I – VI</th>
<th>Sensory function</th>
<th>Motor function</th>
<th>PS* fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Olfactory</td>
<td>Yes (smell)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>II Optic</td>
<td>Yes (vision)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>III Oculomotor</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>IV Trochlear</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>V Trigeminal</td>
<td>Yes (general sensation)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>VI Abducens</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cranial nerves VII – XII</th>
<th>Sensory function</th>
<th>Motor function</th>
<th>PS* fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td>VII Facial</td>
<td>Yes (taste)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>VIII Vestibulocochlear</td>
<td>Yes (hearing and balance)</td>
<td>Some</td>
<td>No</td>
</tr>
<tr>
<td>IX Glossopharyngeal</td>
<td>Yes (taste)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>X Vagus</td>
<td>Yes (taste)</td>
<td>Yes</td>
<td>Yesa</td>
</tr>
<tr>
<td>XI Accessory</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>XII Hypoglossal</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

1 and 2 are only Sensory 5, 7, 9, and 10 both Motor and Sensory 3, 4, and 6 motion of Eye 7, 9, and 10 Taste 3, 7, 9, and 10 carry parasympathetic fibers that serve as visceral muscles and glands.
Make up your own memory device!

I. O_____________
II. O_____________
III. O_____________
IV. T_____________
V. T_____________
VI. A_____________
VII. F_____________
VIII. V_____________
IX. G_____________
X. V_____________
XI. A_____________
XII. H_____________

Oh Oh Oh To Taste And Feel Very Good Vegetables Are Healthy
Cranial Nerves Game

- http://www.purposegames.com/game/178
- http://www.purposegames.com/game/f4c7214f4b