Potential potentials…

Membrane potential:
The voltage (electrical potential difference) across a cell membrane, represented by the symbol V_m. The other types of potentials are either specific values or changes in the membrane potential.

Resting potential:
The membrane potential, or membrane voltage, maintained by a cell when there are no action potentials or synaptic/resting potentials. Neurons have a resting potential of about -65 mV. Use the GHK equation to calculate the resting potential. Depends on internal/external concentrations and the ratio of permeabilities between ions.

Nernst potential:
The potential needed to maintain zero net flow of a particular ion, when the chemical and electrical gradients are balanced. Applies only when describing a single ion species.

Equilibrium potential:
The electric potential difference that exactly balances an ionic concentration gradient. Same as the Nernst potential. Use the Nernst equation to find the equilibrium potential.

Reversal potential:
When the net ion flow through a channel is zero. Depends on which ions can flow through the channel, the equilibrium potential of permeable ions and the relative conductance of the ions.

Threshold potential:
A level of depolarization sufficient to trigger an action potential.

Action potential:
A brief fluctuation in the membrane potential caused by rapid opening and closing of voltage-gated channels in sequence; also known as a spike. Action potentials sweep like a wave along axons to transfer information from one place to another in the nervous system.

Graded potential:
Changes in the membrane potential that vary in size, as opposed to being all-or-none. This is a general term that applies anywhere (except during action potentials). Graded potential can vary in size and amplitude, thus they can be depolarizing or hyperpolarizing, and do not have a threshold themselves, but do trigger action potentials if the action potential is not blocked and causes a depolarization to threshold. All following potentials are types of graded potentials:

Receptor potential:
A stimulus induced change in the membrane potential of a sensory receptor.

Local potential:
The same as graded potential but applies to a specific location along the membrane.

Synaptic potential:
A graded potential through synaptic receptors, includes excitatory and inhibitory potentials.

Excitatory potential/Excitatory post synaptic potential (EPSP):
Depolarization of the postsynaptic membrane potential by the action of a synaptically released neurotransmitter (voltage is depolarized towards threshold potential).

Inhibitory potential/ Inhibitory post synaptic potential (IPSP):
The postsynaptic membrane potential after synaptically released neurotransmitter, making the postysynaptic neuron less likely to fire action potentials. May not change voltage at all. s

End plate potential (EPPs):
EPPs are the depolarizations of skeletal muscle fibers caused by neurotransmitters binding to the postsynaptic membrane in the neuromuscular junction. Thus, they are the same as EPSPs but this term only applies to the NMJ

Miniature end plate potential (mEPP):
The synaptic potential elicited from a single vesicle's worth of neurotransmitter activating postsynaptic receptors, at the neuromuscular junction.

Miniature excitatory post synaptic potential (mPSP):
Exactly the same as miniature end plate potential but applies to neuron-neuron connections.

And as an added bonus:

Quantal content:
Average number of vesicles released after a presynaptic action potential. Entirely dependent on presynaptic mechanisms.

Quantal size:
The average synaptic potential elicited from a single vesicle's worth of neurotransmitter activating postsynaptic receptors (i.e. size of a mEPSP/mEPP). Can be modulated by: 1. changes in postsynaptic receptor density or efficacy (usually), 2. changes in enzymes within the cleft or 3. disruptions in packaging neurotransmitter into vesicles (rarely).