

**Remember**

1. How would the intensity of a sensory stimulus be encoded? That is, what would a slight scent of vanilla vs. an overpowering smell of vanilla look like on the sensory neuron that is traveling to the CNS? Draw your answer.
2. You accidentally pinched your finger closing a drawer. How is your brain able to pinpoint (almost exactly) where you were pinched?

**Understand**

**Synaptic plasticity** means that synapses may be modulated to increase/decrease synaptic effect.

<i>Facilitation:</i> enhance synaptic activity	<u>If over the long term:</u> long-term potentiation
<i>Depression:</i> reduce synaptic activity	long-term depression

Pre-synaptic facilitation: cause affected neuron to release more NT

Pre-synaptic inhibition: cause affected neuron to release less NT  
(may be selective or global)

Post-synaptic cells may alter their NT receptors (changes to structure, affinity, or number) to make NT binding more or less effective

3. Given this, hypothesize how smelling food makes it taste better.
4. How could this explain the way an experienced tennis player has a quicker reaction to a ball than does a novice?

**Apply**

5. For each of the cranial nerves listed, devise a test that would determine if it is intact and working appropriately. Make sure your test would be looking at nerve functionality and not what's going on with that sensory area of the brain.

CN#	Name	Responsible for...
2	Optic	Vision
12	Hypoglossal	Movement of tongue, palate
1	Olfactory	Smell

7	Facial	Movement of facial muscles, taste
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