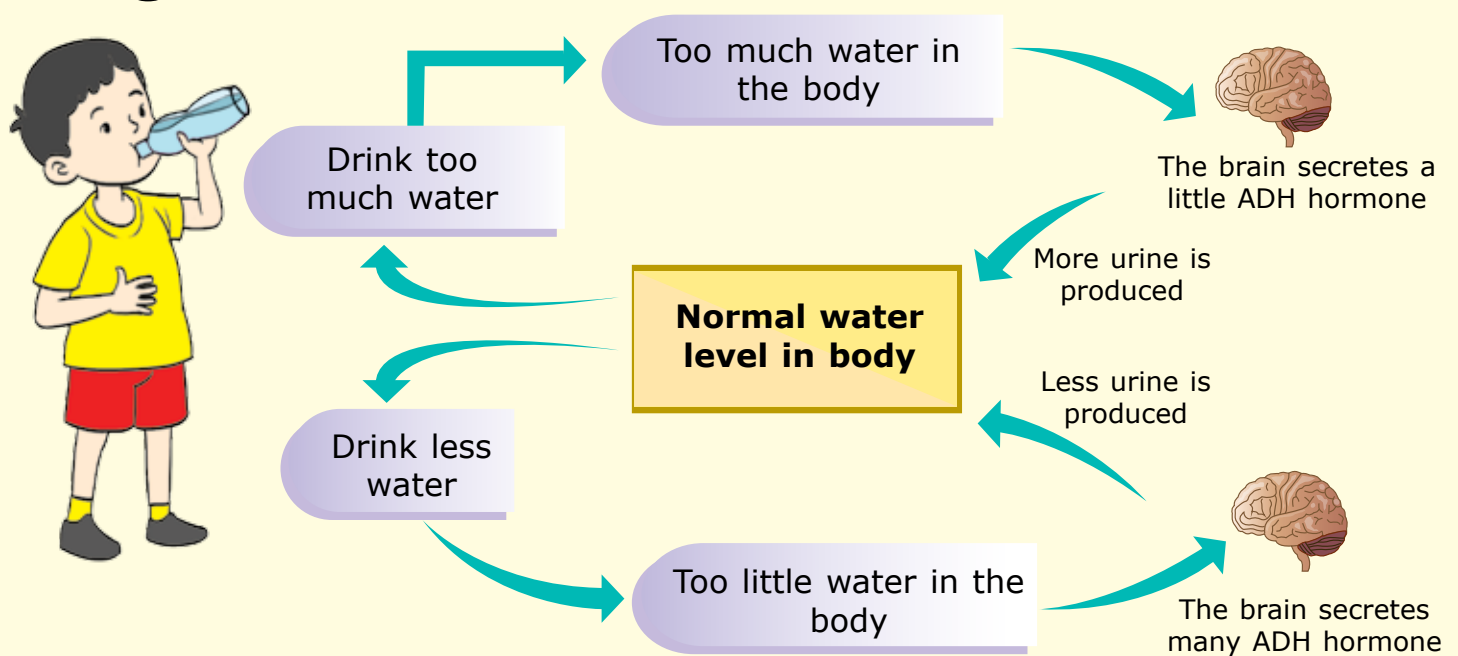
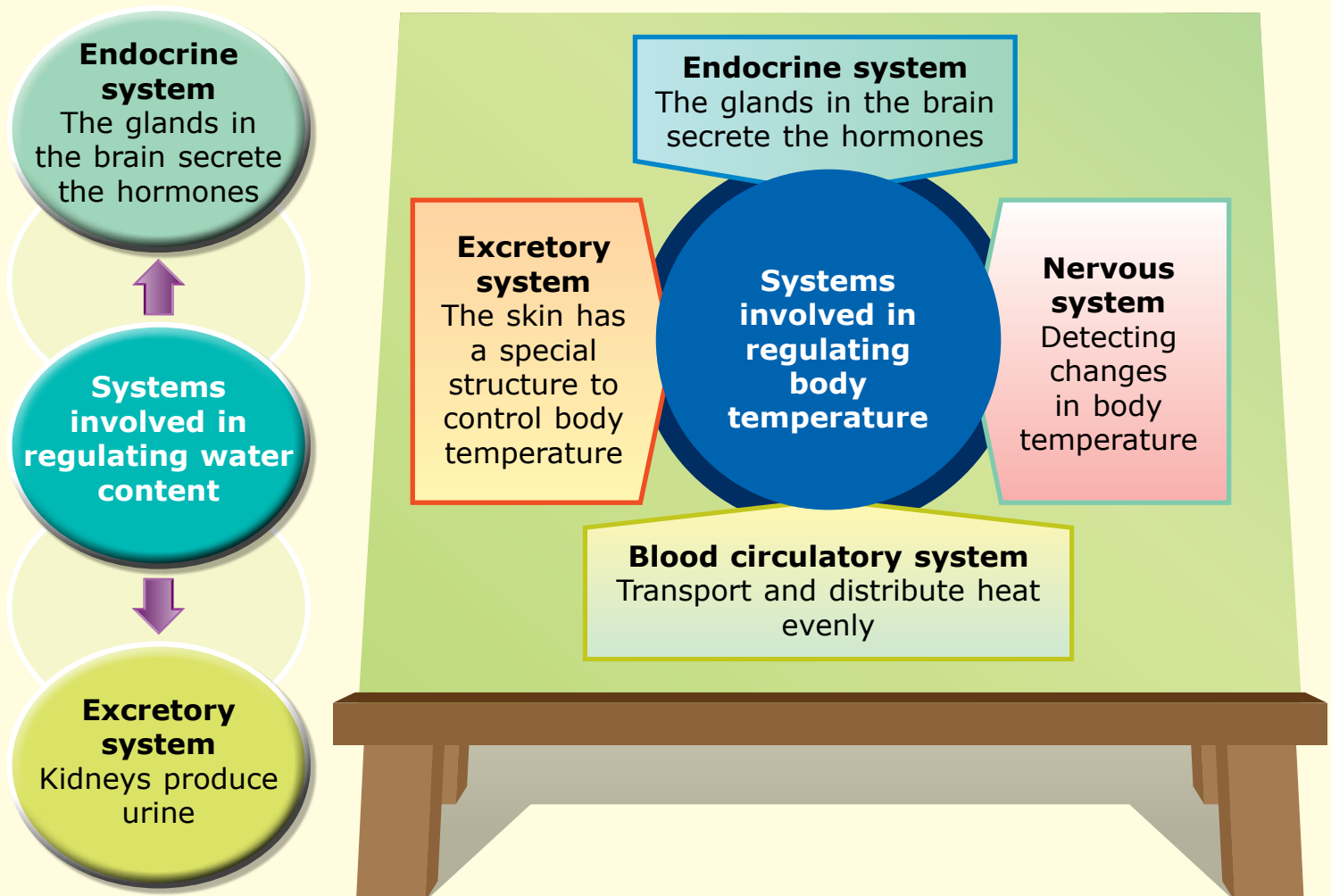


# Regulation of Water Content



# The System involved in Homeostasis



# Regulation of Body Temperature

## When the ambient temperature increases



In hot weather, heat receptors under the skin detect heat, heat receptors triggers nerve impulses and send them to the brain.

Nerve impulses from the brain stimulate the skin to get rid of heat.

Skeletal muscles do not contract or relax, hairs lie flat on the skin, so heat escapes easily.

Blood vessel dilate to increase blood flow near the skin, therefore more heat is released.

Sweat glands are more active and produce sweat that absorbs heat and is released into the environment when sweat is evaporated.

## When the ambient temperature decreases



In cold weather, cold receptors under the skin detect cold, cold receptors triggers nerve impulses and send them to the brain.

Nerve impulses from the brain stimulate the skin to lower heat loss.

Hair stand erect and traps the thick layer of air and reduces heat loss by conduction and radiation.

Blood vessels constrict, therefore less blood flow near the skin and less heat released.

Sweat glands are less active, therefore, less sweat is produced and heat is maintained to return body temperature into normal.

Skeletal muscles will contract and relax rapidly and it will cause an individual to shiver to increase the body temperature.

An individual wears thick clothes as in the diagram above to trap more heat and maintain normal body temperature.