

Unit 3 KA2: The cerebral cortex

What does the phrase
'localisation of function' mean?

Number of cerebral
hemispheres which exist in
the brain

What allows information to
pass between the cerebral
hemispheres?

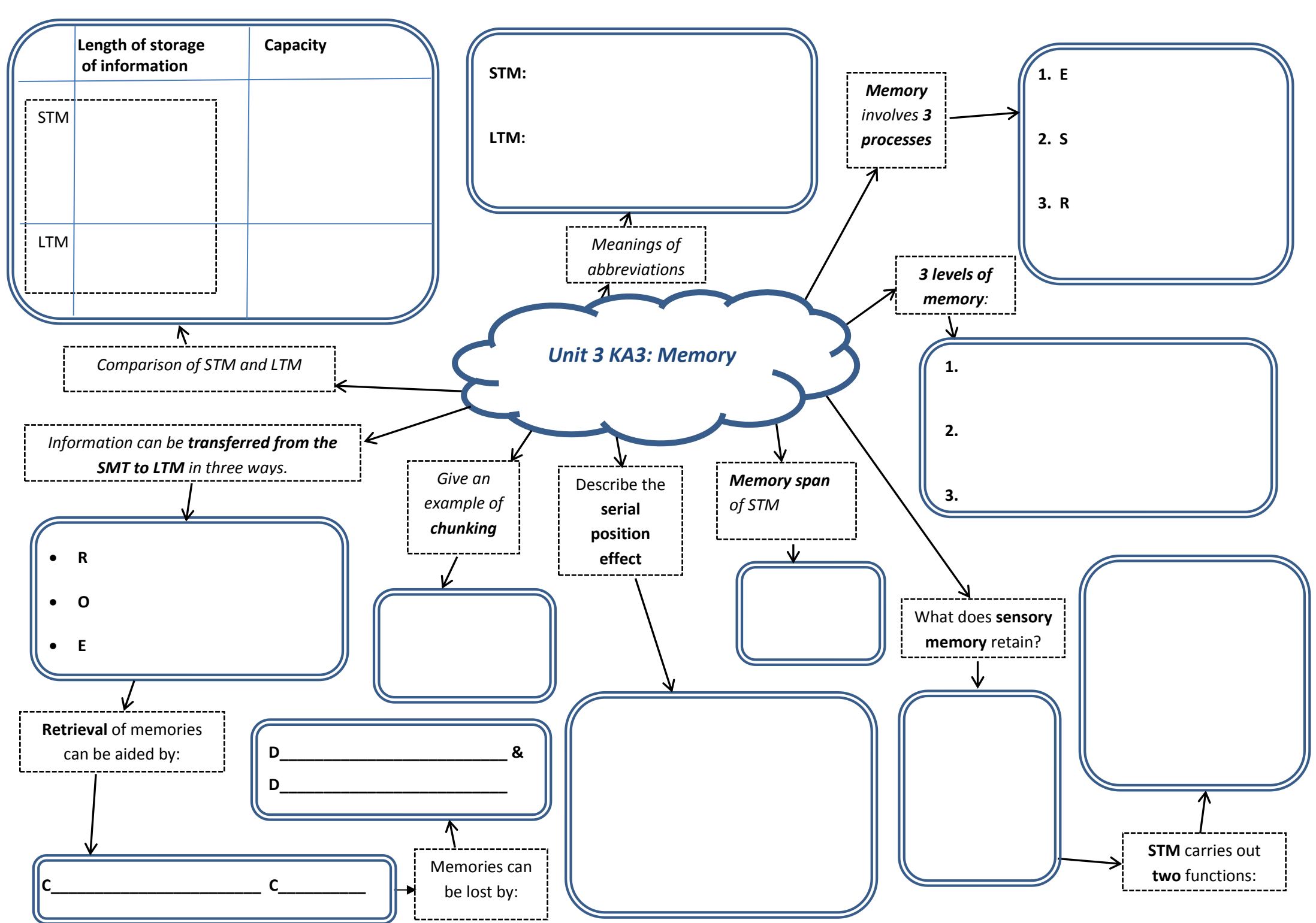
Sketch a **diagram of the brain** labelling
the sensory, motor and association areas
of the **cerebral cortex (cerebrum)**

Some **brain functions** are **localised** to **particular areas** of
the **cerebral cortex**. Describe what is processed in:

Sensory Areas –

Motor Areas –

Association Areas –



Unit 3 KA4a: Nerve Cells and Neurotransmitters

Draw a synapse, labelling the **pre synaptic neuron**, **vesicles containing neurotransmitters**, **synaptic cleft**, **post synaptic neuron** and **receptors**

Draw a neuron, labelling the **cell body**, **dendrite** and **axon**

Function of myelin sheath

By what process do neurotransmitters cross the synaptic cleft?

Why neurotransmitters must be removed after release.

State two functions of **glial cells**

Why a 2 year old's responses to stimuli are **not as rapid or co-ordinated** as an adult's.

Complete the sentence:

Certain diseases destroy the myelin _____ causing a loss of _____ - _____

Two methods in which **neurotransmitters are removed from the synaptic cleft**

1.
2.

1.
2.

Unit 3 KA4b: Nerve Cells and Neurotransmitters

1. Agonists

2. Antagonists

3. Other drugs

Explain the action of drugs which treat neurotransmitter disorders.

Complete the sentence:

Receptors on the post synaptic membrane determine whether the signal passed from neurotransmitters is _____ (more likely to be passed on) or _____ (less likely to be passed on).

Term used to describe the build up of enough weak signals to release sufficient neurotransmitter to trigger an impulse

Complete the sentence:

Drug addiction is caused by repeated use of drugs that act as _____ which block specific receptors causing the nervous system to increase both the number and sensitivity of these receptors. This _____ leads to addiction where the individual craves more of the drug.

Drug tolerance is caused by repeated use of drugs that act as _____ which stimulate specific receptors causing the nervous system to decrease both the number and sensitivity of these receptors. This _____ leads to drug tolerance where the individual must take more of the drug to get an effect.

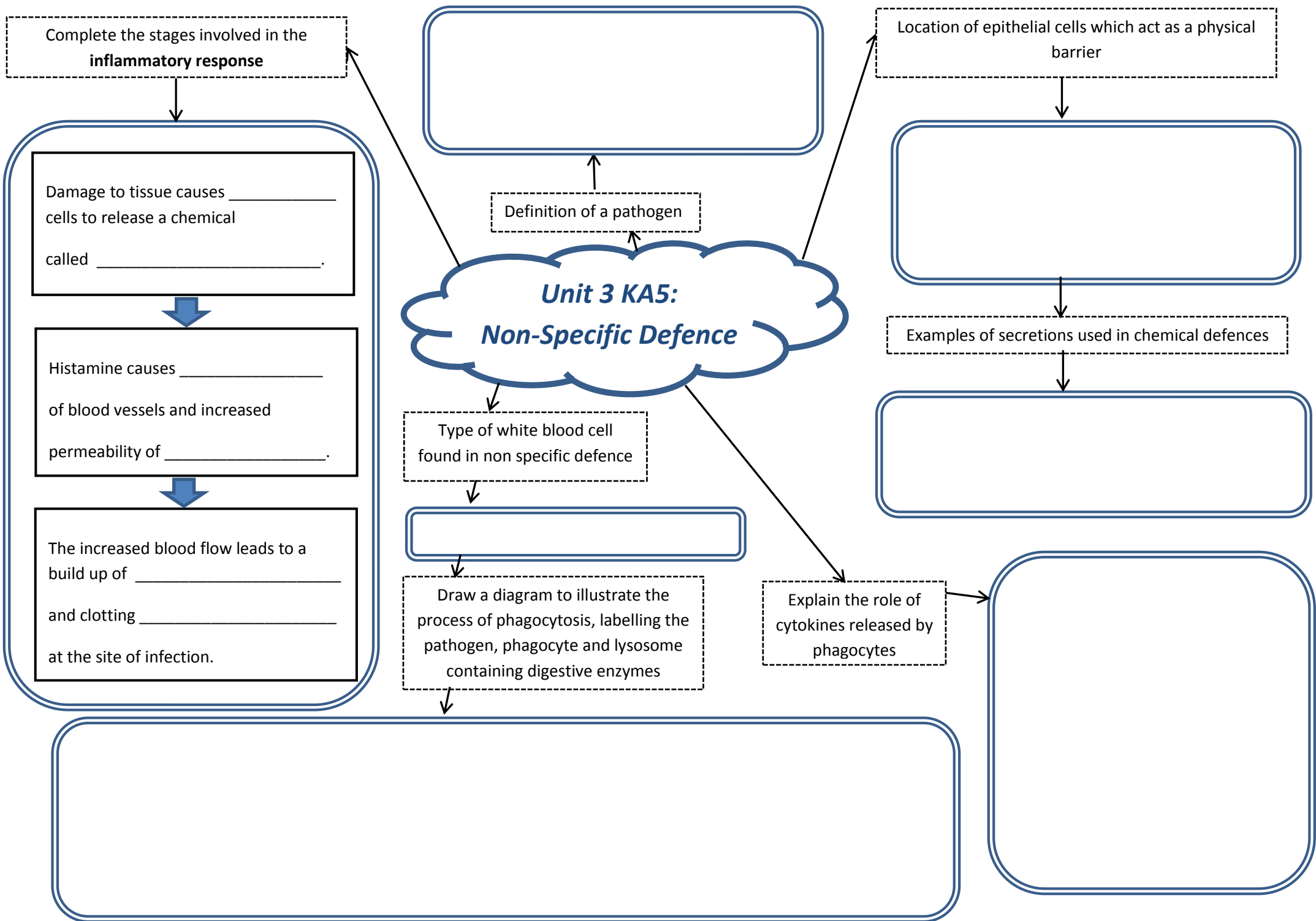
Neurotransmitter involved in feelings of pleasure

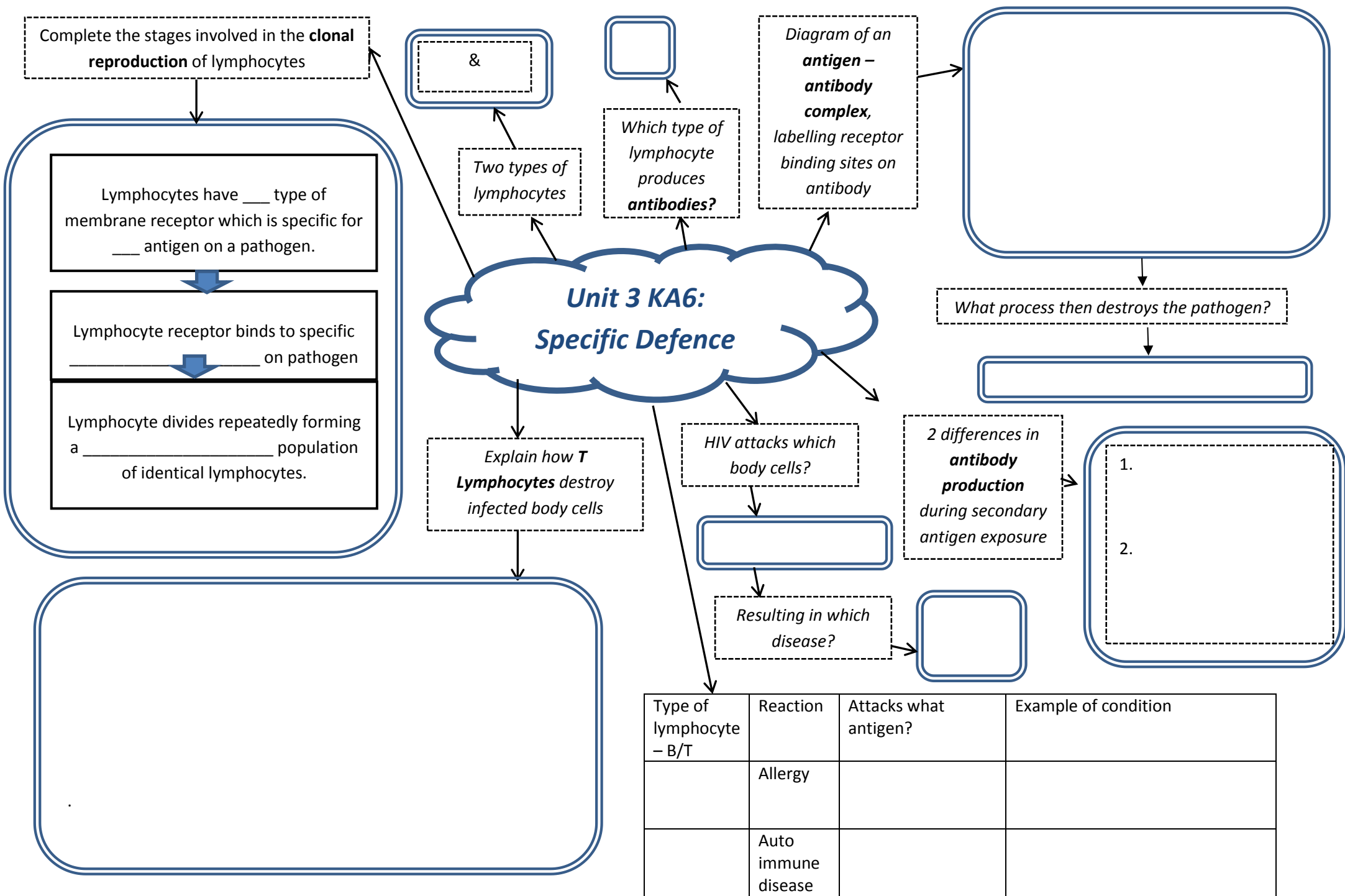
Neurotransmitter involved in reducing pain

Type of neural pathway often involved in this

What situations increase its production?

What situations activate the reward pathway?







What is **antigenic variation**?

What is an *adjuvant* in a vaccine??

4 forms of antigens found in vaccines

Herd immunity occurs when.....

Why do individuals need new influenza vaccination every year?

Situations where widespread vaccination to establish herd immunity may not be possible

Herd immunity threshold depends on:

In developing countries:

In developed countries:

1.

2.

3.

