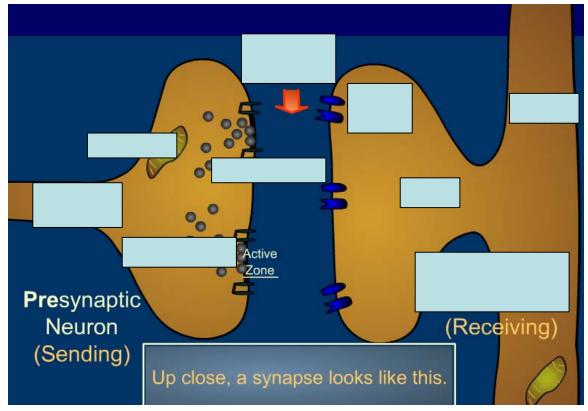
Name _____

The Synapse, a BrainU video

Watch the video **The Synapse** (at <u>brainu.org/movies</u>), then answer the questions below:

- 1. Who are the 6 stars of the show?
- 2. Neurons communicate with each other at ______.
- 3. There are over ______ different neurotransmitters.
- 4. Label this drawing of the synapse.



- 5. At rest a few _____ may be docked at active zones waiting to be released.
- 6. _____ channels are closed.
- 7. When a calcium channel is opened, calcium ions flow ______ a neuron.

Name _____

The Synapse, a BrainU video

- 8. What opens a calcium channel?
- 9. What does the calcium do once it is in the cell?
- 11. What two ions help on the post-synaptic side?
- 12. _____ions flow in and ______ions flow out. Both are flowing down their concentration gradient.
- 13. How do the neurotransmitters aid in this process?
- 14. How does the membrane return to resting potential level?
- 15. What does EPSP stand for?
- 16. What is an EPSP?

Name _____

The Synapse, a BrainU video

17. What are three things that can happen to end the synaptic terminal?

18. What are two things that can happen to the vesicle?

- 19. There are about ______ synapses on each dendrite.
- 20. How do individual synapses (which are below the electrical potential necessary to initiate action potential) cause action potential?
- 21. What does IPSP stand for?
- 22. What is an IPSP?

23. How does an inhibitory signal stop an action potential?