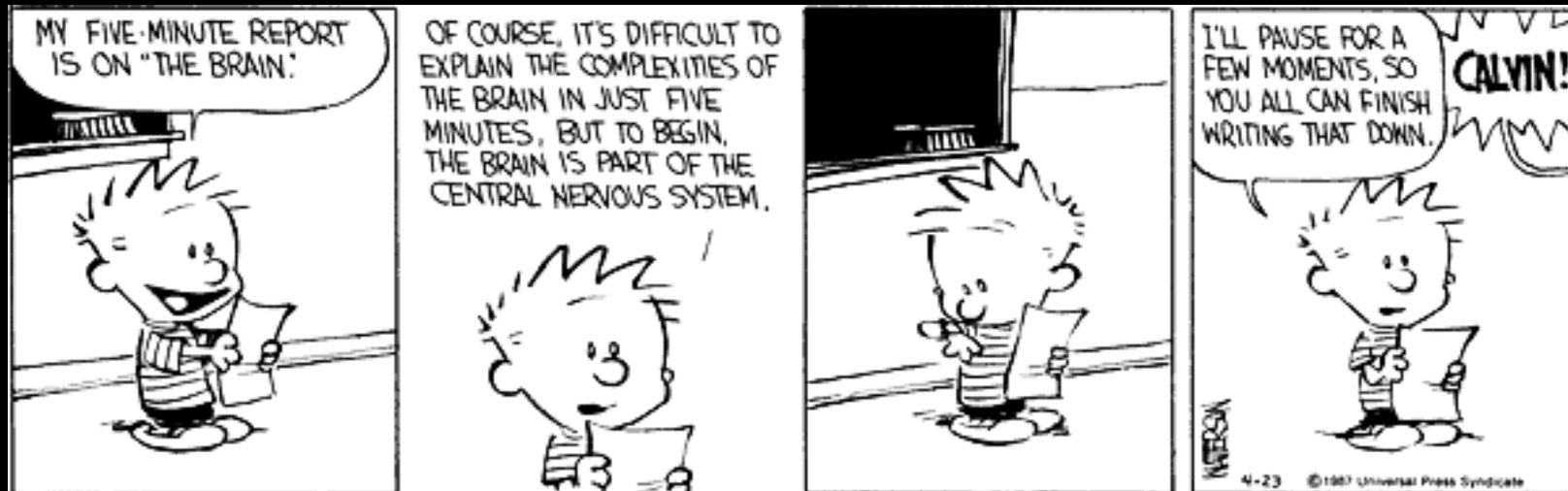


# Exploring your brain!



Splash!

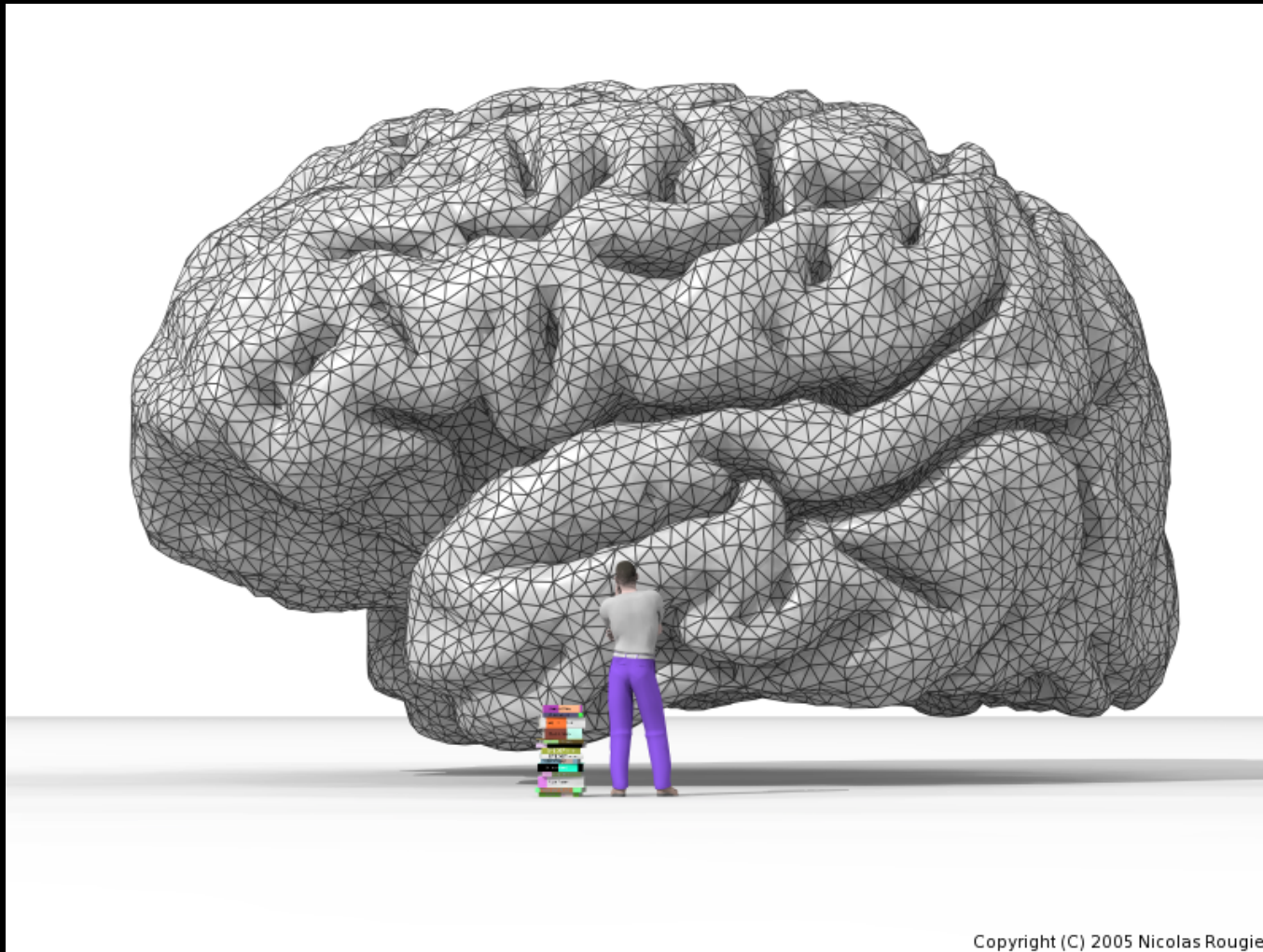
April 22, 2012

# What are we doing today?

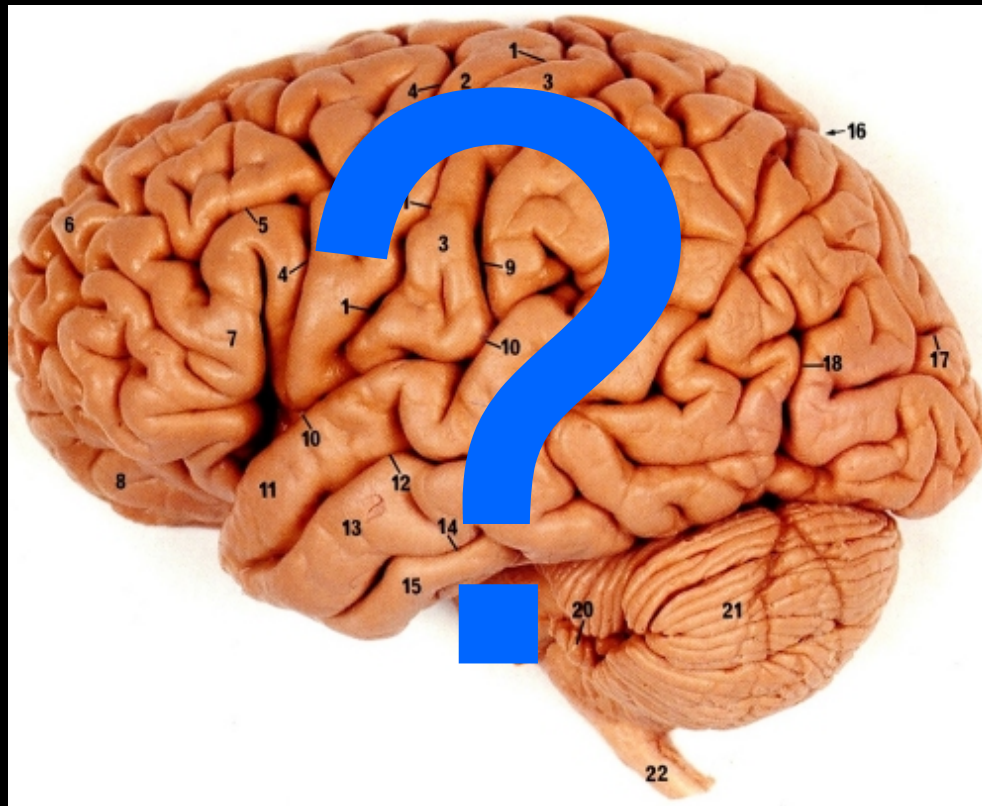
- Who are we?
- Brainstorming
- Introducing your brain
- Cool things we like about the brain
  - Sensation
  - Memory
  - Attention
- Real human and animal brains!



# Introducing Your Brain



# What does your brain do?



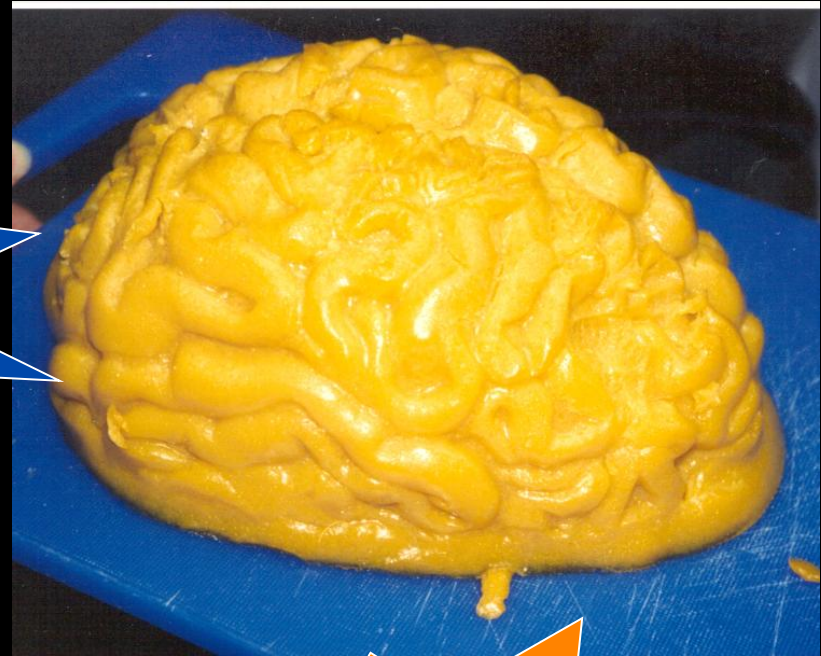
What can go wrong?





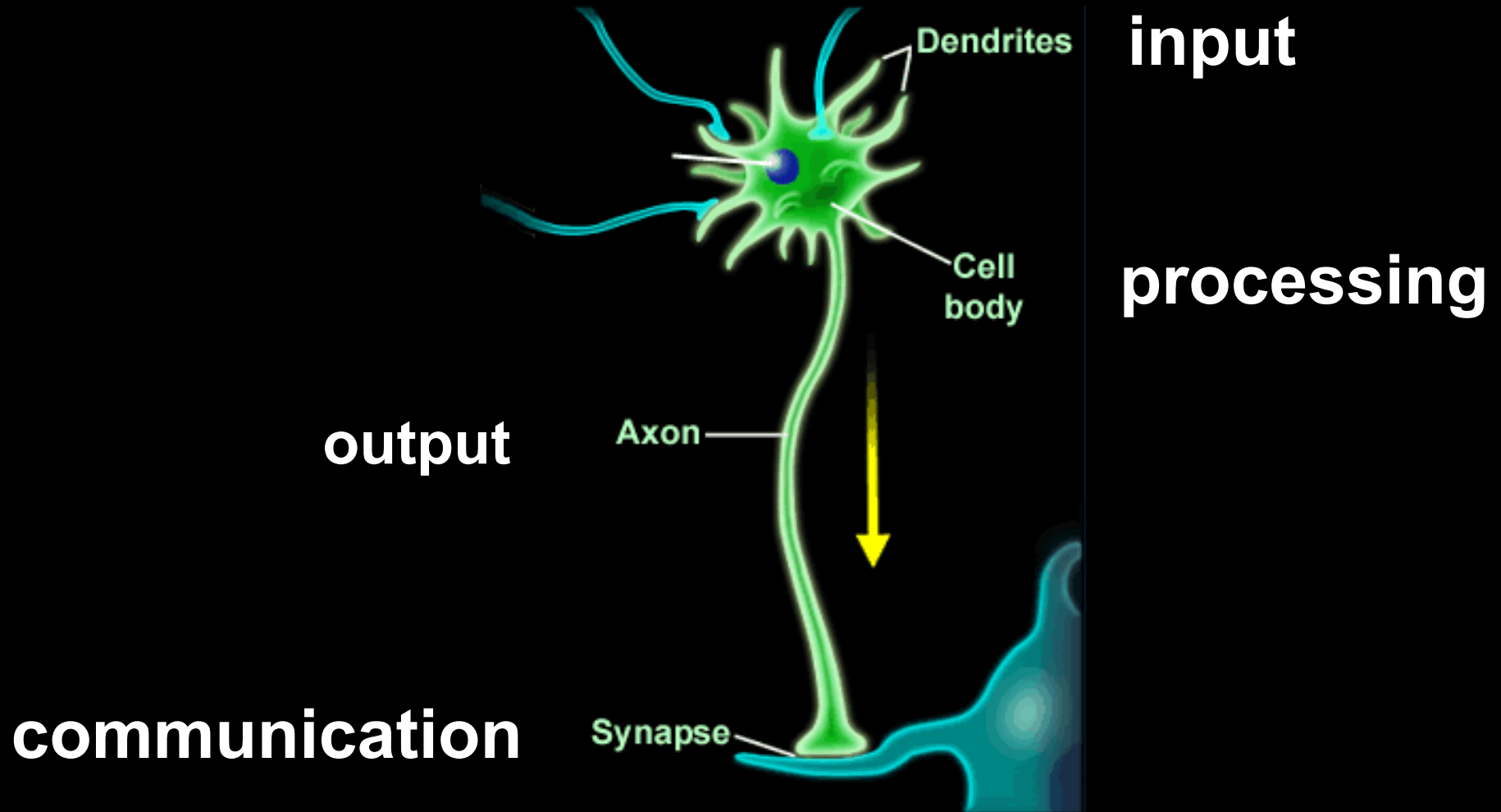
# What's a Brain Made Of?

**100 billion neurons!**

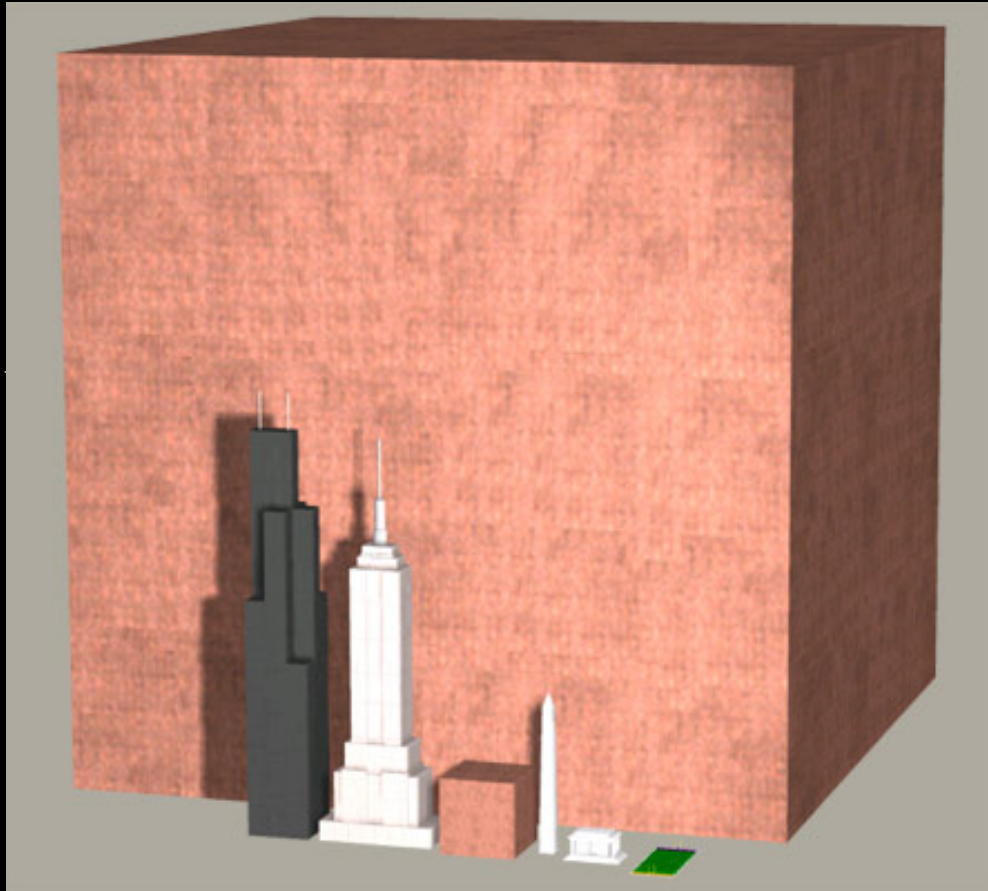


**Even MORE glia**

# The Neuron

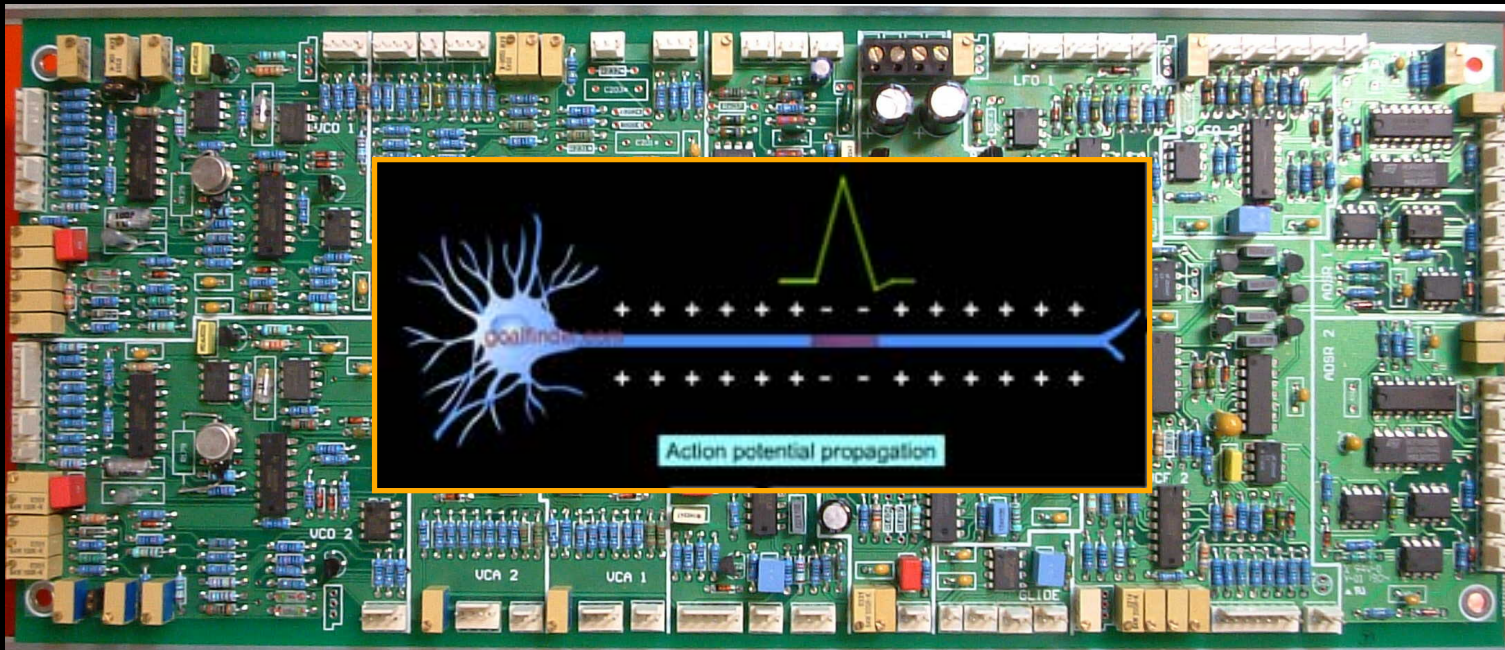


# How Does the Brain Work?





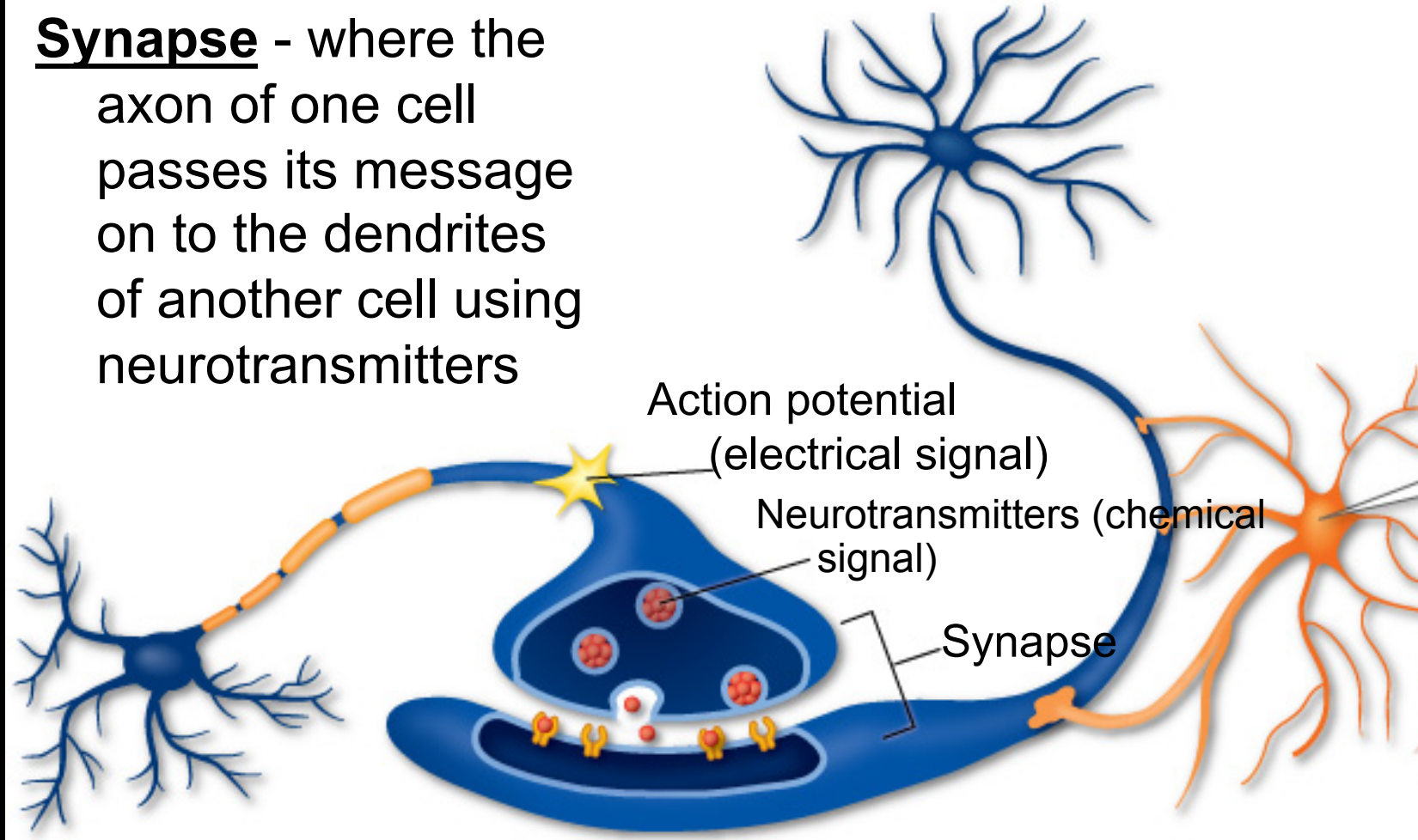
# Electrical Signals: Digital



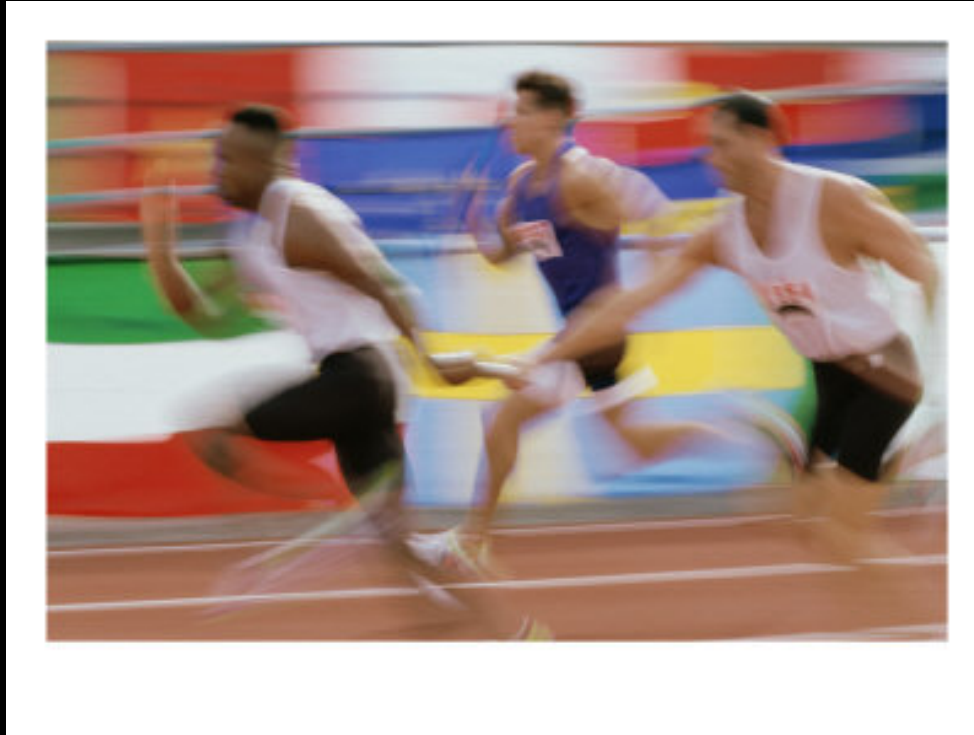
**The Action Potential** - how a message gets passed *inside a cell* from the dendrites to the axon; all or nothing - there either IS a message or there IS NOT

# Chemical Signals: Analog

**Synapse** - where the axon of one cell passes its message on to the dendrites of another cell using neurotransmitters

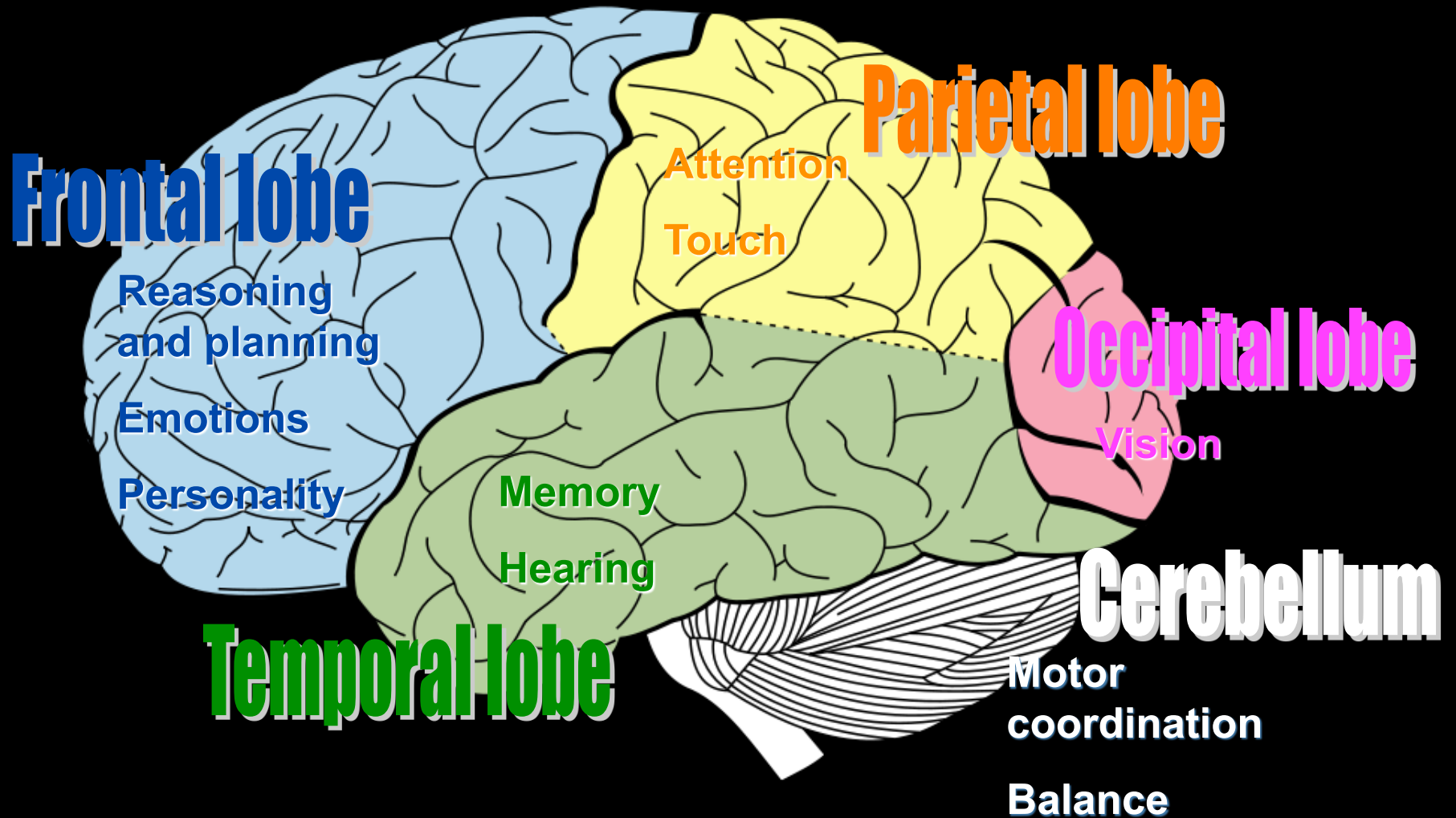


# From Sensation to Action



Your nervous system is like a relay race - passing on messages from one neuron to another, going from sensation to action

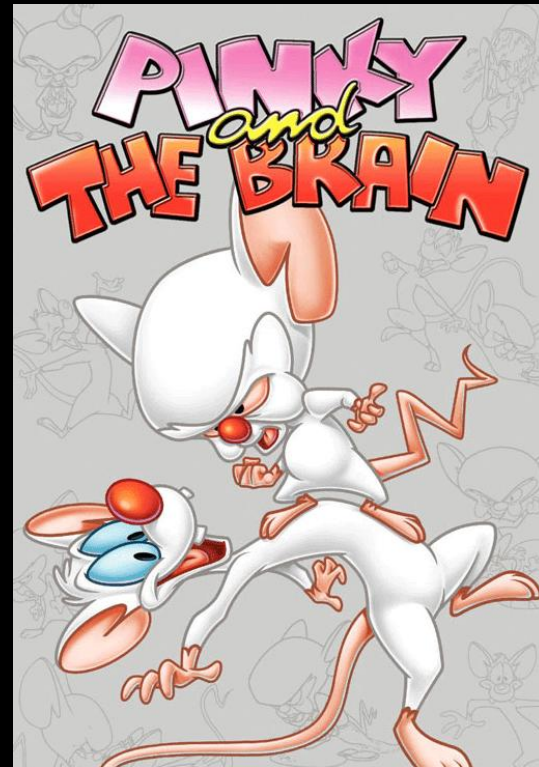
# Your Brain is Specialized





# On to more cool brain stuff!

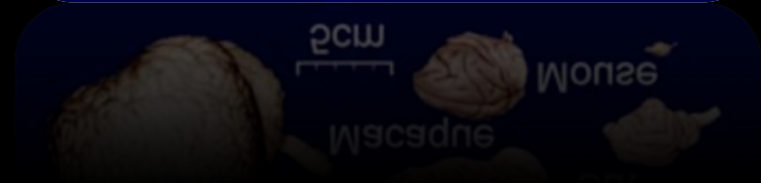
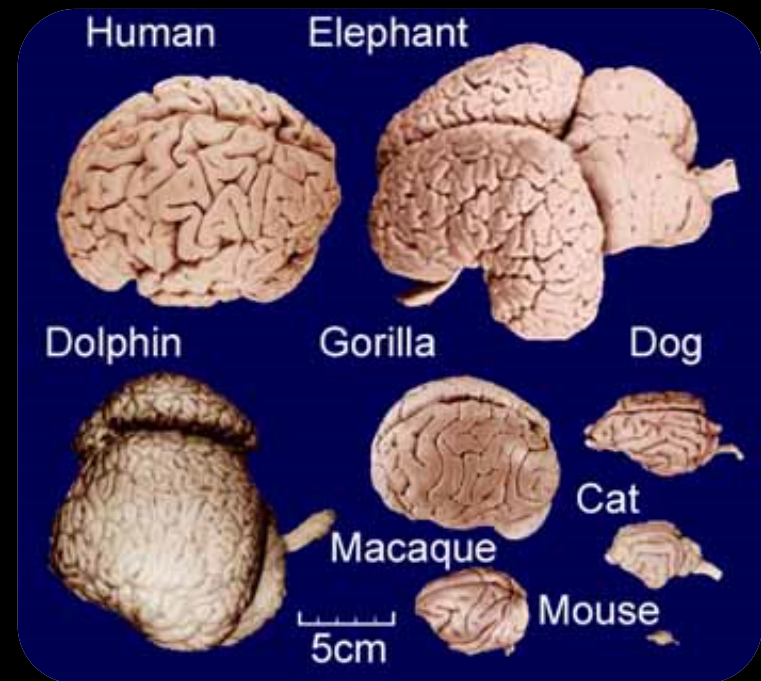
- Interactive Demos
  1. Sensation
  2. Memory
  3. Attention

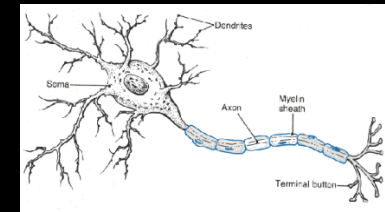
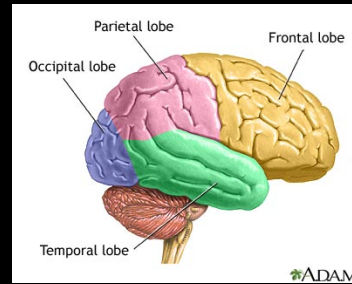




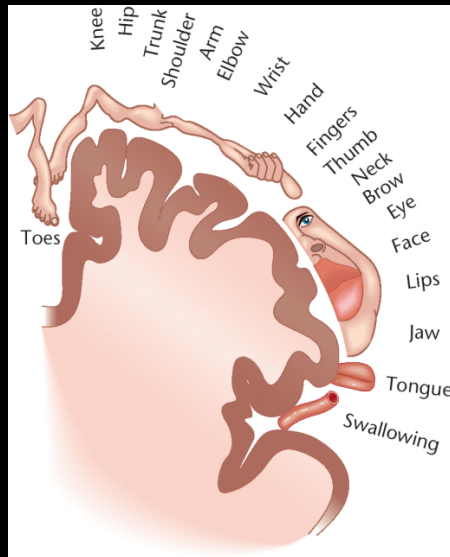
# And now the best part!

- Brain stations
  1. Whole human brains
  2. Human brain slices
  3. Animal brains





What is one cool new thing about the brain that you learned today?



Thanks!

