Human Body Unit Notes

Name:_____

DO NOT LOSE!

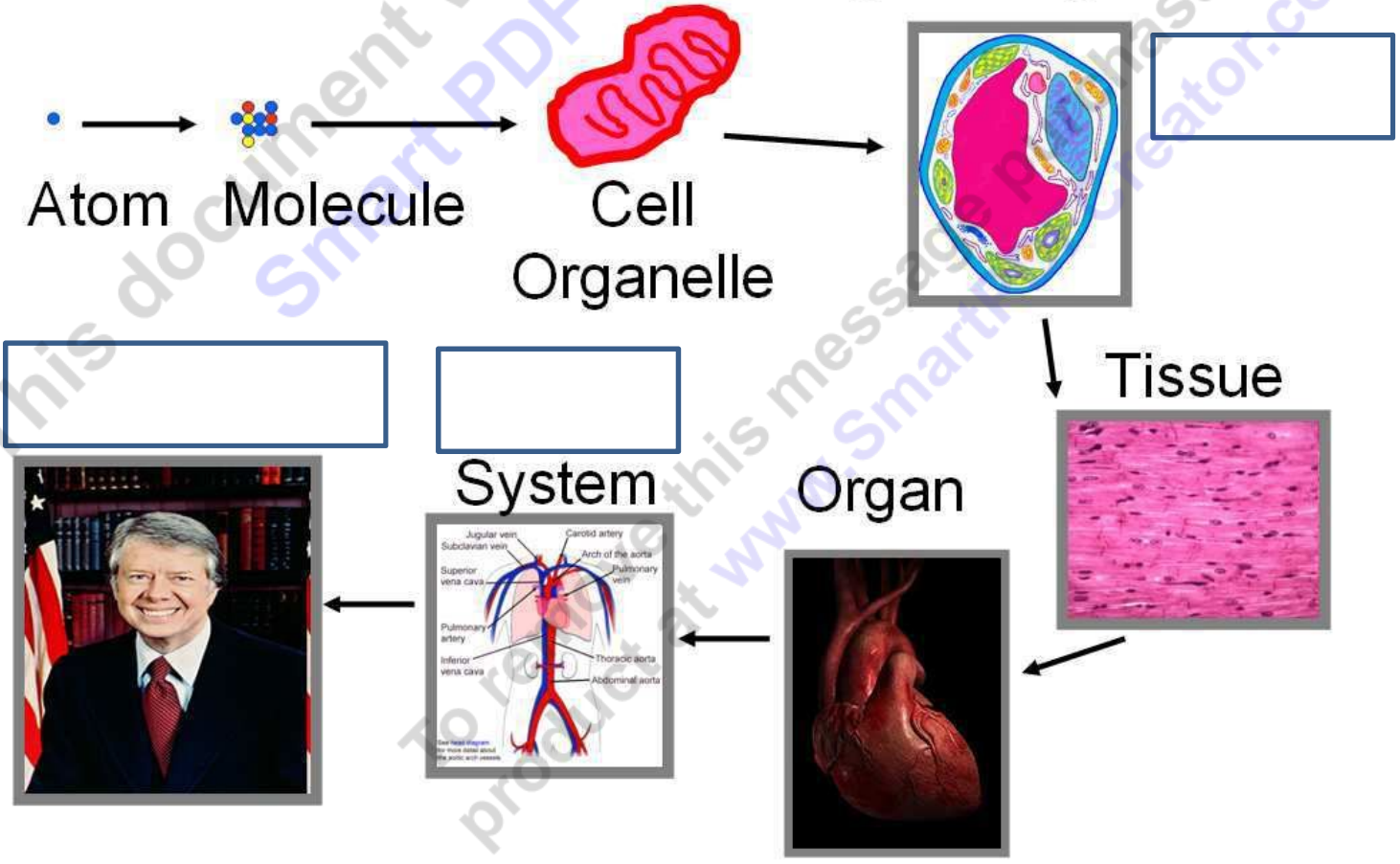
Part I: Levels of Biological Organization

Anatomy: The science of the _____ and _____ of organisms.

(FFF) Form Follows Function: Parts of the body are _____ to perform a particular job.

Physiology: How it all works.

- Area of Focus: Levels of Biological Organization.



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Plant and animal cells both have…

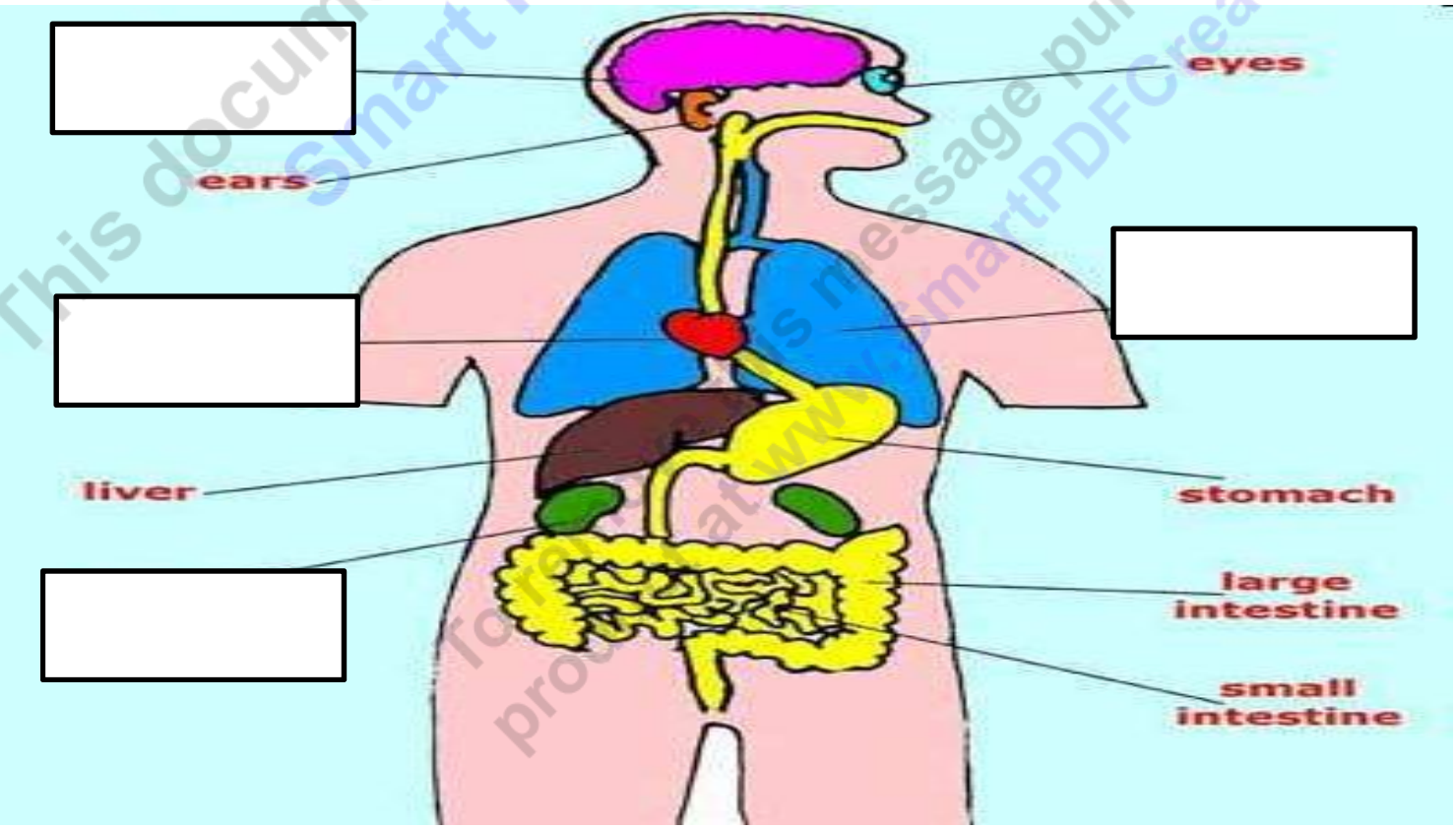
- N_____
- Cytoplasm
- Cell Membrane.
- Other similar organelles.
- Many of the same _____

Cells are the structural and functional units of all living organisms.

- Humans have some 75-100 _____
  - Multi-cellular (More than _____ cell)
- Some Protista have 1 - _____cellular

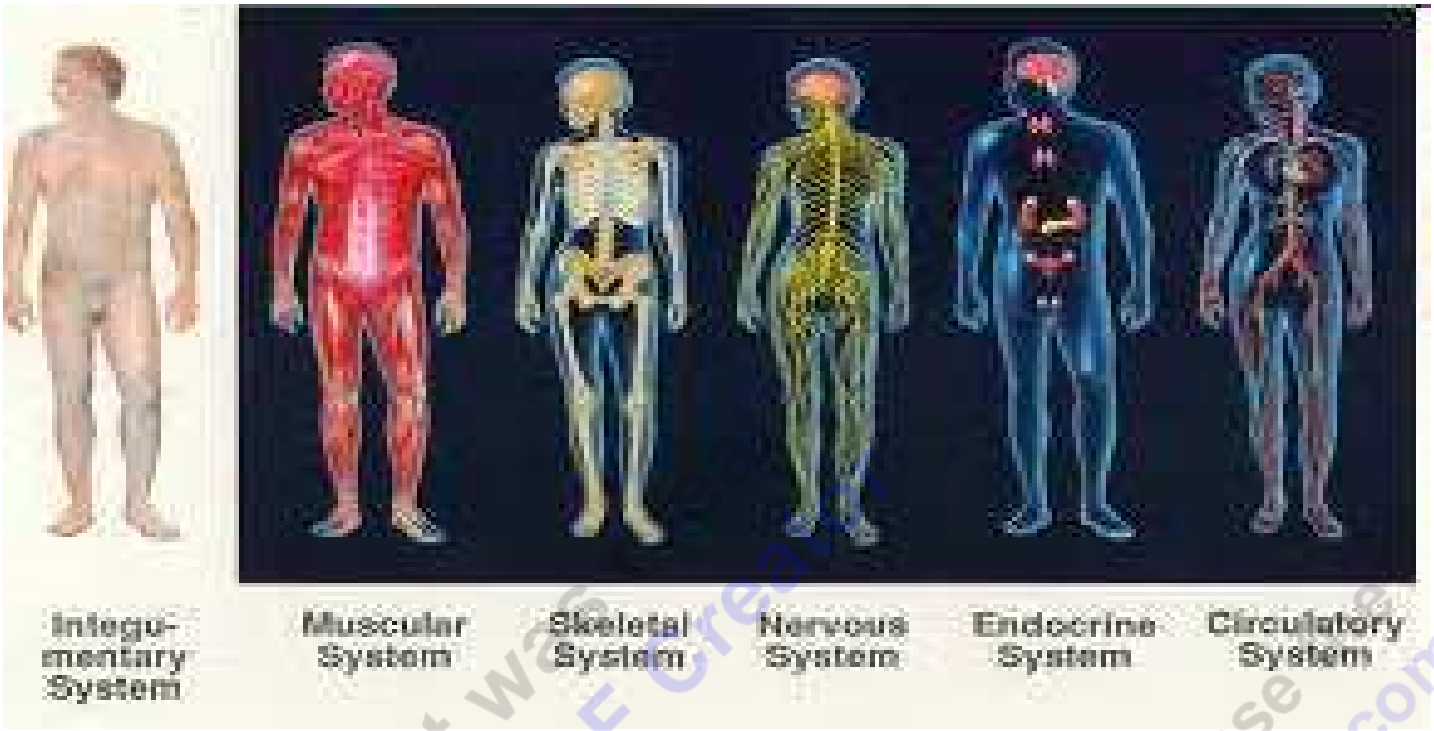
Tissue: A group of similar cells that perform the same _____.

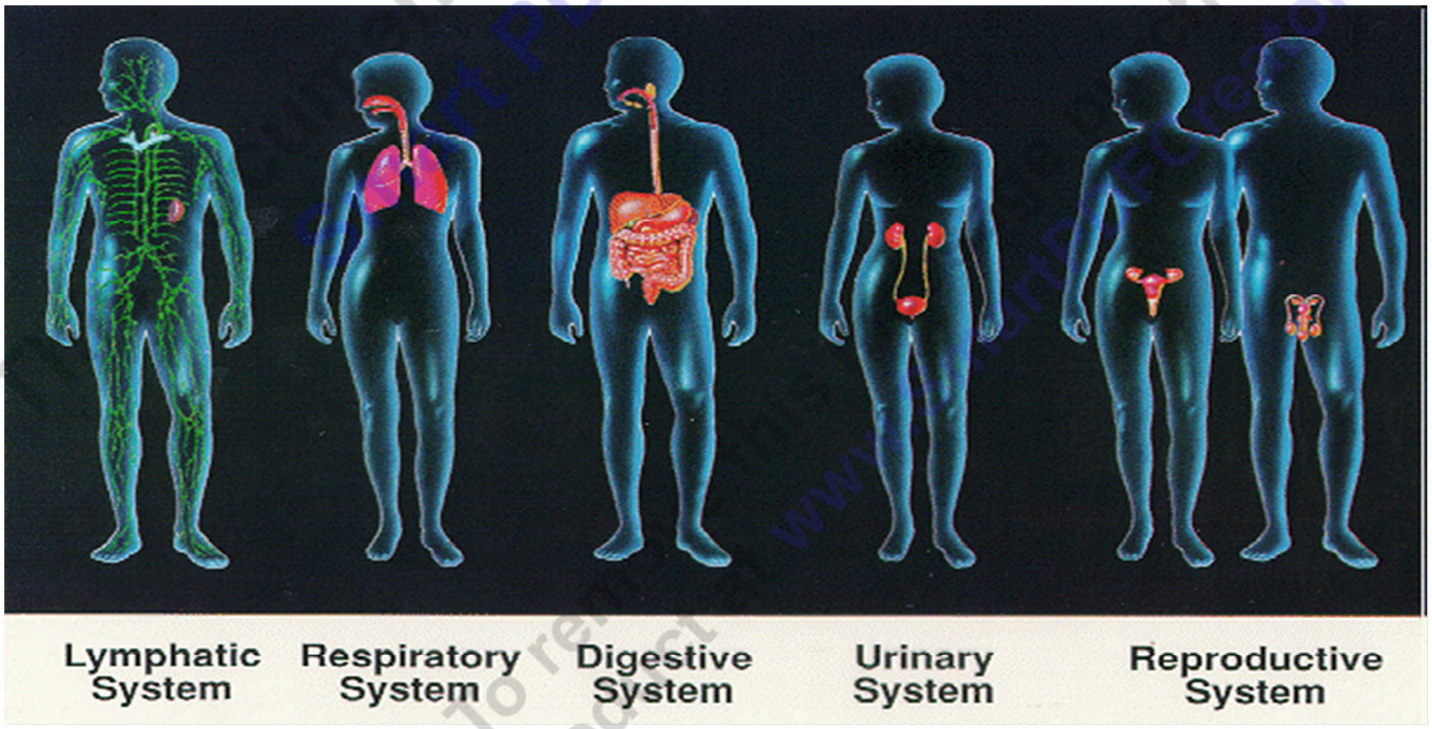
Organ: A group of different _____ with a specific job.



Organ System: A group of organs that work _____ to perform a specific job.

This document was created using SmartPDFCreator. To remove this message purchase the product at www.SmartPDFCreator.com





Homeostasis: The ability of an organism or cell to maintain internal _____ by adjusting its physiological processes.

- Regardless of outside conditions.

Part II: Area of Focus: The Skeletal System.

An adult human has _____ bones.

- When you are born, you have over 300 bones. They _____ together as you get older.

The skeletal system…

-Provides the _____ and form.
-Supports.
-Protects.
- Traumatic _____ injury (TBI)
-Produces blood.

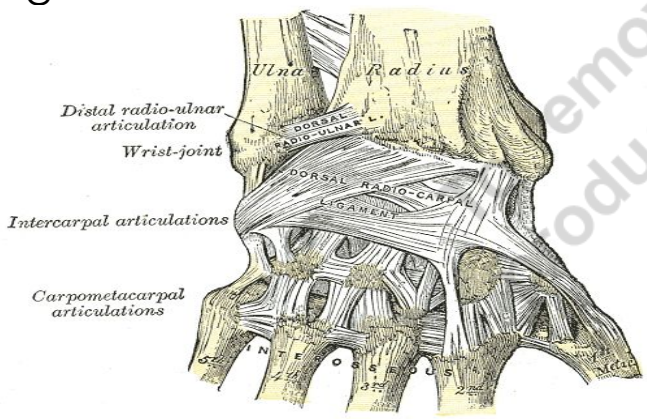
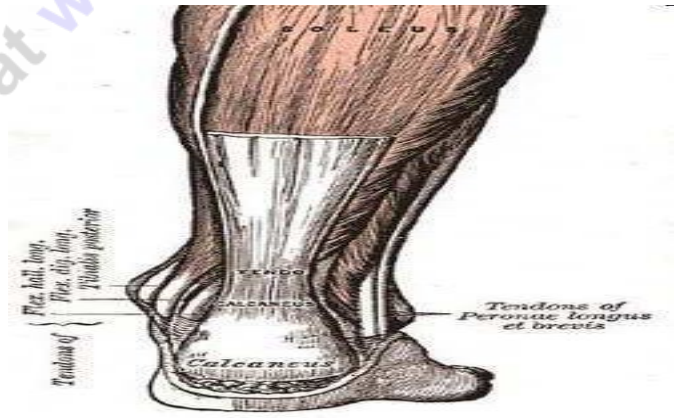
Bones are categorized into several groups.

- There are two main categories of bones.
- S_____ Bone
- Compact Bone
  - Long Bones
  - Flat Bones
  - I_____Bones
  - Short Bones

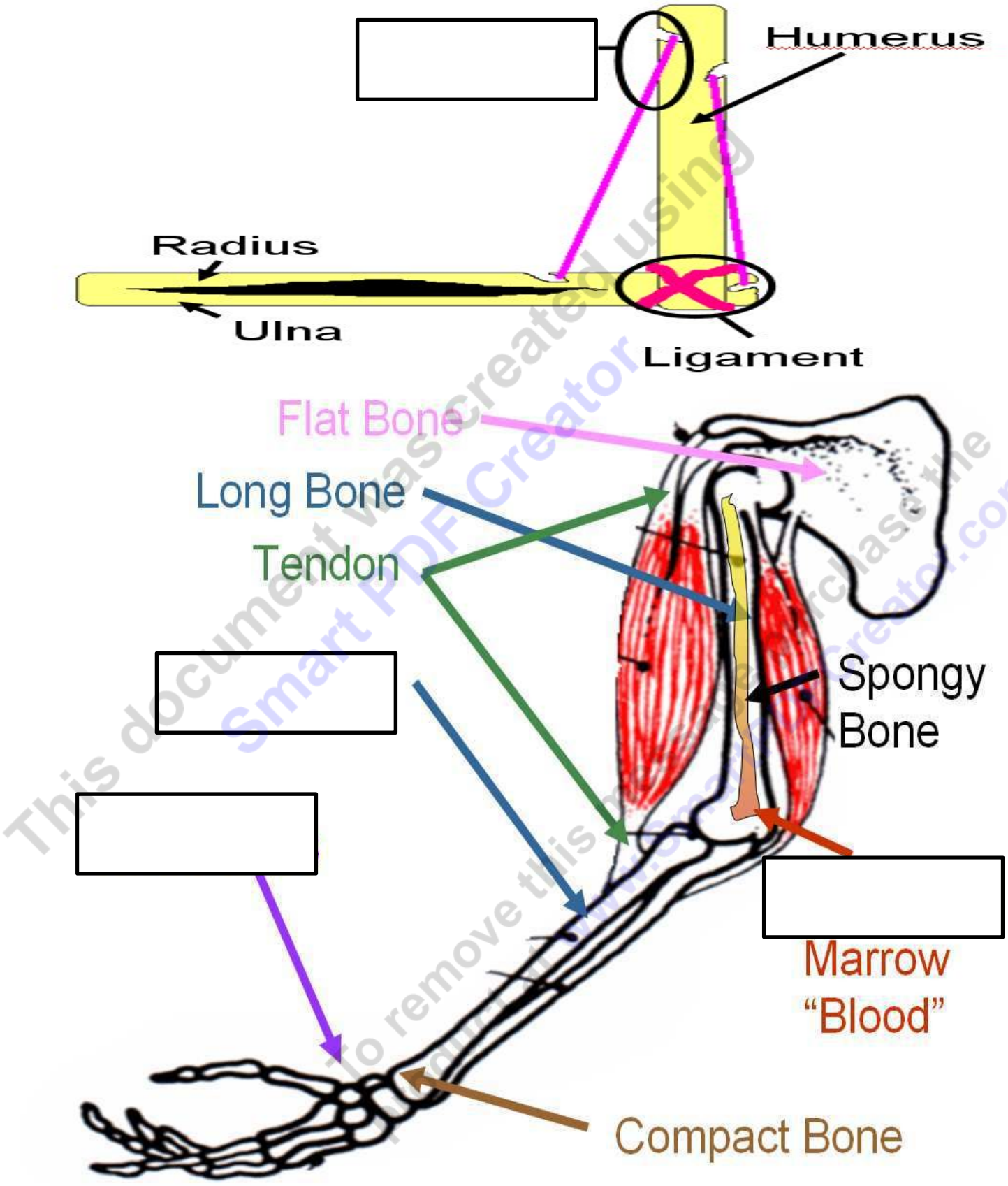
-Allows movement.
-Stores _____.

Bones are held together by connective tissues.

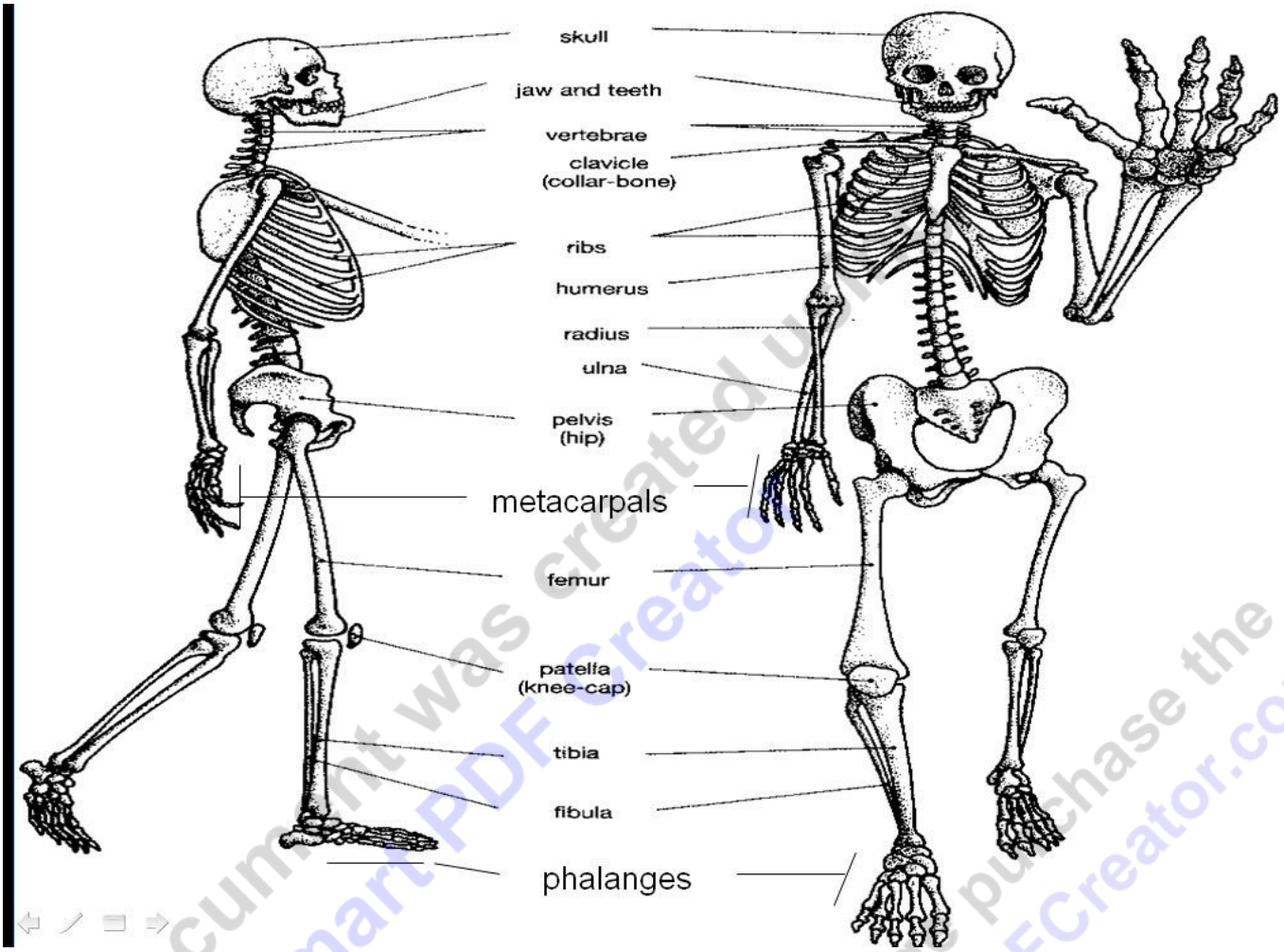
- Ligaments: Bones to _____
- Tendons: Bones to _____

Ligament	Tendon
	

This document was created using SmartPDF Creator. Remove this message purchase the product at www.SmartPDFCreator.com



This document was created using Smart PDF Creator
to remove this message purchase the Smart PDF Creator.com



A human joint: A place where two _____ meet.

Joints can be…

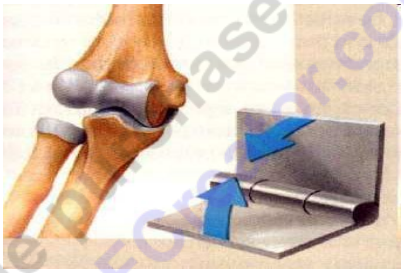
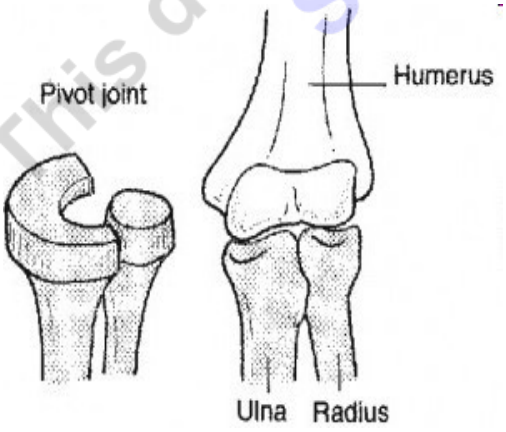
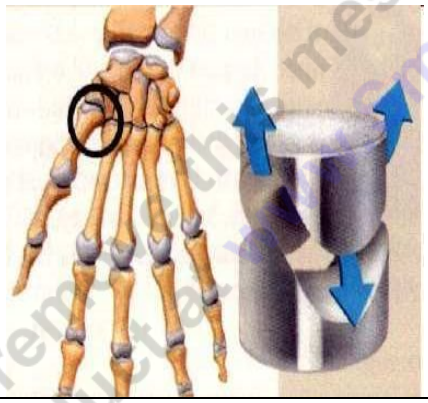
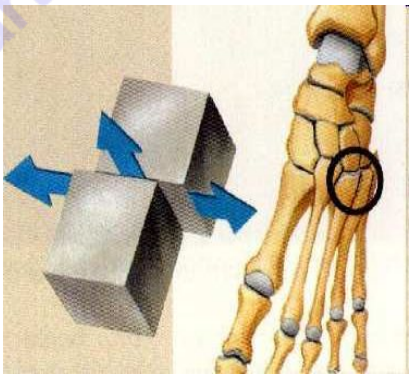
- A.) Fibrous (_____)
- B.) Cartilaginous (_____ movable)
- C.) Synovial (_____ movable)

- PRICE
  - P-Protect
  - R-R_____
  - I-Ice
  - C-C_____
  - E-Elevate

This document was created using SmartPDFCreator.com. To remove this message purchase the product at www.SmartPDFCreator.com

The six types of human joints.

- Ball and Socket Joint: Radial movement in almost _____ direction.
  - Hips and Shoulders.
- Ellipsod Joint: Similar to ball and _____ but much less.
- Hinge Joint: Allows extension and _____.
- Pivot Joint: R_____ around an axis
  - Neck and forearms.
- Saddle Joint: Movement back and forth and up and down.
- Gliding Joint: Bones _____ past one another.

Ball and Socket Joint 	Ellipsoid Joint 	Hinge Joint 
Pivot Joint 	Saddle Joint 	Gliding Joint 

This document was created using Smart PDF Creator
To remove this message please purchase the product at www.SmartPDFCreator.com

Part III: New Area of Focus: The Muscular System.

The human body contains _____ types of muscular tissue.

- Skeletal Muscle
- S_____ Muscle
- Cardiac Muscle

Muscle can also be voluntary and _____.

- Voluntary muscles you can control
- Involuntary muscles are ones that you can't _____.

Muscle Fiber: Long _____ that run parallel to each other and are held together by connective tissue.

- They contract and relax.

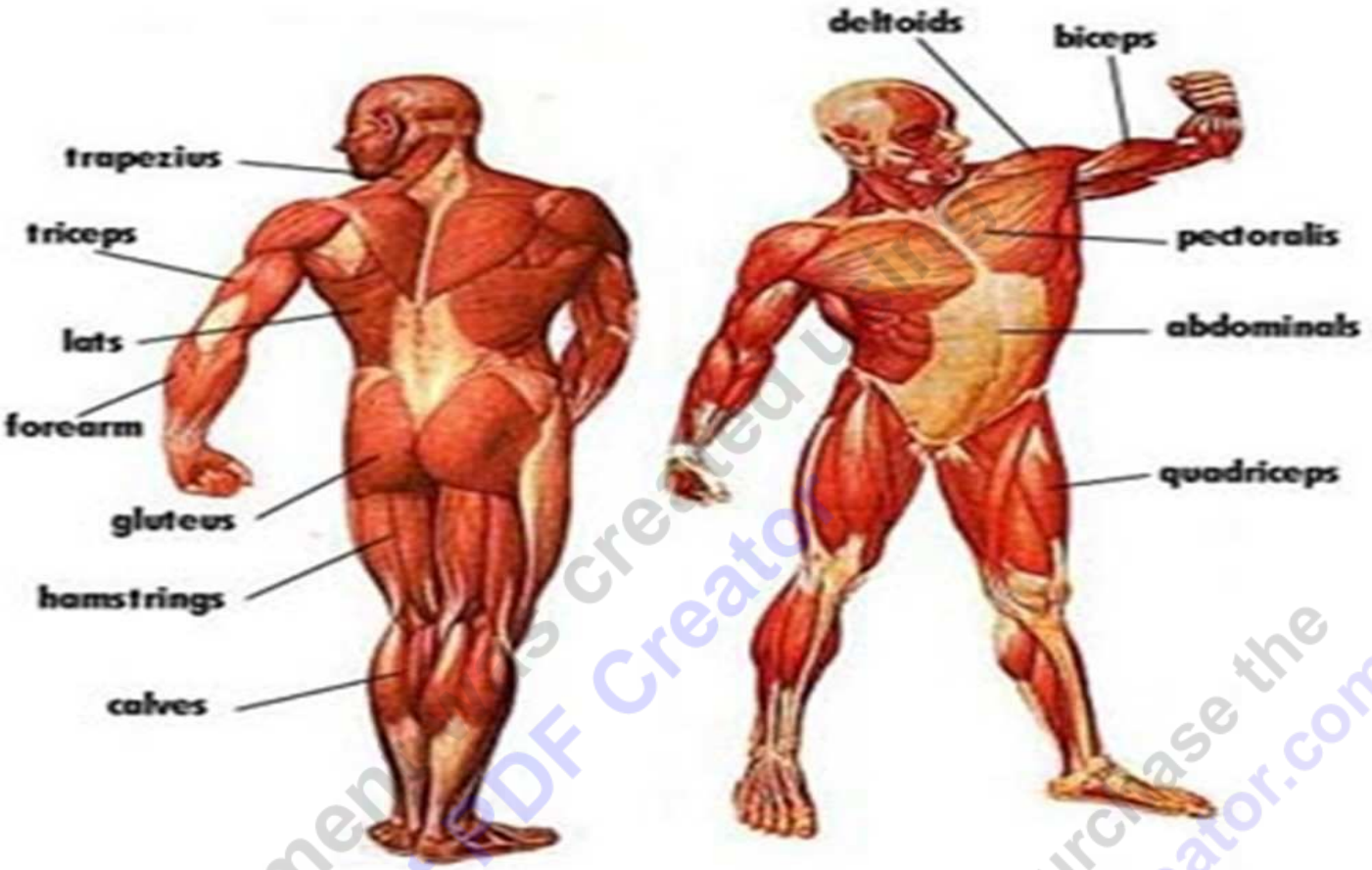
Individual muscles can act only to shorten, and not to lengthen the distance between two attachment points. (T_____)

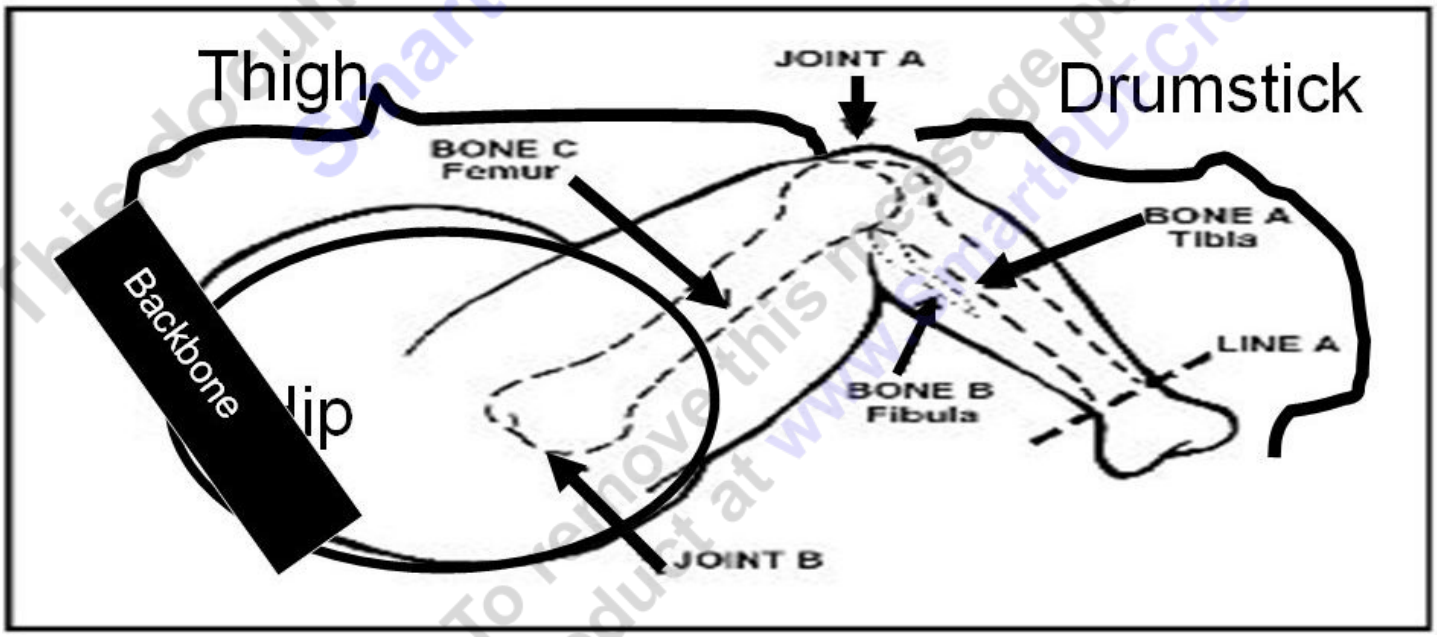
- They can only pull, they can't push.

Smooth muscles work by sending a signal in a _____over several cells

- This wavelike action helps in moving food through the intestine.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com





This document was created with SmartPDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Part IV: Nutrients and Healthy Living Notes

SPONCH

25 of the elements are essential for life.

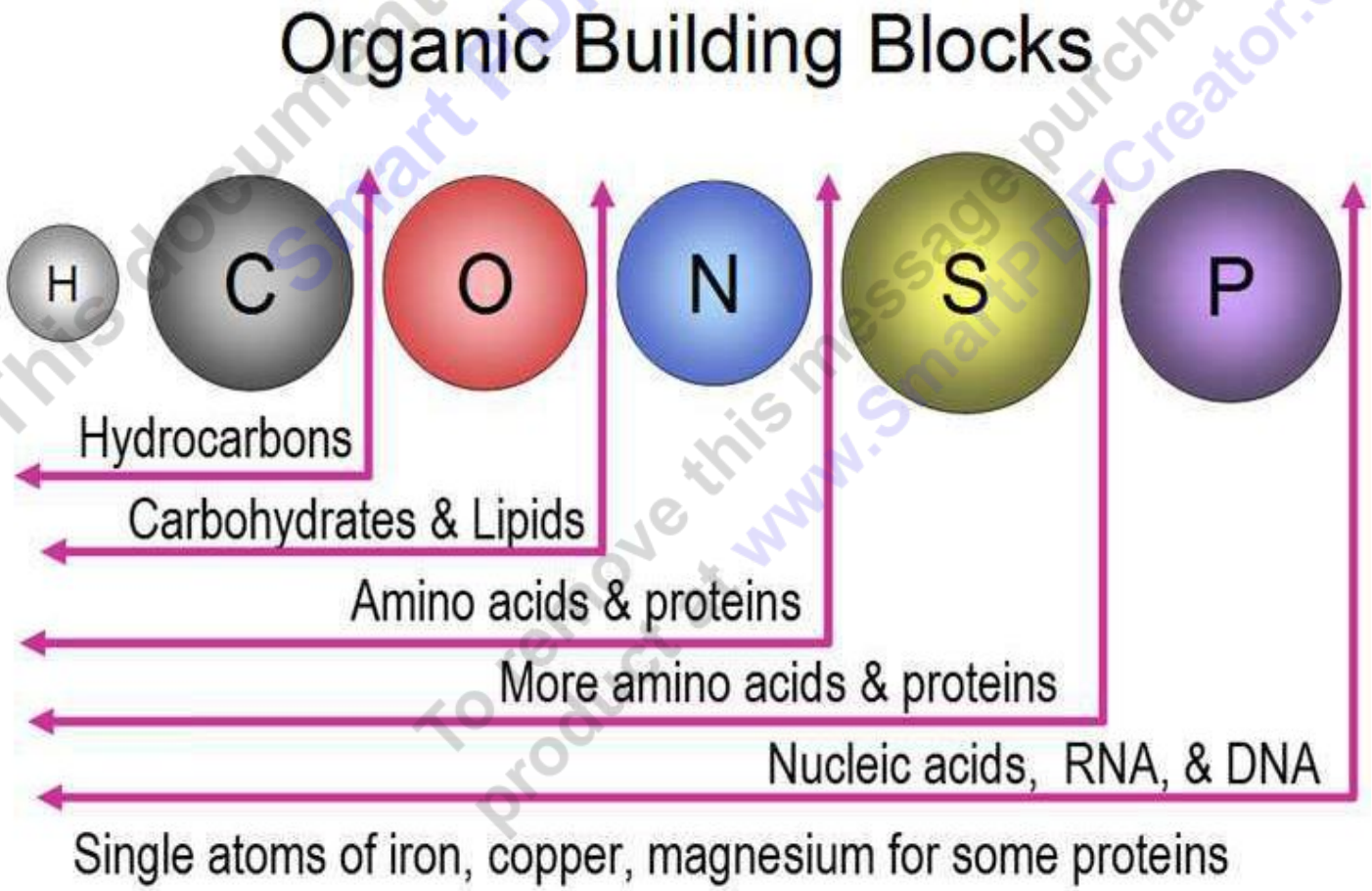
SPONCH elements are the most biologically important.

Percentage of SPONCH elements in living things.

- **S.** Sulfur Trace
- **P.** Phosphorus 1.0%
- **O.** O_____ 65.0%
- **N.** Nitrogen 3.3%
- **C.** Carbon 18.5%
- **H.** H_____ 9.56%
- Other (Trace) 3.0%

SPONCH CaFe.
The next most important elements for life.

- Ca= Calcium
- Fe= Iron



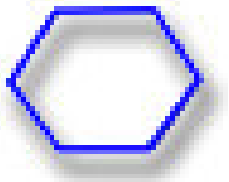
This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Carbohydrates (sugars) SPONCH
Sugars combine to become more _____

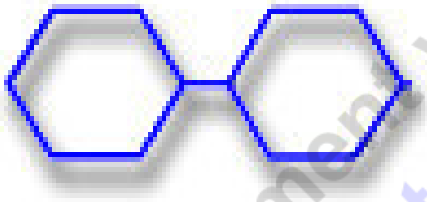
- -Cellulose – Cell Walls in _____
- -Chitin – Insect exoskeleton
- -Starch is a complex _____ (longer lasting energy)

Monosaccharide – _____ sugar

- Glucose

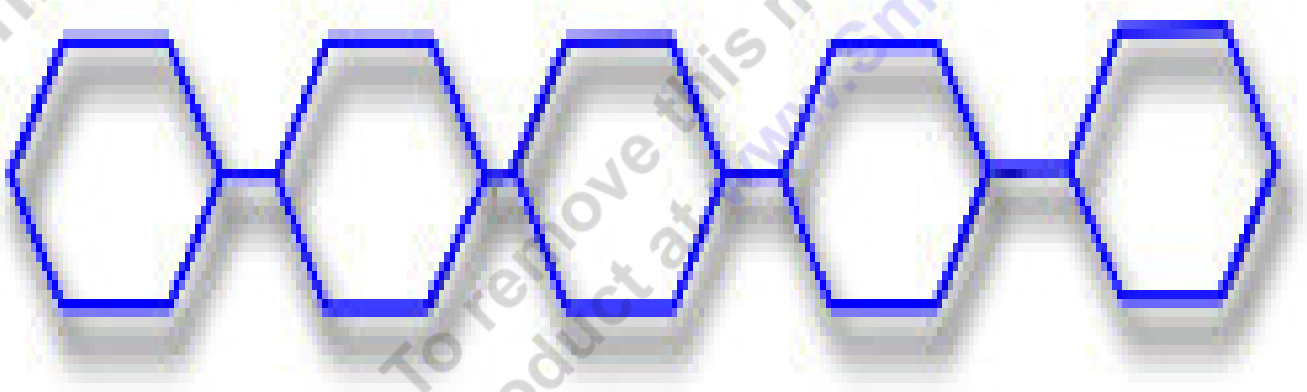


Disaccharides – _____ sugars



*Poly*saccharides – M_____

- Starch, Glycogen and Cellulose



Polymer

- Long complex chains of _____
- Protein – S O N C H (Amino acid)

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Grr…
- Growth
- repair
- re_____
- regulate

Proteins play important role in Grr…
The important roles of a living cell

There are also structural proteins.
- Make list next to stick figure

Hair is a _____
Enzymes - Proteins act as enzymes, which are important in making chemical _____ happen in cells.
- Fingernails
- Skin
- M_____
- Cartilage
- Ligaments and tendons
- Eyes / cornea
- Antibodies – Protect from _____
- Hormones

Lipid – C H O (F_____ acid)
Chlorophyll, which is important in photosynthesis, is a lipid.
(AKA-Fats) They store _____.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Cell membranes are made of a type of structural lipid.
Body fat is a good thing. It provides your body with extra _____.

Sex hormones, such as testosterone and _____ are made of lipids.

Saturated Fats □
Unsaturated fat □ (just a bit however)
Trans Fats □□□

Nucleic Acids – S P O N C H (Nucleotide)
Nucleic acids include DNA, which carries _____ information, and RNA, which translates that information into proteins.

Nucleic Acids – S P O N C H (Nucleotide)
□ DNA (Deoxyribose Nucleic Acid) Controls reproduction.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

RNA (Ribose Nucleic Acid) Makes and transfers proteins.
Stores information such as your genetic code.

Part V: New Area of Focus: Learning About Our Foods.

Dangers of obesity

- -increased risk of _____disease
- -high _____pressure
- -Type _____ diabetes
- -breathing problems
- -Increased risk of stroke
- -C_____

Why Fast Food Sells

It's C_____
It's Fast
It Tastes Good (_____ Fats) Maybe?
It's Readily Available
It's Readily Available
Consistency - I know what I'm getting.
Comes with cheap plastic toys
It's a safe place to be.
Heavy media advertising.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Anorexia is an eating _____ where people starve themselves.

Dangers of being to thin

- Bones _____
- Irregular heartbeat.
- Stunting of _____ (permanent).
- Loss of menstrual cycle.
  - Extreme – loss of ability to have children
- Body has little stored _____
  - During a sickness you may need that energy.

Bulimia nervosa – Binge eating and then purging (_____ up).

- Erosion of tooth /Cavities.
- Swelling and soreness in the salivary _____ (from repeated vomiting).
- Stomach _____
- Ruptures of the stomach and esophagus.
- Disruption in the normal _____ release function.
- Dehydration.
- Irregular _____ and in severe cases a heart attack.
- A greater risk for _____ behavior.
- Decrease in libido (sex drive).

Steroids: A naturally occurring complex ringed _____ in the body. They take part in many important body functions.

Anabolic steroids: A group of 100+ man made _____ used to stimulate muscle and bone growth.

This document was created using SmartPDFCreator
To remove this message purchase the product at www.SmartPDFCreator.com

Part VI: New Area of Focus: The Digestive System

Nutrients: The usable portions of _____.

Nutrients include
- Proteins
- C_____
- Fats
- Vitamins
- Minerals
- W_____

Protein: Growth, Repair, Reproduction of _____ (structure of your body), produces enzymes, hormones, antibodies.

Carbohydrates: Energy molecule and contains _____.

Fats: Energy source.

Vitamins: Prevents _____, regulates body processes, and needed for chemical reactions.

Minerals: Needed for bones and teeth, blood and other _____.

Water: To _____ substances in blood, tissue fluid, biochemical reactions.

Digestion: The process of _____ food down into nutrients.

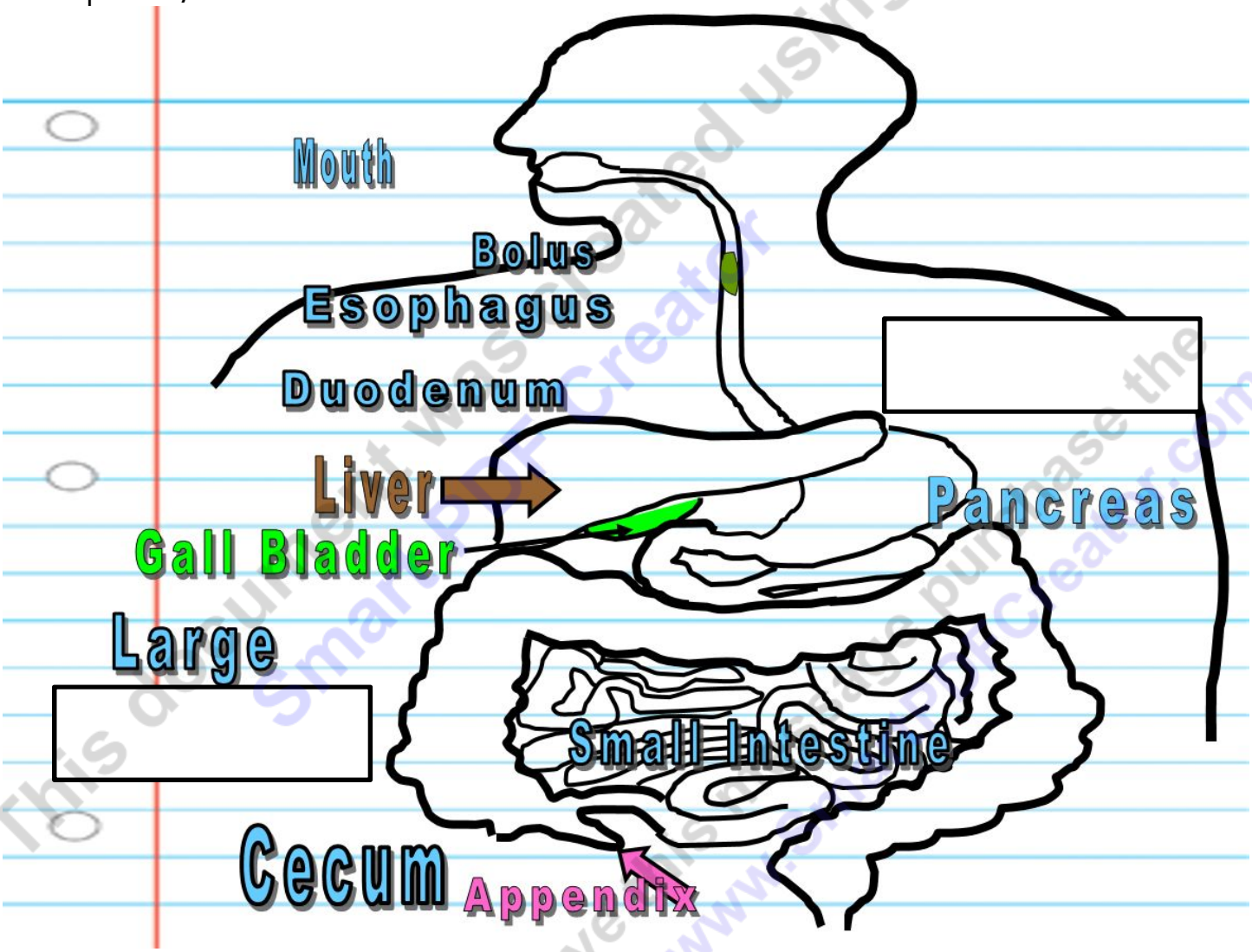
Ptyalin: Chemical (Enzyme) in salvia that _____ starches into sugars.

Chemical Digestion: Process of converting food into _____ substances that can be absorbed and used.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Mechanical Digestion: P_____ breaking down the food.

Peristalsis: Waves of rhythmic muscular _____ that push / move food.



Stomach: A saclike part of the alimentary canal in which food is _____.

Cells in the stomach wall release a chemical gastric _____ (Pepsin – enzyme) and thick slippery mucus to protect stomach.

- Pepsin contains hydrochloric acid.

Duodenum: The beginning of the _____ intestine.

- Distributes bile (produced by the liver and stored in the gall bladder), pancreatic acids (pancreas), and other secretions to chemically _____ food.

Small Intestine: Major organ for food absorption.

Digestive Juices	Digestive Enzyme	Works On	Changes To
Saliva	Ptyalin	Starch	Simple Sugars
Gastric (Stomach)	Pepsin	Protein	Peptides and Amino Acids
Pancreatic	Amylase Trypsin Lipase	Starch Protein Fats	Complex Sugars, simple Proteins, Fatty Acids, Glycerol
Intestinal	Lactase, Maltase, Sucrase, Lipase, Peptidase	Complex Sugars, Simple Proteins, Fats	Simple Sugars, Amino Acids, Fatty Acids, Glycerol

Copyright © 2010 Ryan P. Murphy

Pancreas: Organ that aids in _____ by producing pancreatic juices that enter small intestine.

Liver: Large, heavy, vital organ that produces _____ that breaks down fats.

- Also _____ chemicals
- Synthesizes proteins
- Stores Glycogen (_____)
- Decomposes _____ blood cells
- Hormone production

Gall Bladder: A small pear-shaped _____ that stores and concentrates bile from the liver.

This document was created using SmartPDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

The nutrients in your food get broken down into _____substances (molecules) and are absorbed into your bloodstream.

- Proteins to _____ Acids
- Starches to _____sugars
- Fats to Fatty _____ and Glycerol

The small intestine is covered with millions of small fingerlike structures called _____.

Large Intestine: Water is _____ bacteria in the intestine also make important vitamins.

Rectum: Short tube at the end of the large intestine that stores _____.

Part VII: New Area of Focus: The Circulatory System

Circulatory System: Delivers food and _____ to the body and carries carbon dioxide and other _____ products away.

Consists of the following

- Heart
- Blood V_____
- Blood

Cellular Respiration: Processes whereby certain organisms obtain _____from organic molecules.

Cellular Respiration

$C_6H_{12}O_6$ + 6_____ = Released Energy + 6_____ + 6H_2O

The functions of the circulatory system.

- To deliver _____ and oxygen to cells.
- To carry away _____.

This document was created using Smart PDF Creator To remove this message purchase the product at www.SmartPDFCreator.com

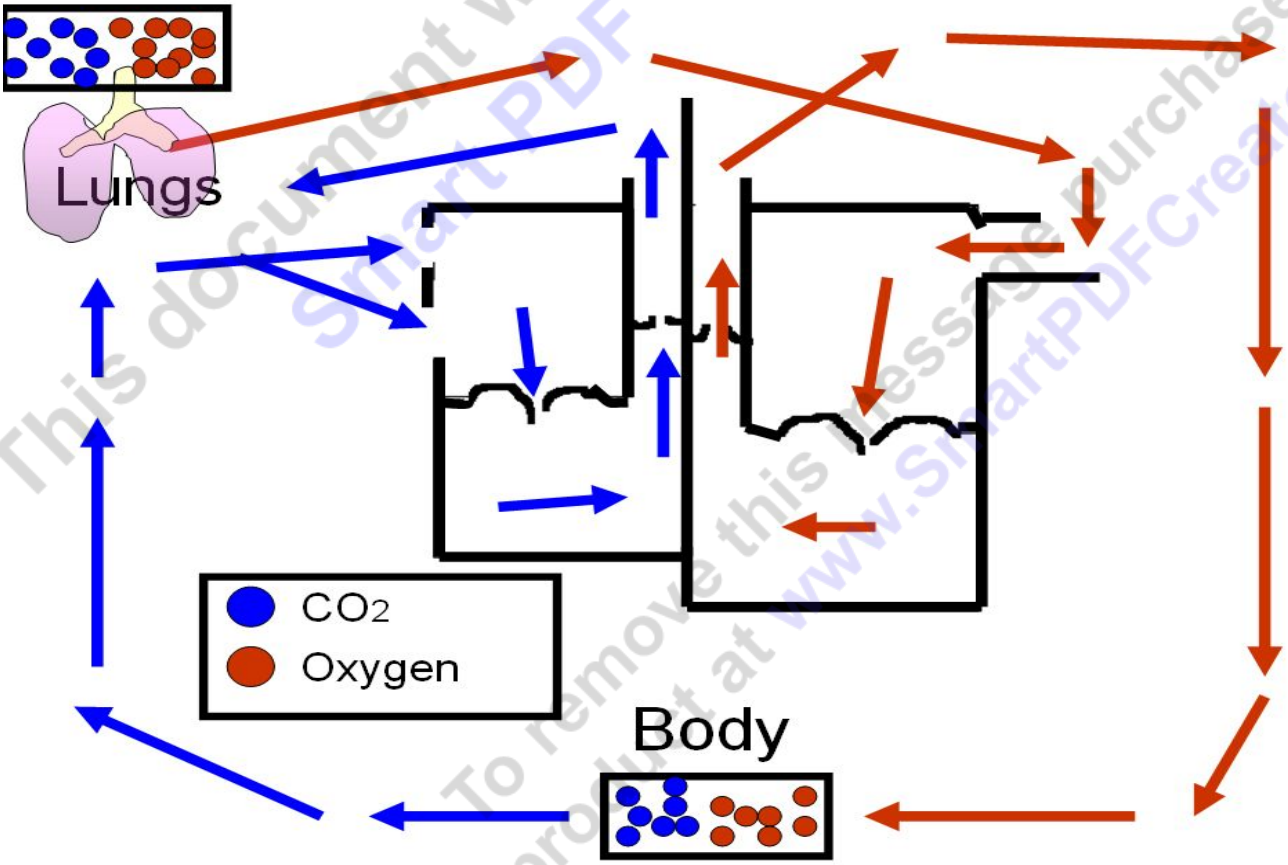
- To aid in disease _____.
- To deliver chemical messages (_____).

The circulatory system

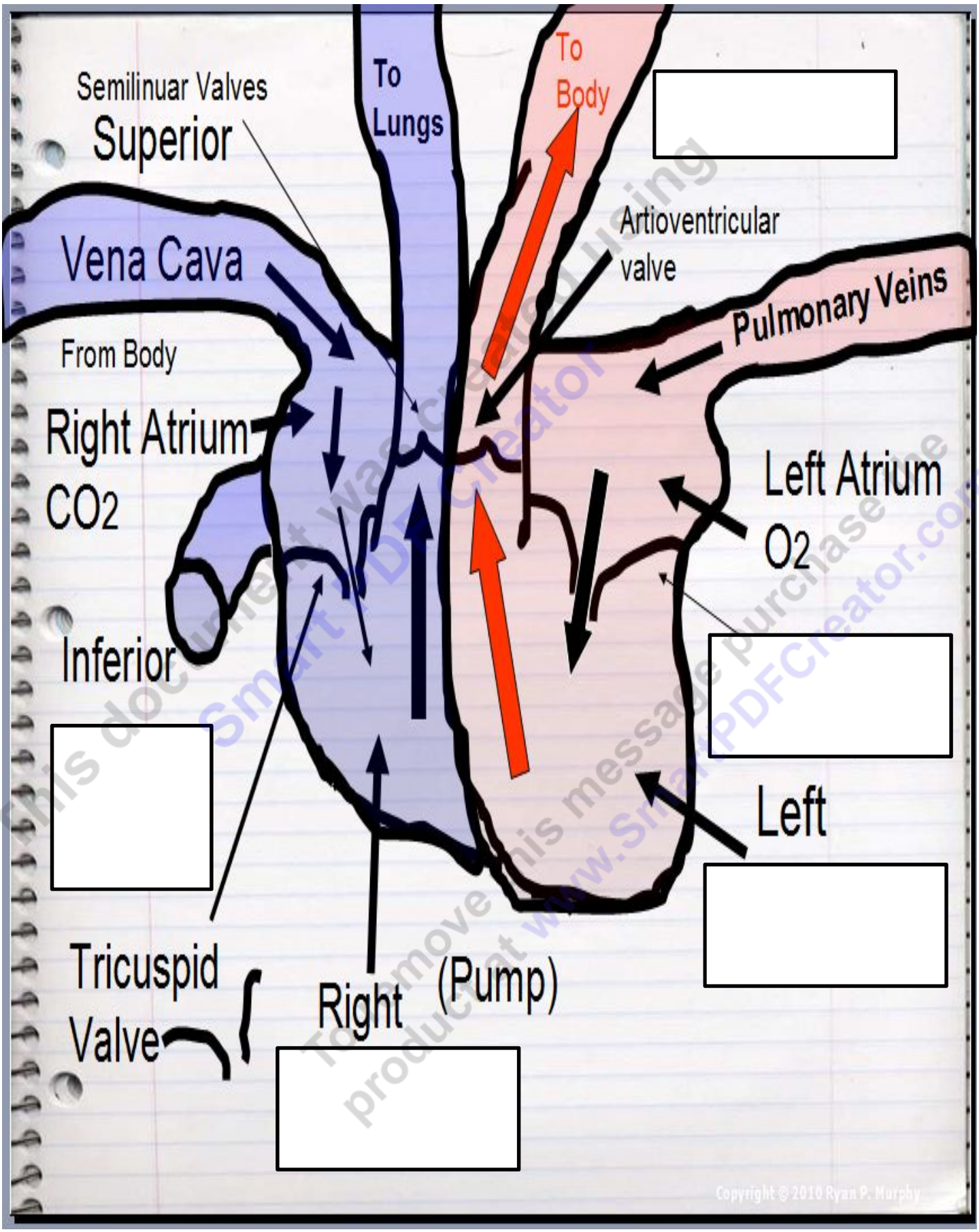
- Powered by the _____.
- Blood carries food, oxygen, waste, chemical _____.
- Blood vessels provide the _____ of travel and have unique structures.

Human Heart: Important organ that provides a continuous _____ of blood.

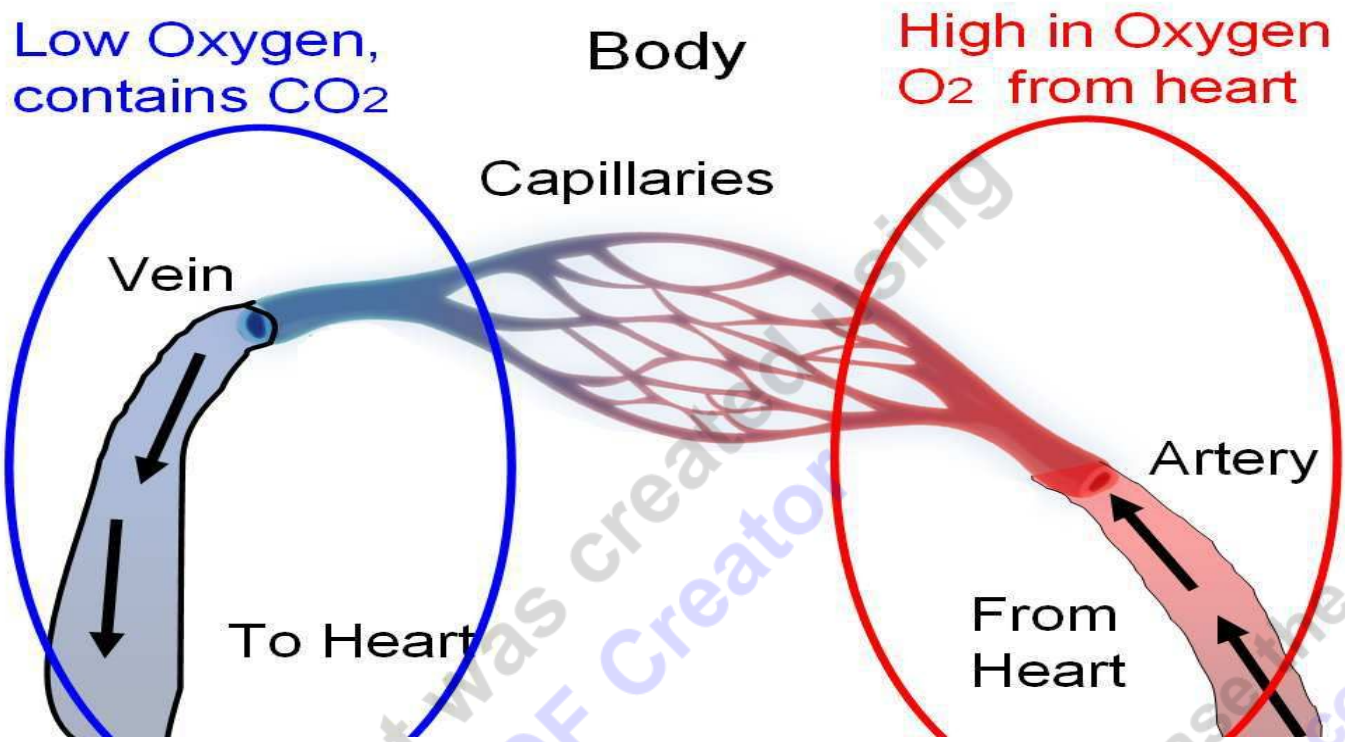
Bright Red = Oxygen R_____
Blue = Oxygen P_____



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com



This document was created using Smart PDF Creator
To remove this message purchase product at www.SmartPDFCreator.com



Artery: Blood vessel that carries blood _____ from the heart.
Capillary: Extremely _____ blood vessels.
Vein: Blood vessel that carries blood _____ the heart.

Avoid Cardiovascular Disease

- A number of diseases that can affect the _____ and blood vessels. Many can be prevented.
- Getting proper _____ and diet can keep your system working properly.

Some common diseases…

Atherosclerosis: T_____ of artery walls, fats such as cholesterol collects on wall, over time it may block blood flow (heart attack).

Blood: A specialized bodily fluid that delivers necessary _____ to the body's cells.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Blood is made up of…

- R_____ Blood Cells
- W_____ Blood Cells
- Platelets
- Plasma

Plasma: Fluid of blood, 90% _____, 10% sugars, fats, salts, gases, and proteins.

- Controls amount of water in blood
- Has antibody proteins that fight off d_____
- Blood clotting agents
- Carries chemical _____ (hormones)
- Carries waste products

Red Blood Cells: Produced in _____ marrow, no nucleus in cell (mature cell), delivers _____ to cells, and carries away CO2.

- Hemoglobin: Protein in blood that helps blood bind with _____ and carbon dioxide.

White Blood Cells: Circulate throughout the body providing _____ against foreign organisms and matter.

Platelets: Irregularly shaped bodies with sticky surfaces that form clots to stop _____.

Antibodies cling to a _____. They will prevent the virus from infecting a cell.

Antigen: A substance that when introduced into the body stimulates the production of an _____.

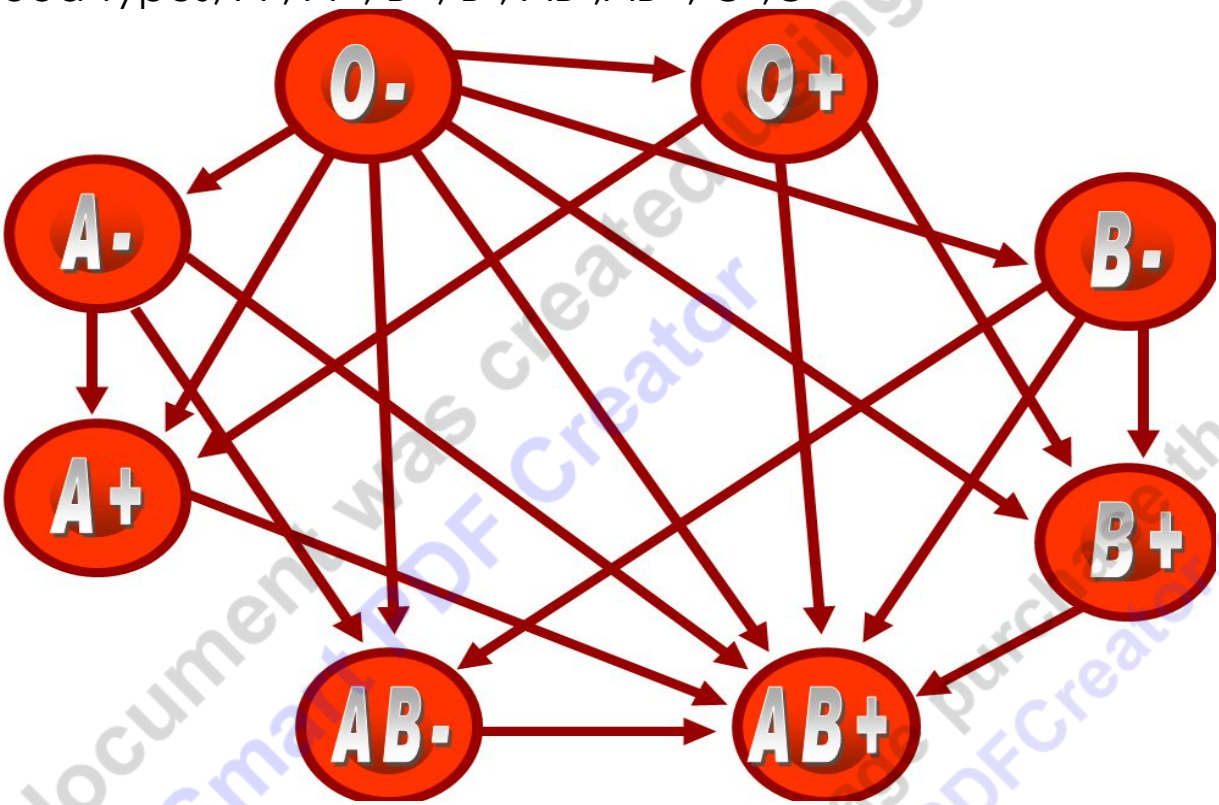
There is another antigen that some people may have.

- If you have it you're… Rh+
- If you don't you're… Rh-

This document was created using Smart PDF Creator. To remove this message purchase the product at www.SmartPDFCreator.com

- Rh+ should not share blood with someone who is Rh-
- Rh- can give to a person who is Rh+

Blood Types, A-, A+, B+, B-, AB-,AB+, O-,O+



This document was created using SmartPDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

- **Lymphatic System: A part of the _____ system, comprising a network of lymphatic vessels that carry a clear fluid called _____.**
  - **Lymph is essentially recycled blood _____.**
  - **Plays an important part in the immune system.**

Part VIII Area of Focus: The Respiratory System

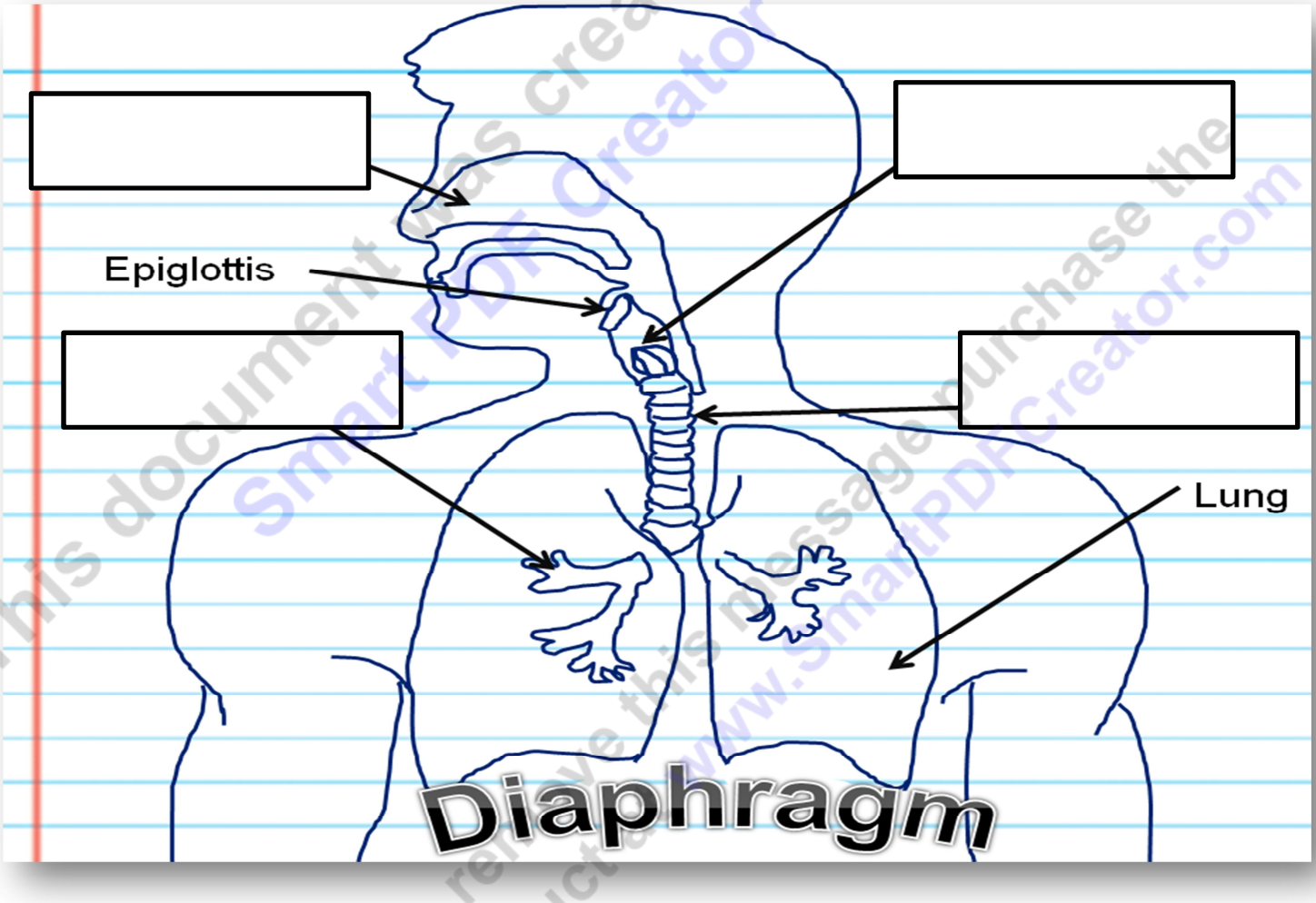
The energy releasing process is called cellular _____.

6_____+$C_6H_{12}O_6$+Release of Energy + 6_____ and 6H_2O

Respiratory System: System responsible for supplying _____ to the body and removing carbon _____.

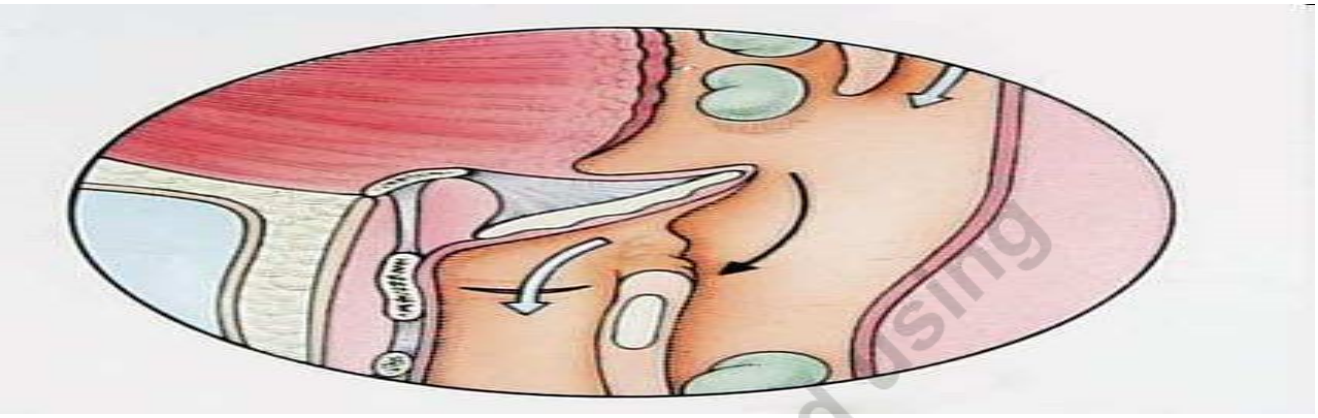
The Nose

- F_____ Particles.
- Moistens the Air.
- W_____ the Air.

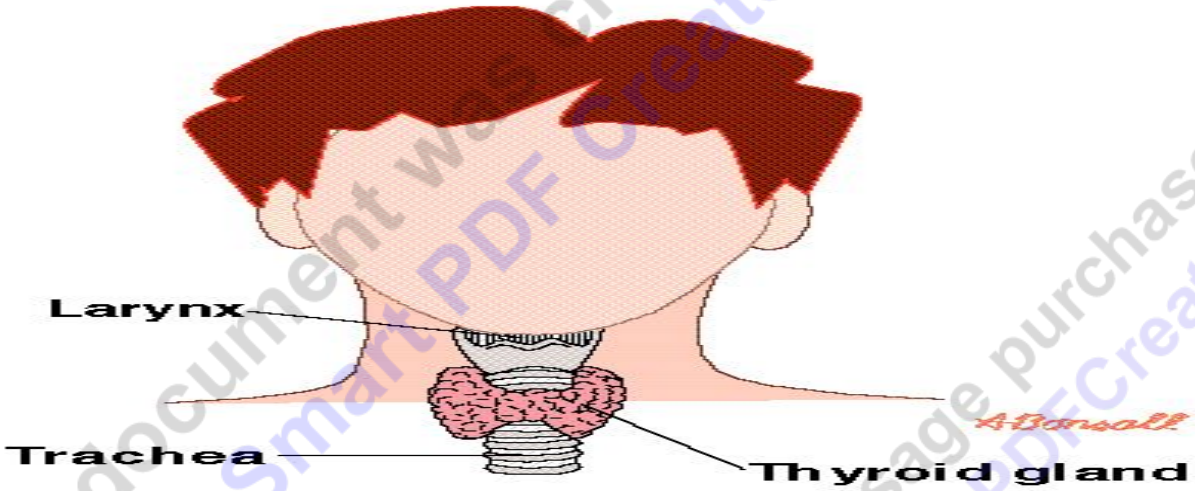


This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Epiglottis: A flap of cartilage at the roof of the tongue, which is depressed during _____to cover the opening of the windpipe.



Larynx: The hollow muscular organ forming an air _____ to the lungs and holding the vocal cords.



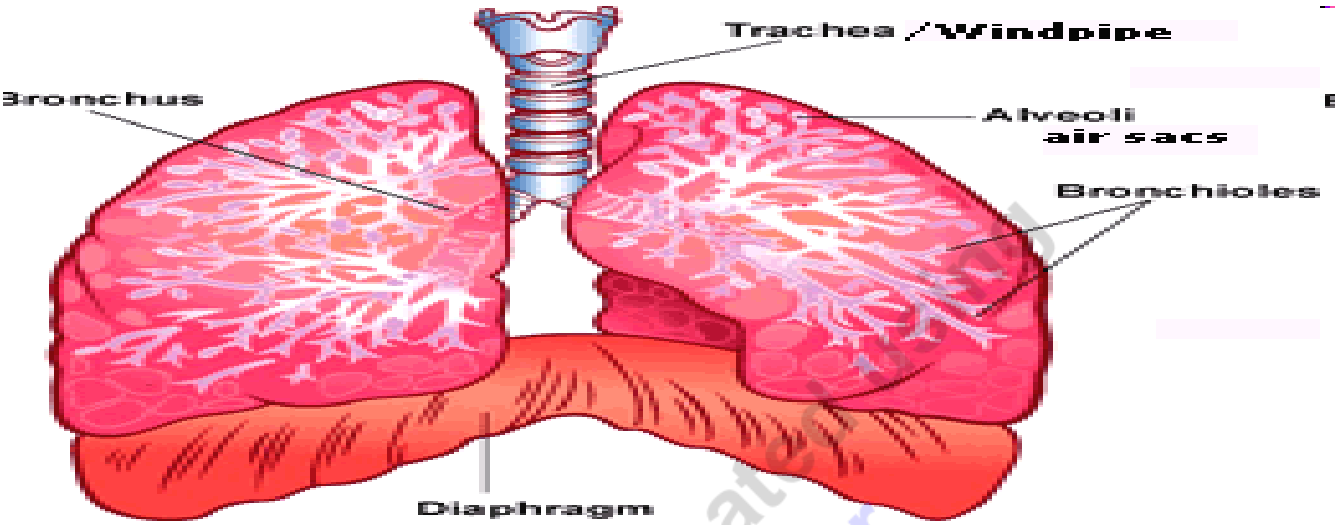
Trachea: Tube in your throat that carries _____ to your lungs (windpipe)

Cartilage rings

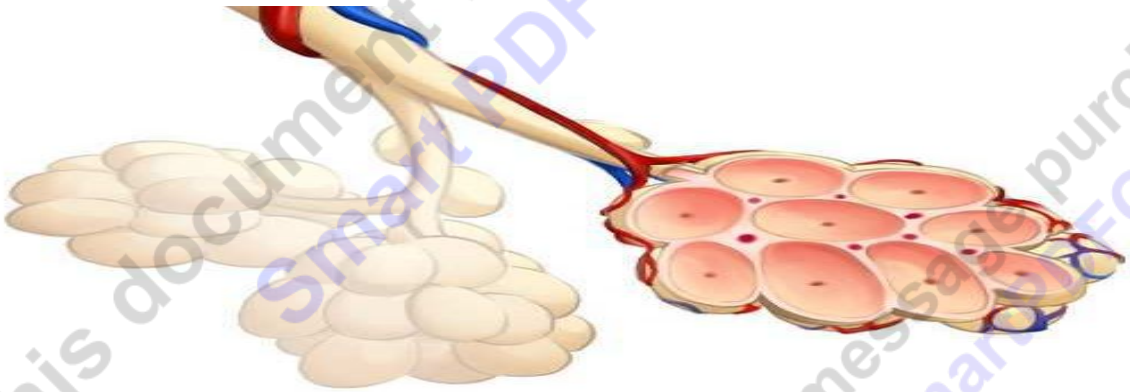
Bronchus: Airway in the respiratory tract that conducts air into the _____.

Lungs: Either of two saclike respiratory organs in the chest of vertebrates; serves to remove carbon _____ and provide _____ to the blood.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com



Alveoli: Any of the many tiny air sacs in the lungs where the exchange of _____ and carbon dioxide takes place.



Diaphragm: Dome shaped _____ and membranous partition that separating the abdominal and thoracic cavities.

- a major muscle aiding inhalation.

As you inhale, your diaphragm flattens out allowing your chest to expand and allows more air to flow _____ your lungs.

- Air pressure decrease, air then rushes into your lungs.

As you exhale, your diaphragm relaxes to a normal state. Space in chest _____.

This document was created with Smart PDF Creator. To remove this message purchase the product at www.SmartPDFCreator.com

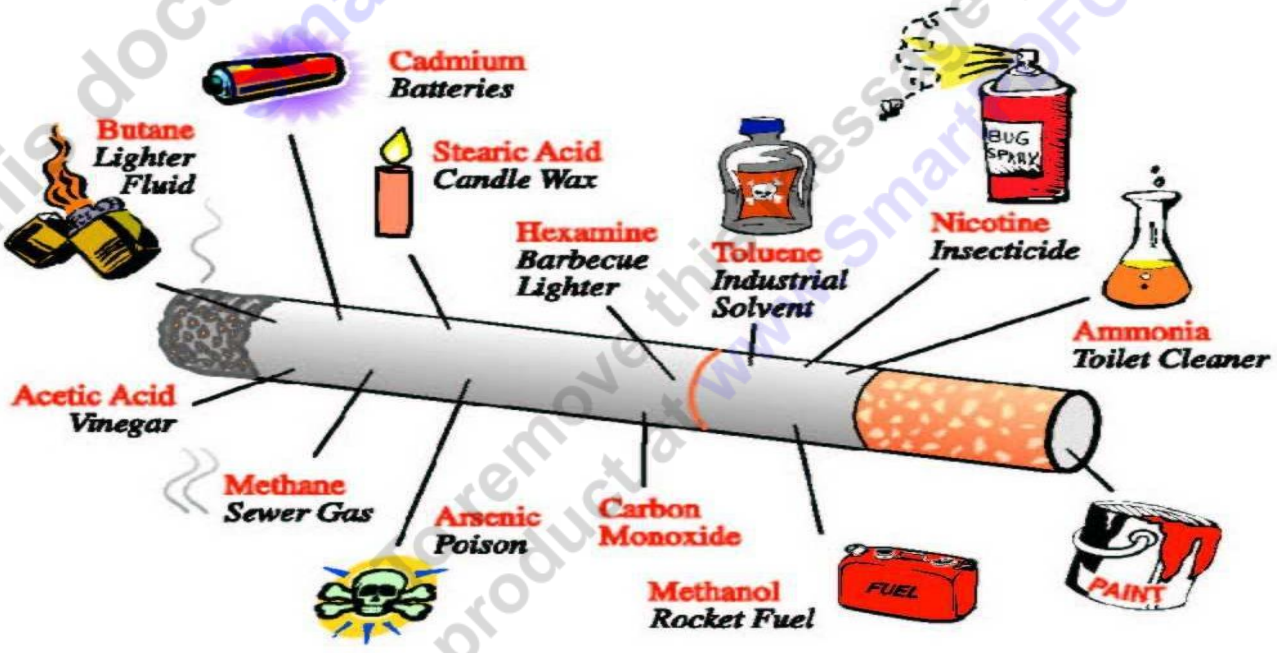
- Air pressure increases, air then rushes _____ of your lungs.

Cancer is: Uncontrolled, unregulated cell _____ and reproduction. Mitosis out of control.

A few things that may help you avoid cancer.

- Don't _____or chew
- Avoid UV exposure (skin cancer)
- E_____ daily
- Eat healthy
- Don't drink excessive _____
- Avoid radiation / energy exposure
- Avoid unprotected sex (HPV virus)
- Get regular checks up with your doctor

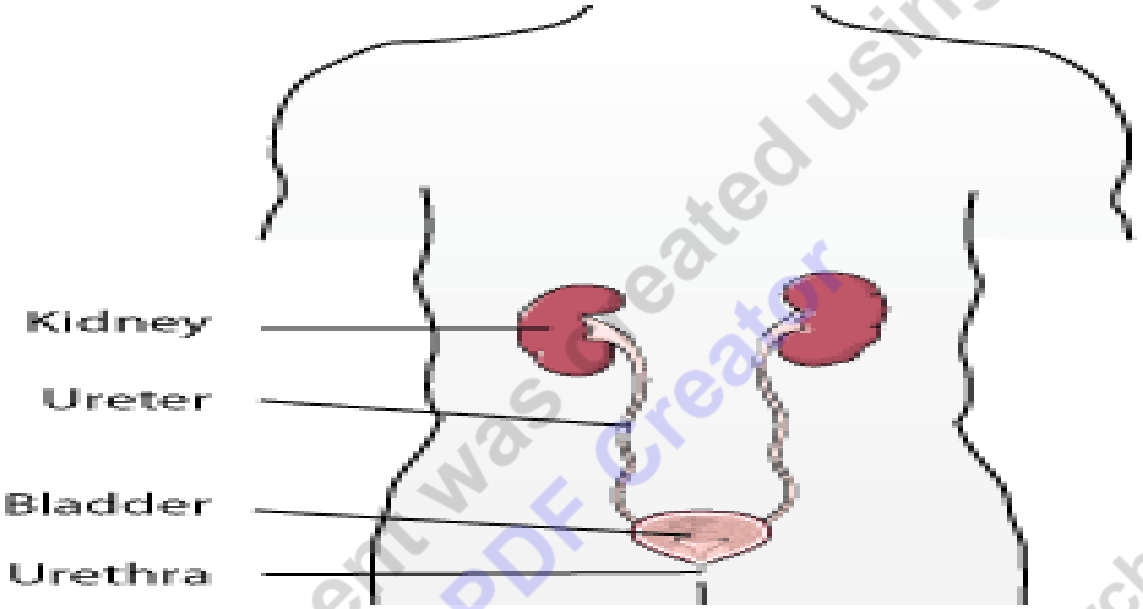
What's in a cigarette?



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Part IX - New Area of Focus: The Excretory System

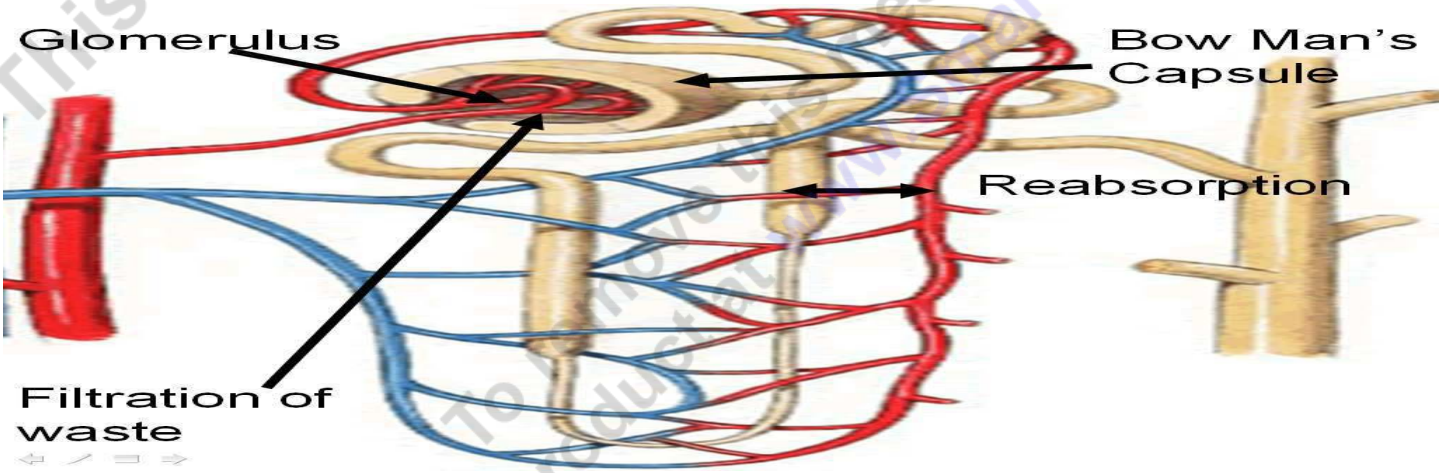
The excretory system provides a pathway to _____ wastes from the body.



The kidneys process about 200 quarts of _____ and produce 2 quarts of waste product (urine).

- The urine travels through the ureters to the bladder

NEPHRON



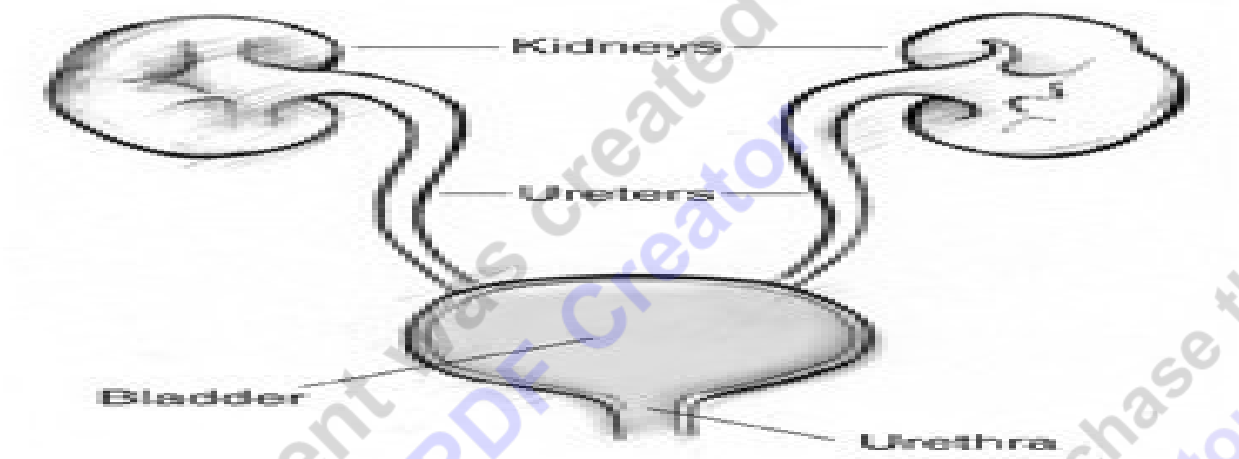
The kidneys measure out chemicals such as sodium, phosphorus, and potassium and release them back to the _____ to return to the body.

This document was created using Smart PDF Creator To remove this message purchase the product at www.SmartPDFCreator.com

- The kidneys regulate / balance the body's level of these substances.

Urine travels from the kidneys through narrow tubes called _____ to the bladder.

Urinary Bladder: Stores urine until _____.



Urethra: Tube that connects the urinary _____ to the genitals for the removal of fluids out of the body.

The Liver: Vital organ that among other jobs filters _____ from the blood.

Skin: Large organ that covers body.

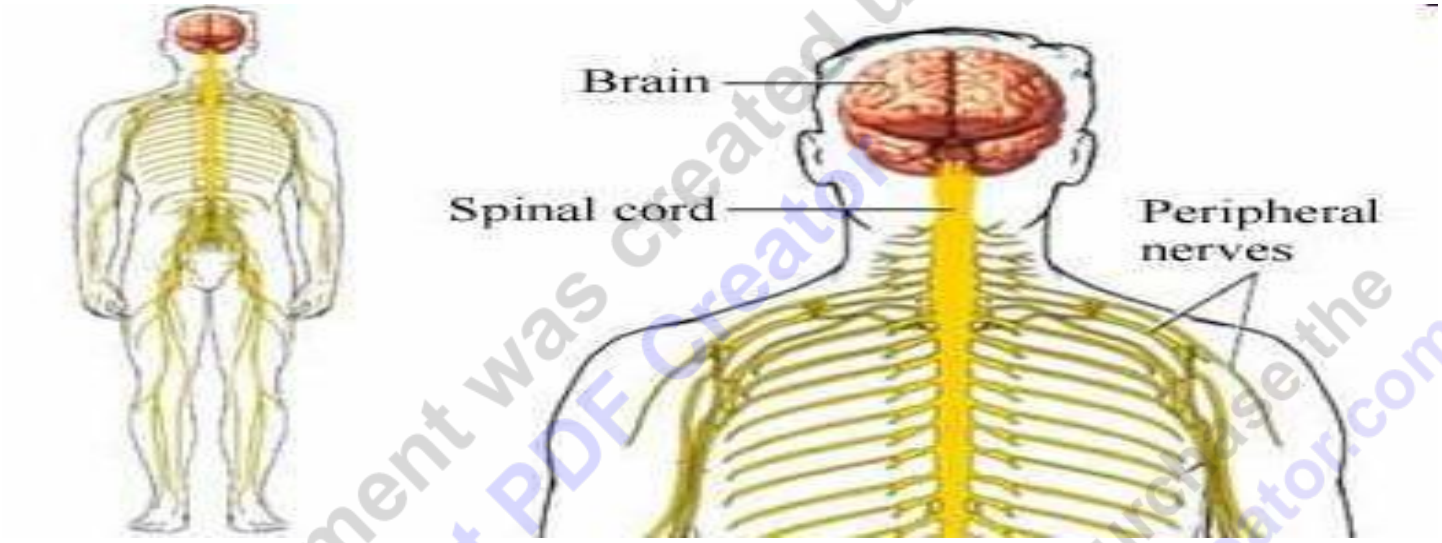
- Aids in _____
- Keeps in moisture
- Makes new _____ (repair)
- Regulates body temp.

This document was created using Smart PDF Creator. To remove this message purchase the product at www.SmartPDFCreator.com

Part X: New Area of Focus: The Nervous System

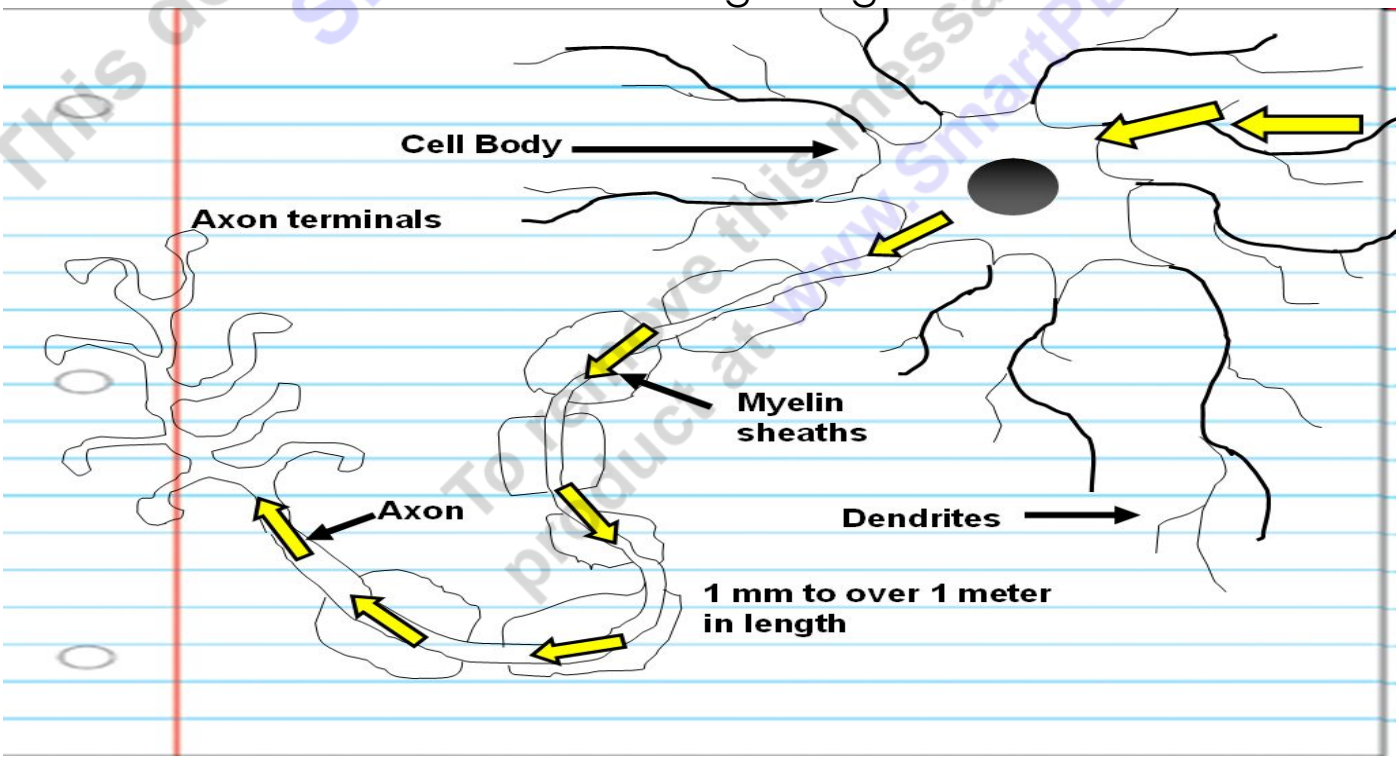
The nervous system _____ and then sends _____ information about your body.

It also monitors and _____ to changes in your environment.



Neuron: A specialized cell transmitting nerve _____.

- Electrical and chemical signaling.



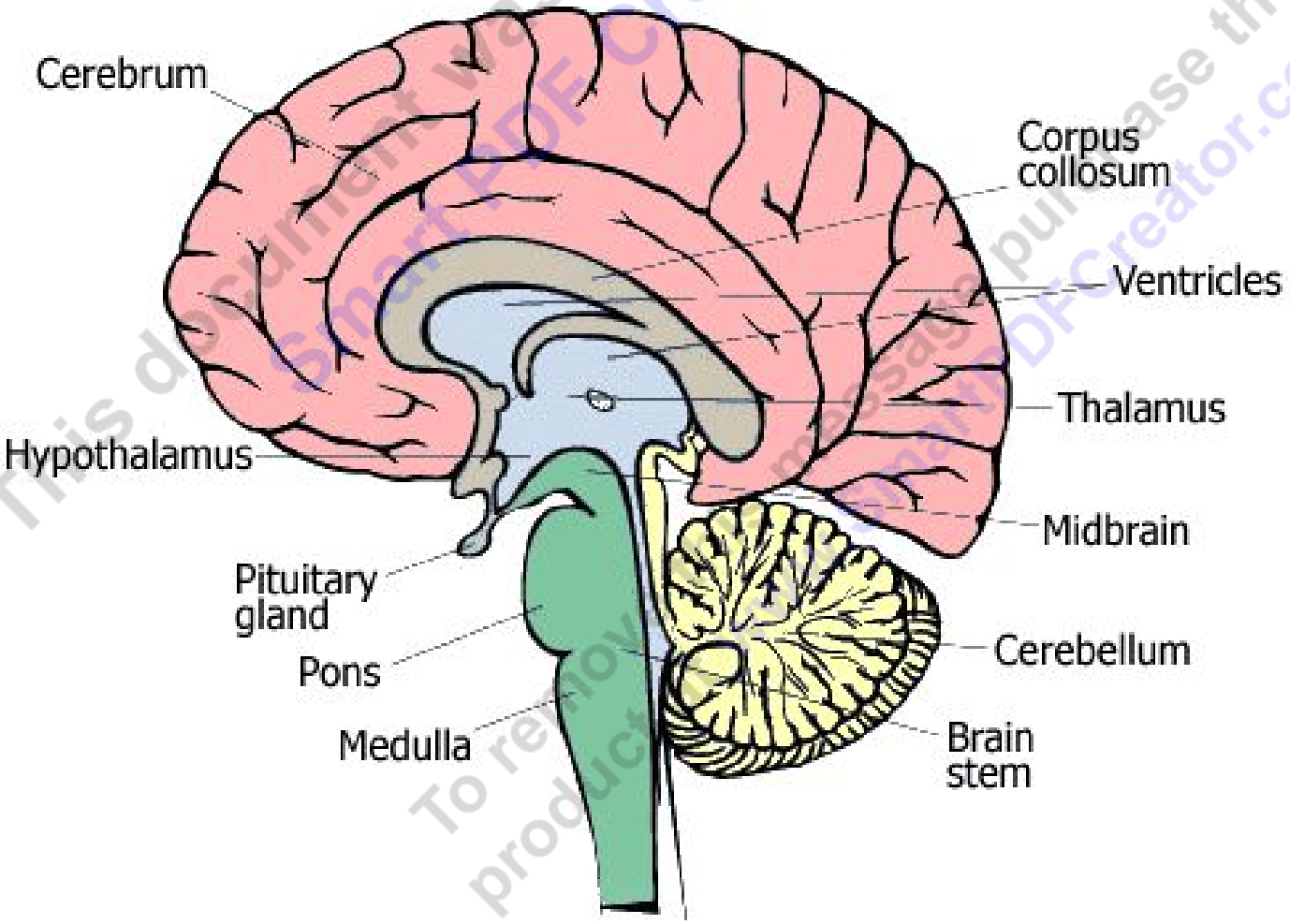
This document was created using SmartPDFCreator.com
To remove this message purchase the product at www.SmartPDFCreator.com

There are three types of neurons.

- S_____ neurons: Conducts impulses inwards to the brain or spinal cord.
- Interneurons: Transmits impulses _____other neurons. (Brain and Spinal Column)
- Motor neurons: Pathway along which impulses pass from the _____ or spinal cord to a muscle or gland.

The C_____Nervous System: Brain and Spinal Cord
 Control center of the body.

Peripheral Nervous System: Network of nerves throughout body.



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

EXPERIENCE =

USABILITY/ANALYTIC + DESIGN/CREATIVE

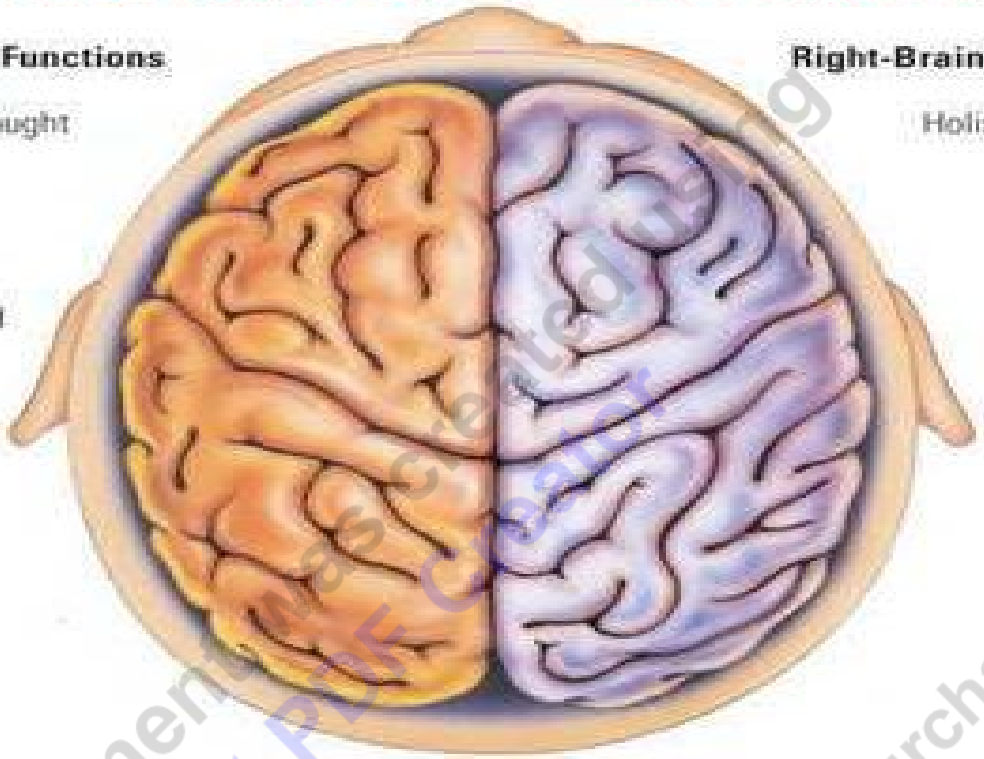
Left-Brain Functions

Analytic thought

Logic

Language

Science and math



Right-Brain Functions

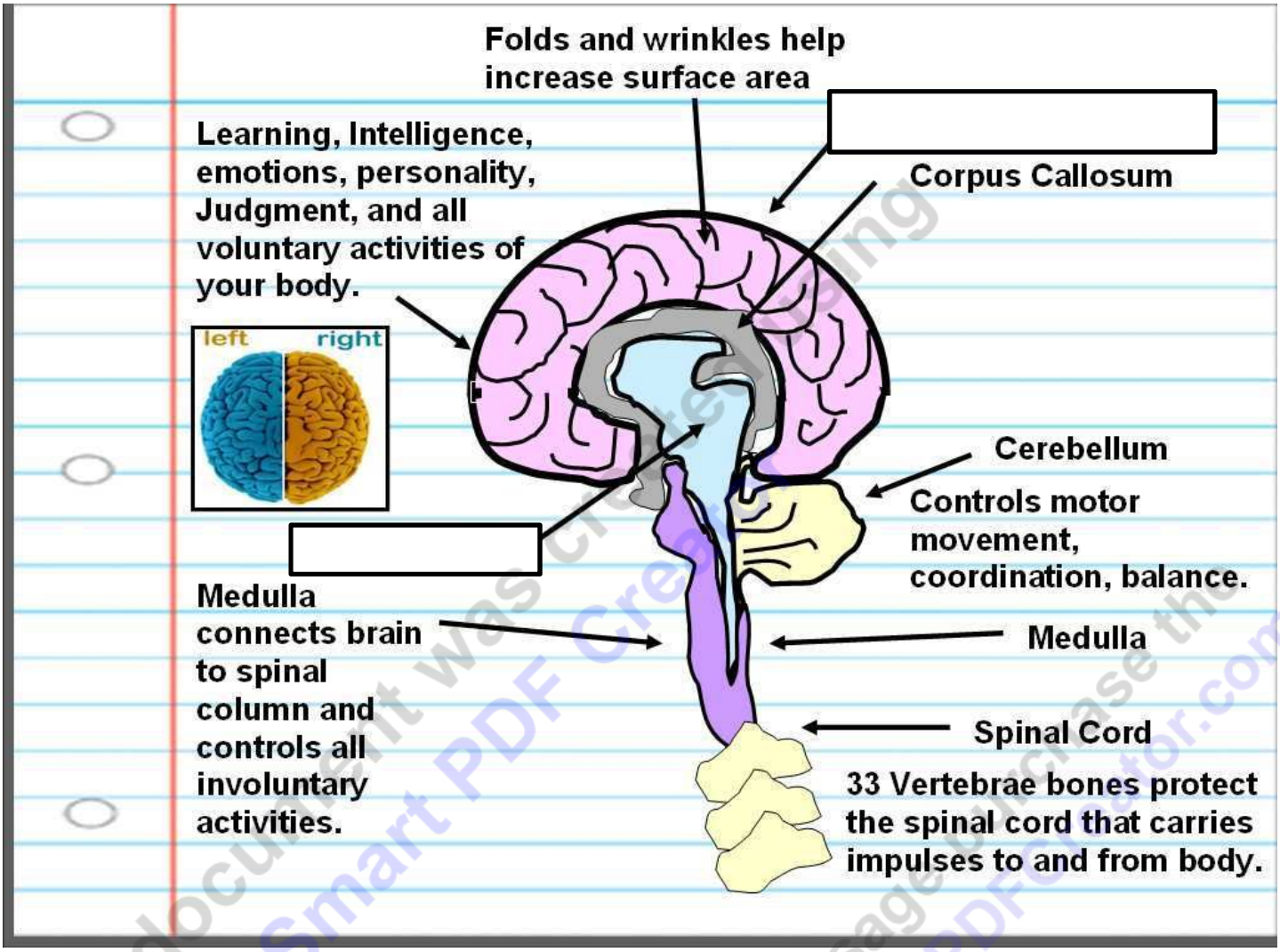
Holistic thought

Intuition

Creativity

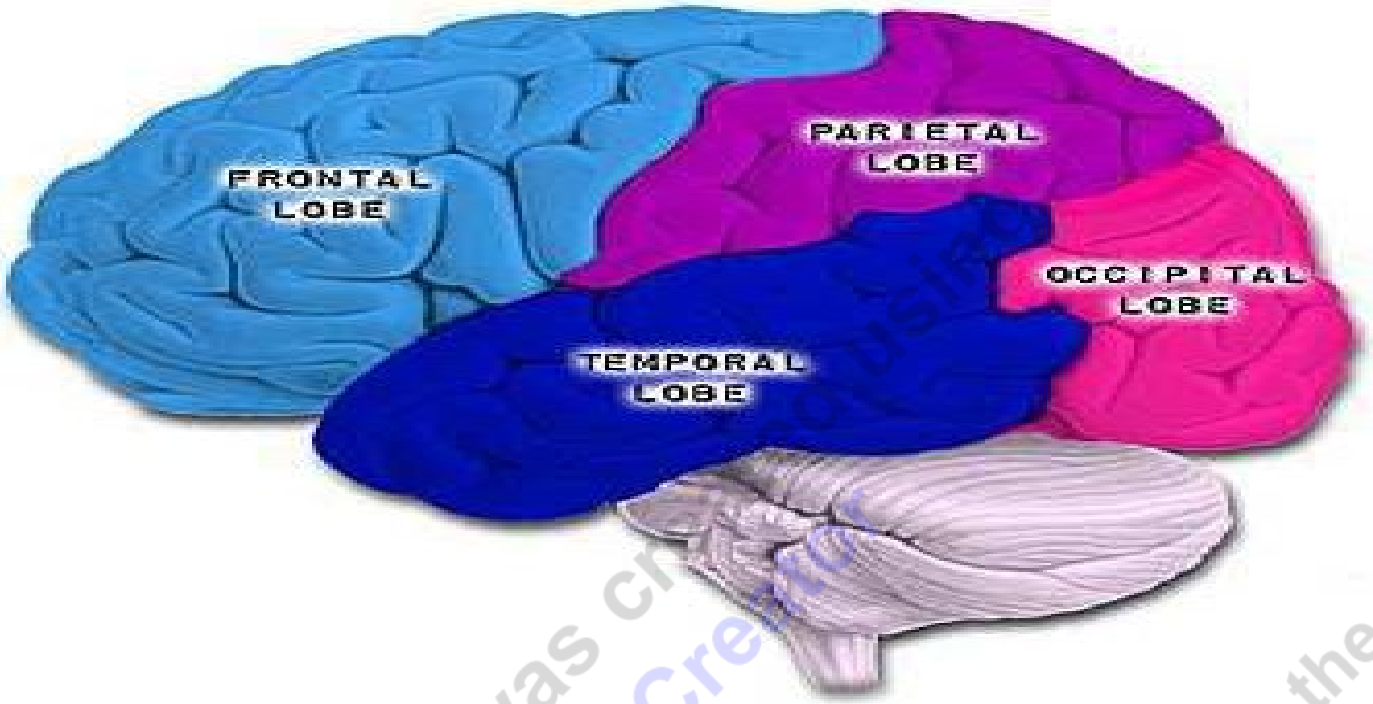
Art and music

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

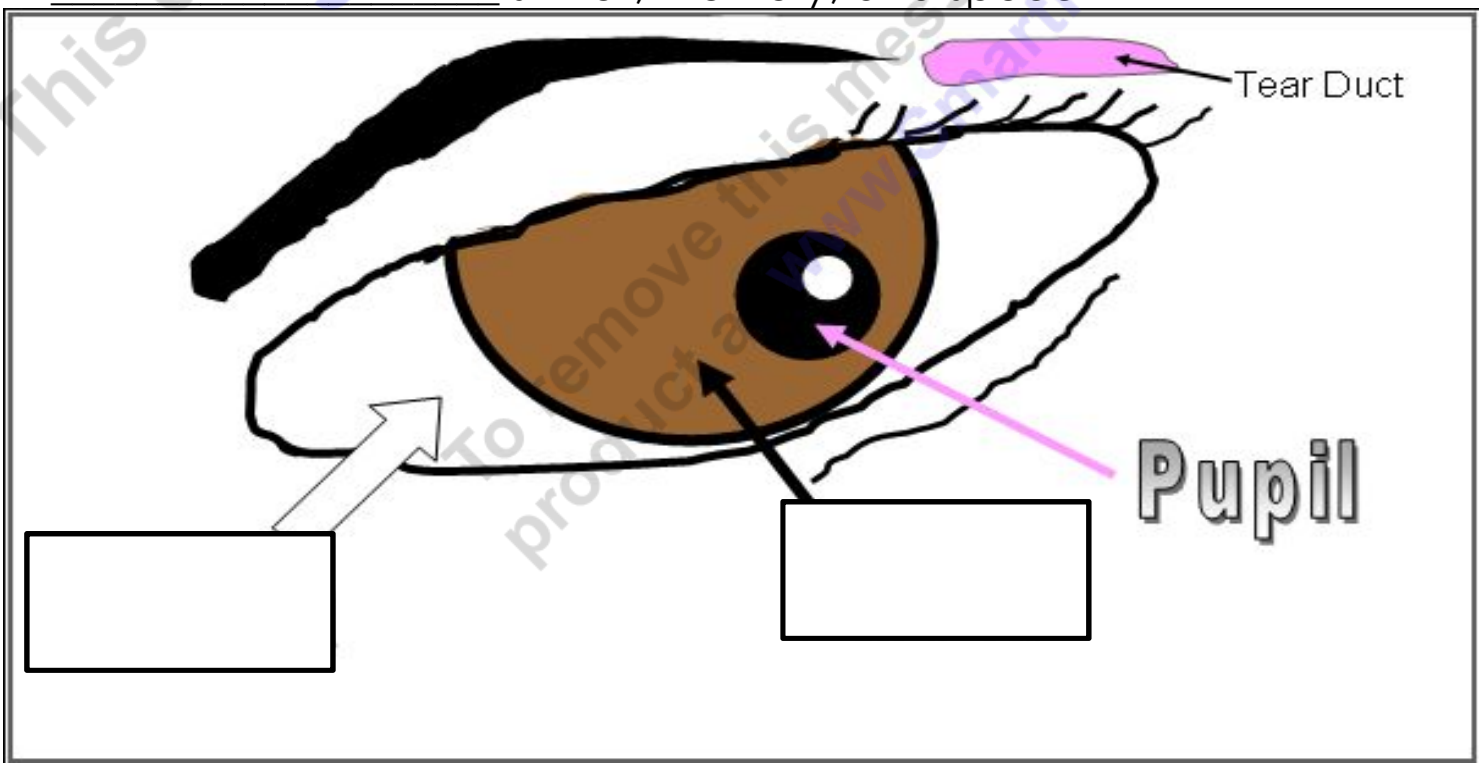


- C_____: Learning, Intelligence, emotions, personality, Judgment, and all voluntary activities of your body.
- Cerebellum: Controls _____ movement, coordination, balance.
- Corpus Callosum: Thick band of nerve fibers that _____ the cerebrum into left and right hemispheres.
- Medulla connects brain to spinal column and controls all _____activities.
- Thalmus: Lobed mass of _____ matter buried under the cerebral cortex. It is involved in sensory perception and regulation of motor functions.
    - Also controls _____ and awake consciousness

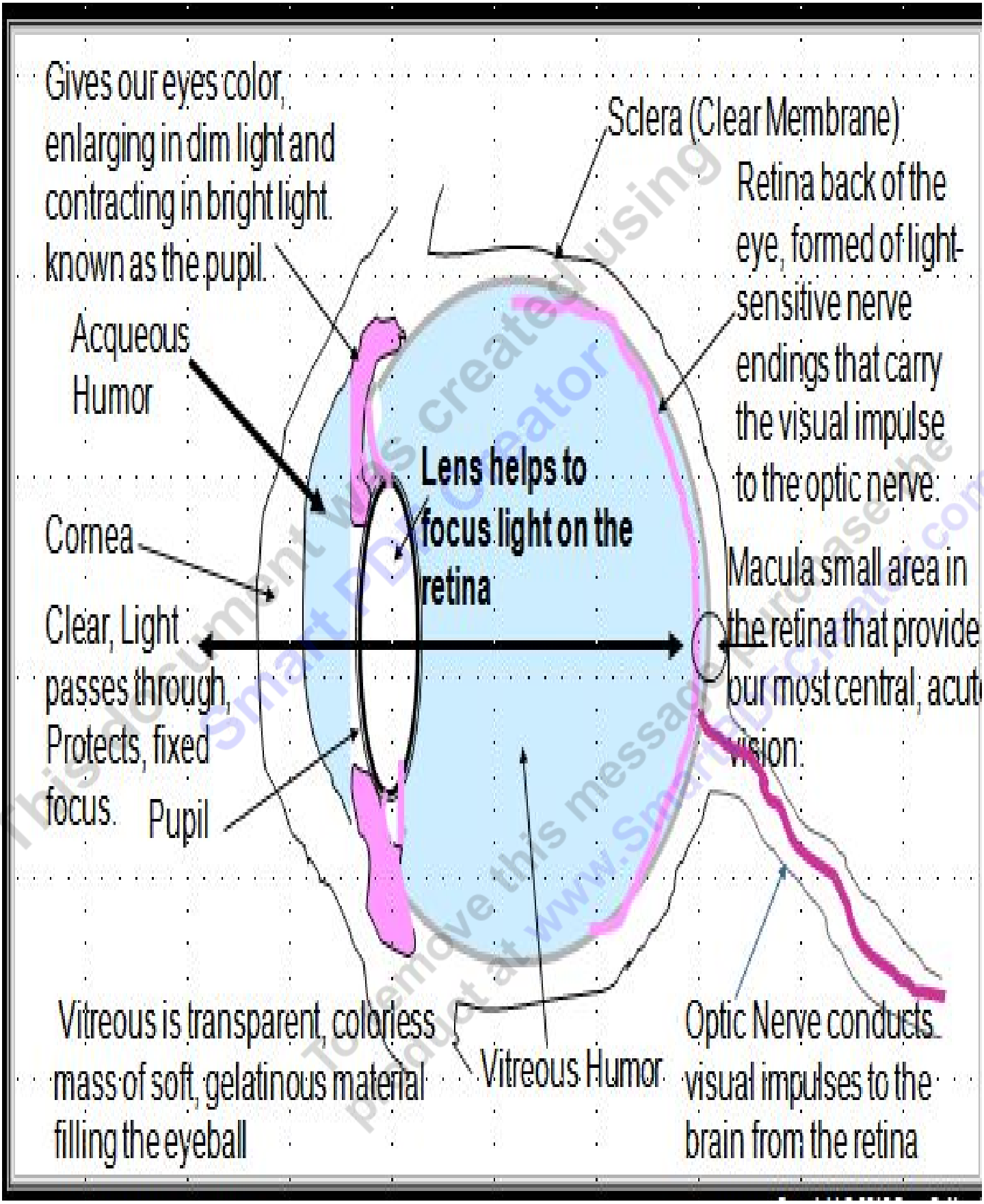
This document was created using Smart PDF Creator. To remove this message, purchase the product at www.SmartPDFCreator.com

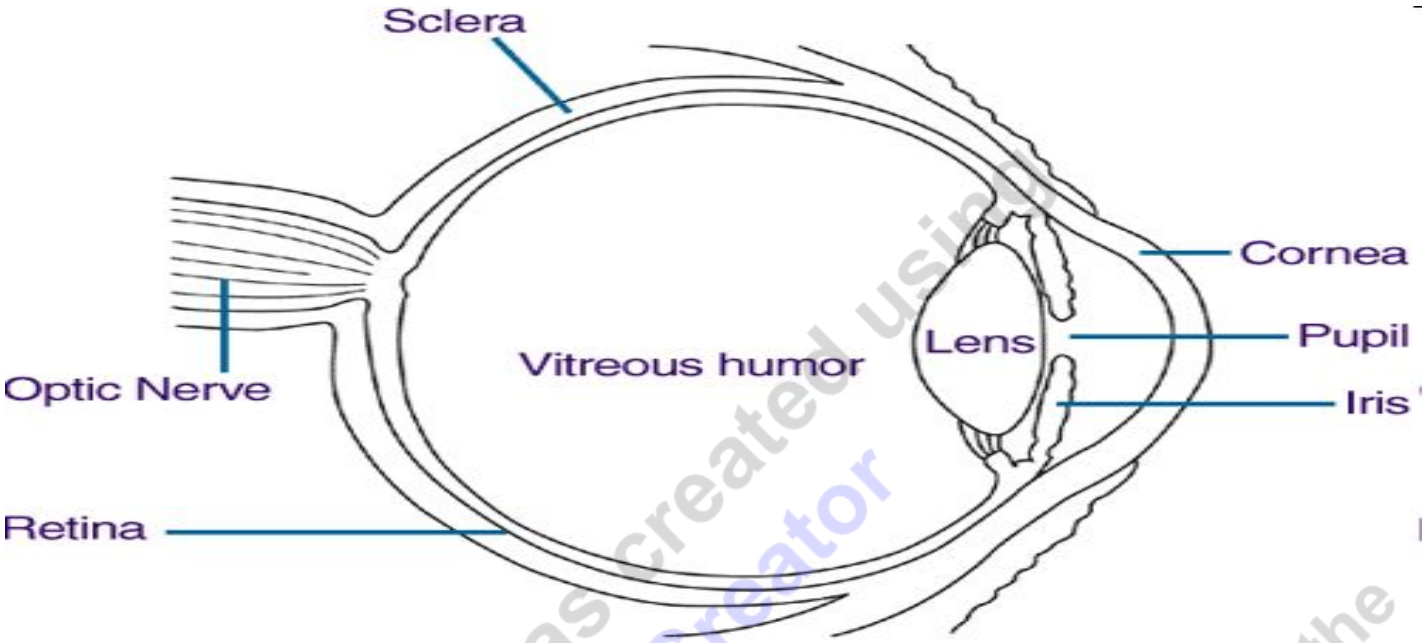


_____ **Lobe-** associated with reasoning, planning, parts of speech, movement, emotions, and problem solving
Parietal Lobe- associated with _____, orientation, recognition, perception of stimuli
Occipital Lobe- associated with _____ processing
Temporal Lobe- associated with perception and recognition of _____ stimuli, memory, and speech



This document was created with Smart PDF Creator
To remove this message purchase the product at www.SmartPDFcreator.com


Gives our eyes color, enlarging in dim light and contracting in bright light known as the pupil.
Sclera (Clear Membrane)
Retina back of the eye, formed of light-sensitive nerve endings that carry the visual impulse to the optic nerve.
Acqueous Humor
Lens helps to focus light on the retina
Cornea
Clear, Light passes through, Protects, fixed focus.
Macula small area in the retina that provide our most central, acut vision.
Pupil
Vitreous is transparent, colorless mass of soft, gelatinous material filling the eyeball
Vitreous Humor
Optic Nerve conducts visual impulses to the brain from the retina



Rod and Cones: The two types of _____ the eye.

- Rods are more numerous (120 million) and work well in dim _____.
- Cones see color (6-7 million – macula) and _____ work well in dim light.
  - That is why you don't really see colors at night.

Smell: To perceive the _____ of (something) by means of the olfactory nerves.

To Smell…

- Inside your nose is a patch of _____ that come in contact with the air.
- They have hair like projections called _____ that maximize surface area with air.
- Odor molecules bind to cilia and _____ is sent via the neurons.

Reminder for homework question – The nose filters particles, warms the air, and moistens the air as well as smells.

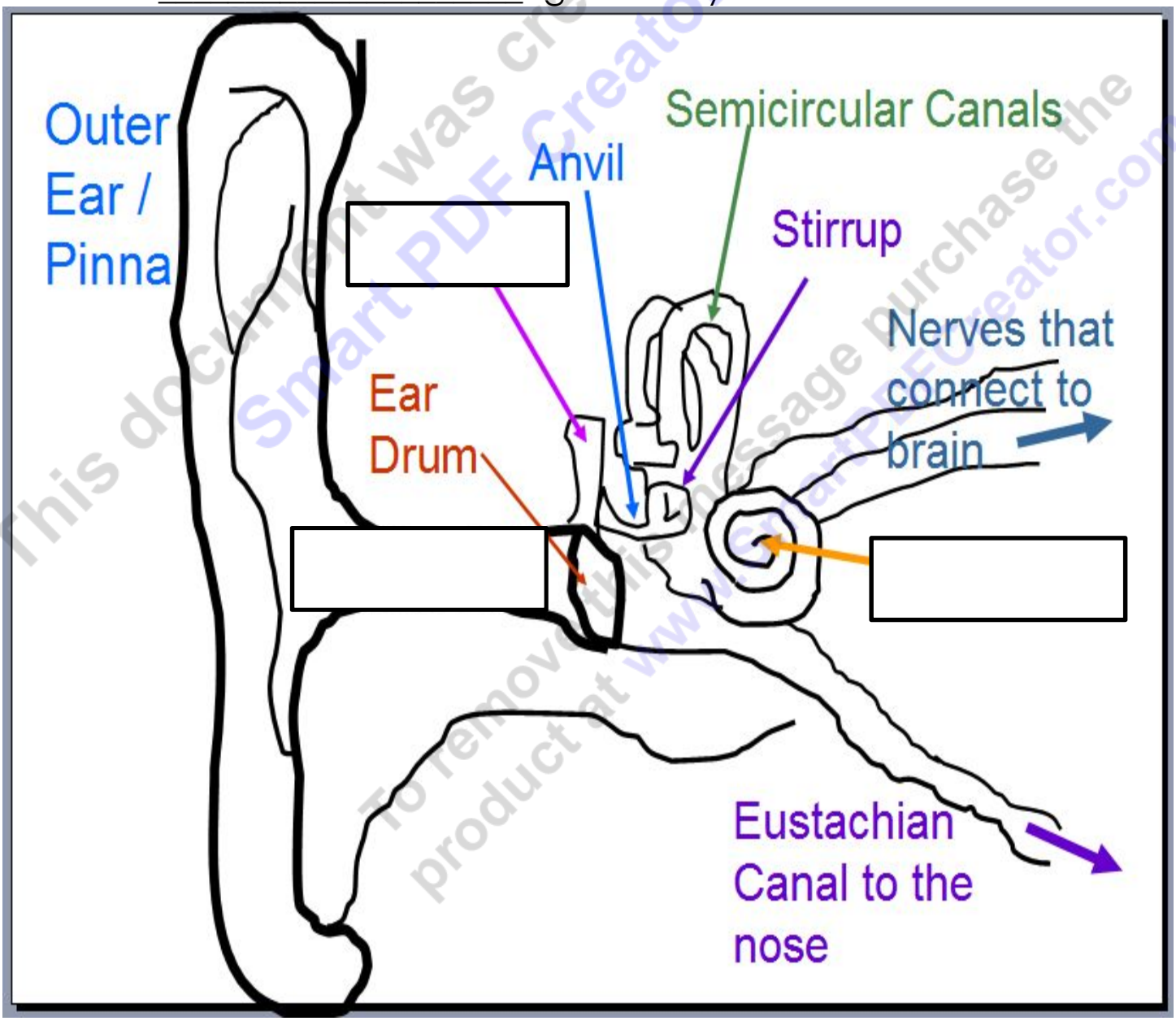
Hearing…

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

- The hearing system is based solely on _____ movement. (Not chemical such as smell and taste).
- Sound occurs when it _____ in matter. (Solid, Liquid, Gas).

To Hear, you must…

- Direct the sound _____ into the hearing part of the ear.
- Sense the fluctuations in _____ pressure.
- Translate these fluctuations into an _____signal that your brain can understand.



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Anvil - A tiny _____ that passes vibrations from the hammer to the stirrup.

Cochlea - A spiral-shaped, _____-filled inner ear structure; it is lined with cilia (tiny hairs) that move when vibrated and cause a _____ impulse to form.

Eardrum - (Also called the tympanic membrane) a thin membrane that _____when sound waves reach it.

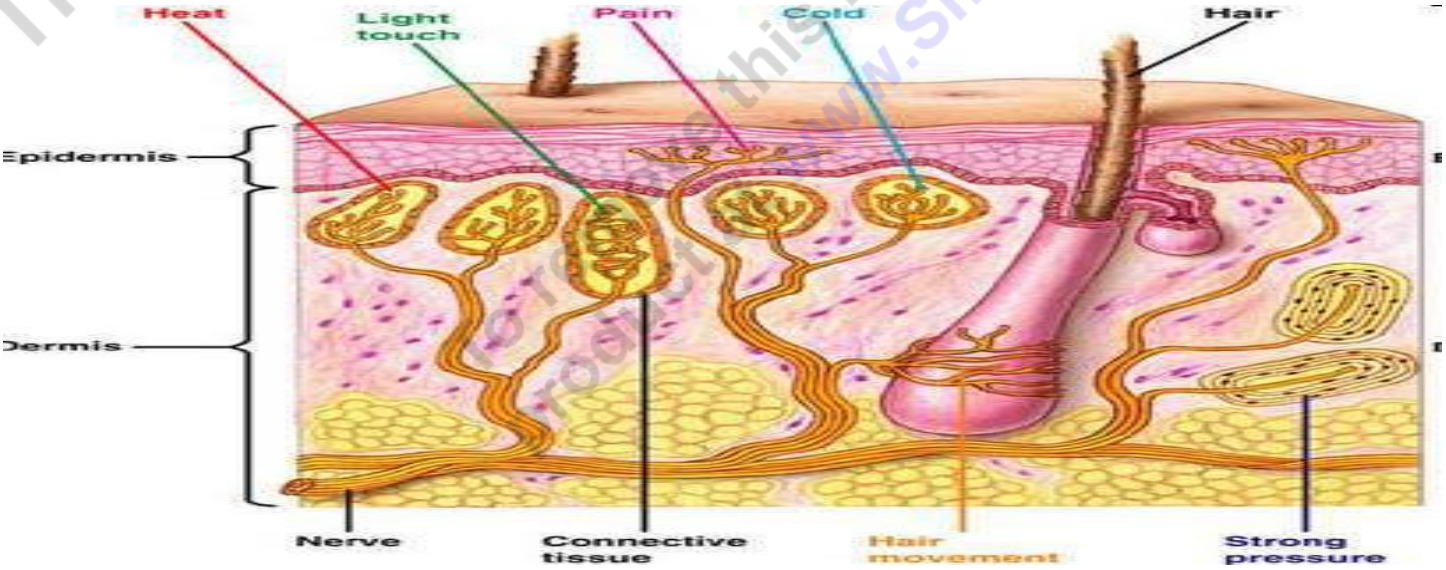
Eustachian Canal - A tube that connects the middle ear to the back of the nose; it equalizes the _____ between the middle ear and the air outside.

- When your ears pop as you change altitude (going up a mountain or in an airplane), you are equalizing the _____ pressure in your middle ear.

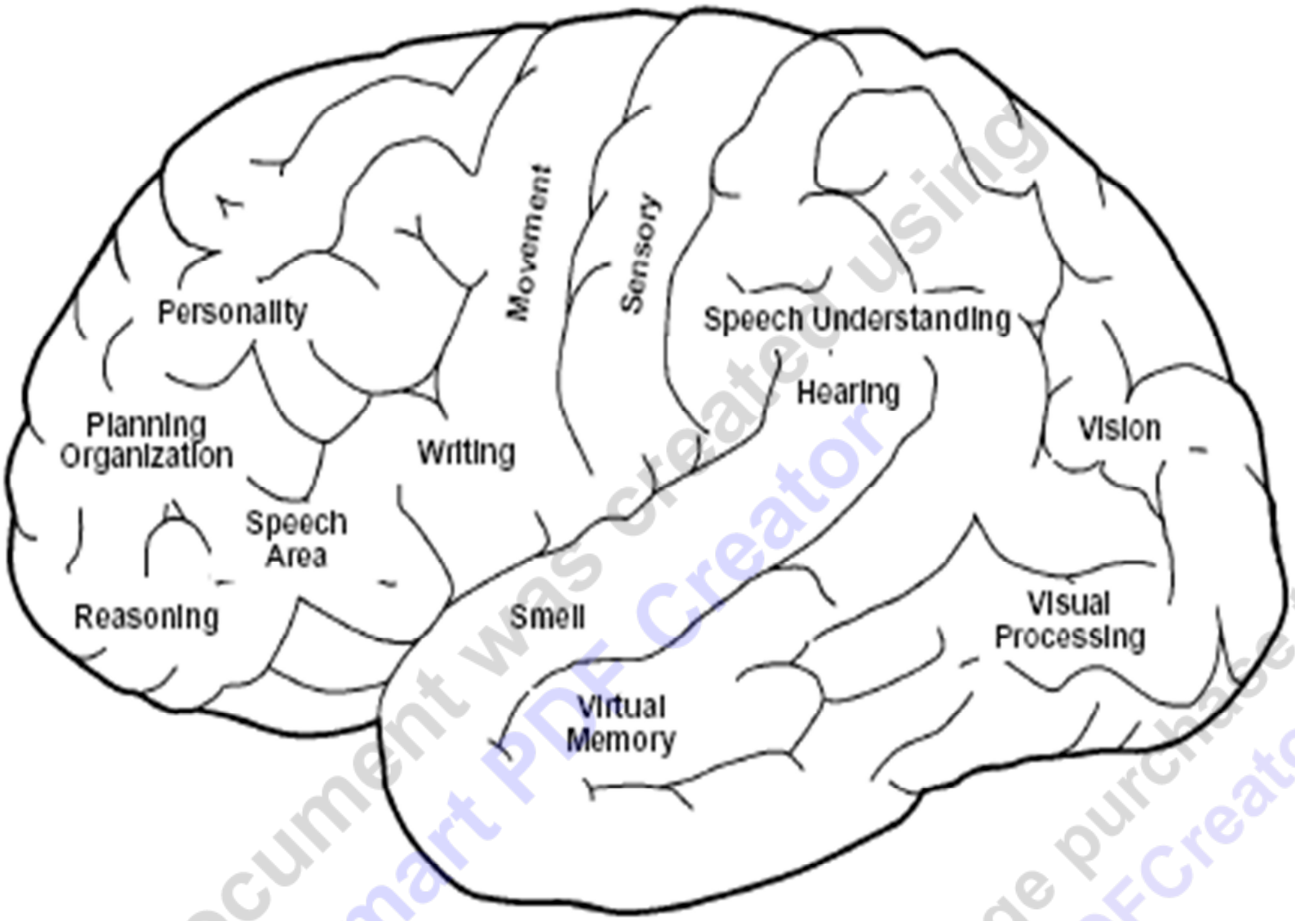
Hammer - A tiny bone that passes _____ from the eardrum to the anvil.

The skin has touch receptor cells that allows you to feel texture.

1. Deeper receptor cells allow you to feel _____.
2. Other receptors respond to _____, cold, and pain.



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Part XI: The Endocrine System

The endocrine system is a system of _____ that release _____ messages into your body.

Gland: A cell, a group of _____. or an organ that produces a secretion for use elsewhere in the body.

Hormone: A _____ substance produced in the body that controls and regulates the activity of certain cells or organs.

- Some activities in the body…
  - G_____
  - Sexual development

- Reproductive cycle
- Digestion
- S_____
- Hair growth
- Hunger
- B_____Production
- Much More

- Some important hormones
  - Insulin
  - T_____
  - Estrogen
  - Adrenaline
    - epinephrine
  - Dopamine
  - M_____
  - Thyroxine

Nervous and Endocrine both _____ the body.
- Nervous system sends electrochemical _____.
- The endocrine sends chemical messages in _____.

- Exocrine Glands: Give off chemicals through _____ (tubes) to organs.
  - These don't produce _____
  - Produce tears, sweat, oil, digestive juices, saliva,

- Pituitary Gland: C_____s to hypothalamus (neurons). Size of pea.
  - Controls blood pressure, growth, _____.

- Thymus: Responsible for development of _____ system.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

- Thyroid: Controls how quickly the body uses _____, makes proteins, and controls how sensitive the body should be to other _____.

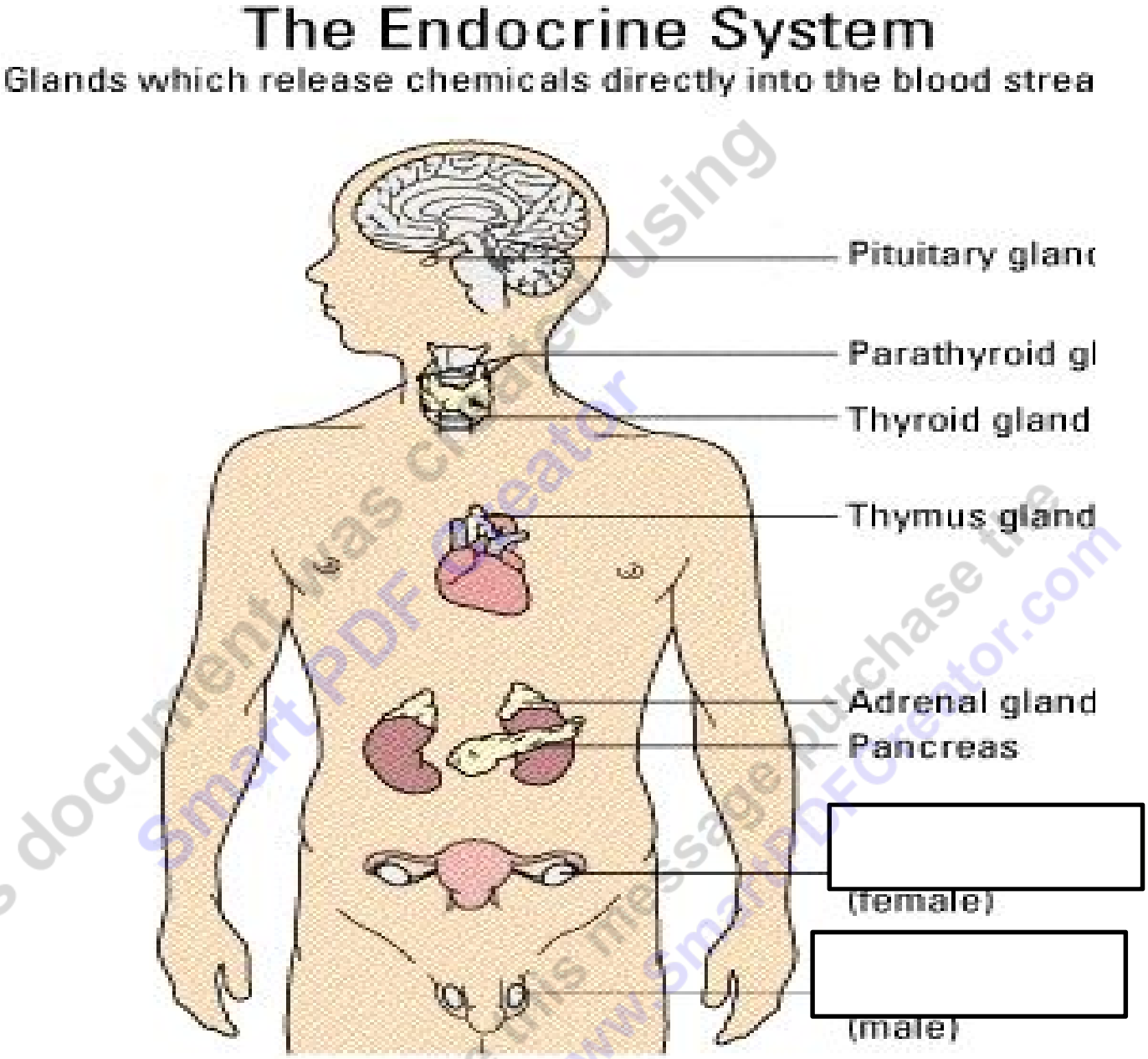
- Adrenals: Produces _____, part of emergency action plan, puts you on high alert.

- Pancreas: Produces _____, which keeps sugar (glucose) in blood under control.
  - Helps body absorb _____ and use it for energy.
  - Turns excess sugar into a storage molecule called _____.
    - Diabetes: Levels of sugar in ones blood is too high.

- Ovaries and testes: Produce sex hormones.
  - Male: Testosterone
  - Female: Estrogen

- Body Stability: The presence of an abnormally large amount of any hormone or other substance will trigger a gland to secrete a _____ hormone.
  - This keeps your body in chemical balance.

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com



This document has created using Smart PDF Creator To remove this message purchase the product at www.SmartPDFCreator.com

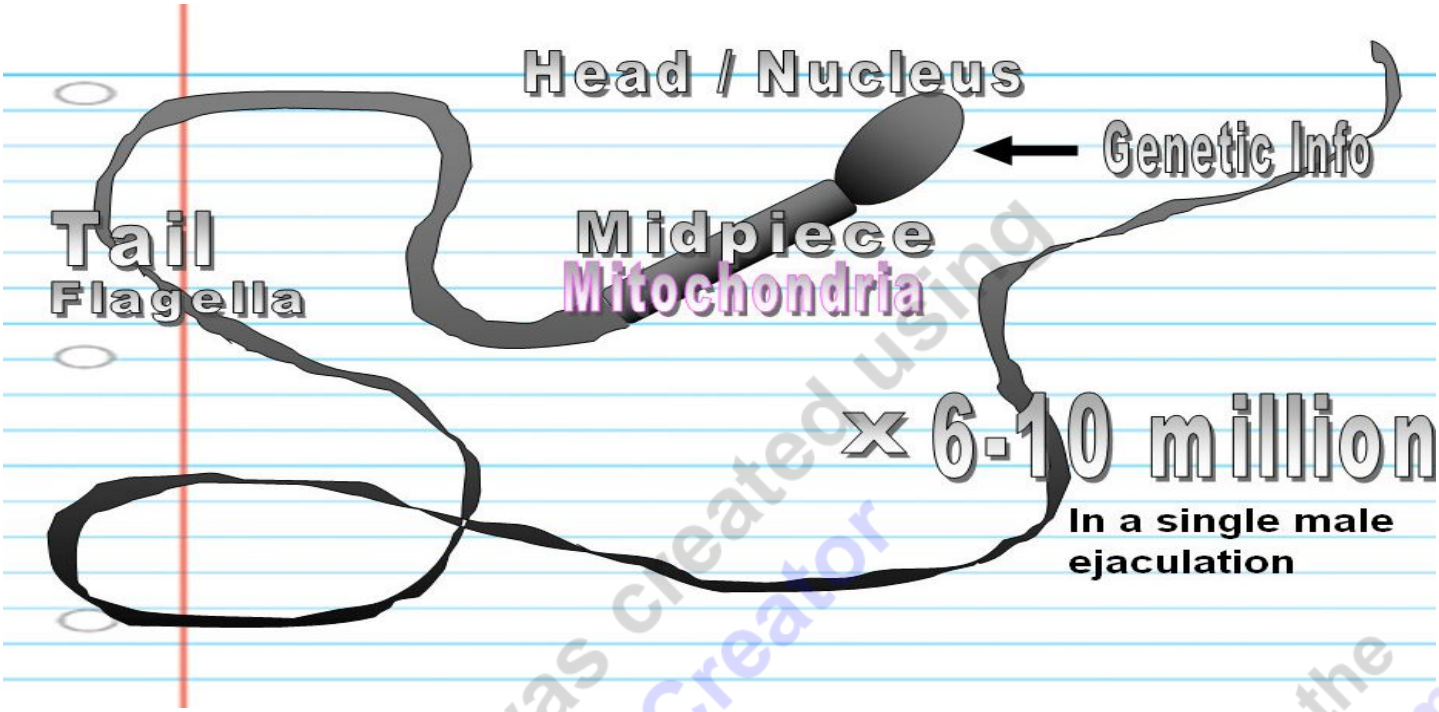
Part XII: The Reproductive System

The Reproductive System: Produces, stores, nourishes and releases sex _____.

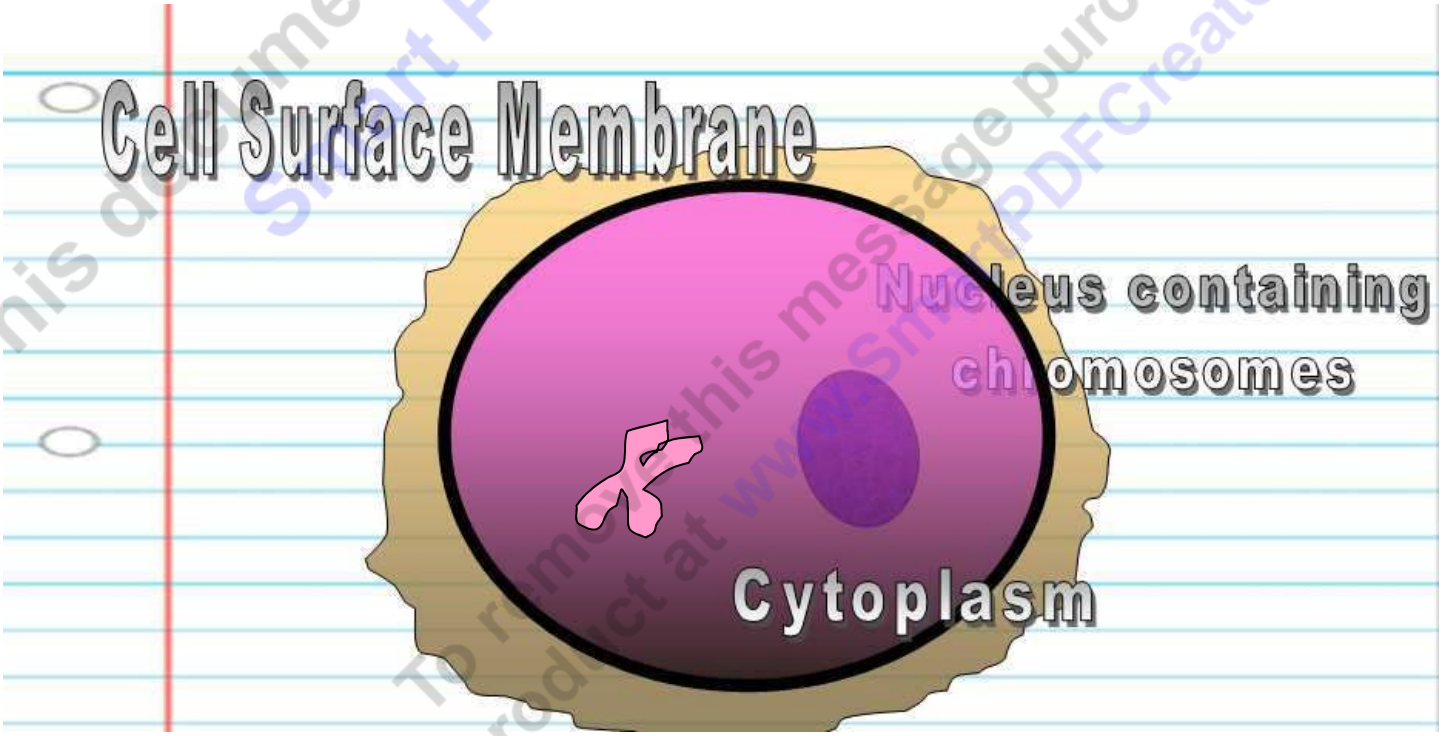
Sperm: M_____ sex cell (gamete)

Fertilization: The joining of the _____ and the sperm.

- The sperm and egg contain _____ information that will allow this one cell to multiply into trillions.



Chromosome: An organized structure of _____ and protein that is found in cells.

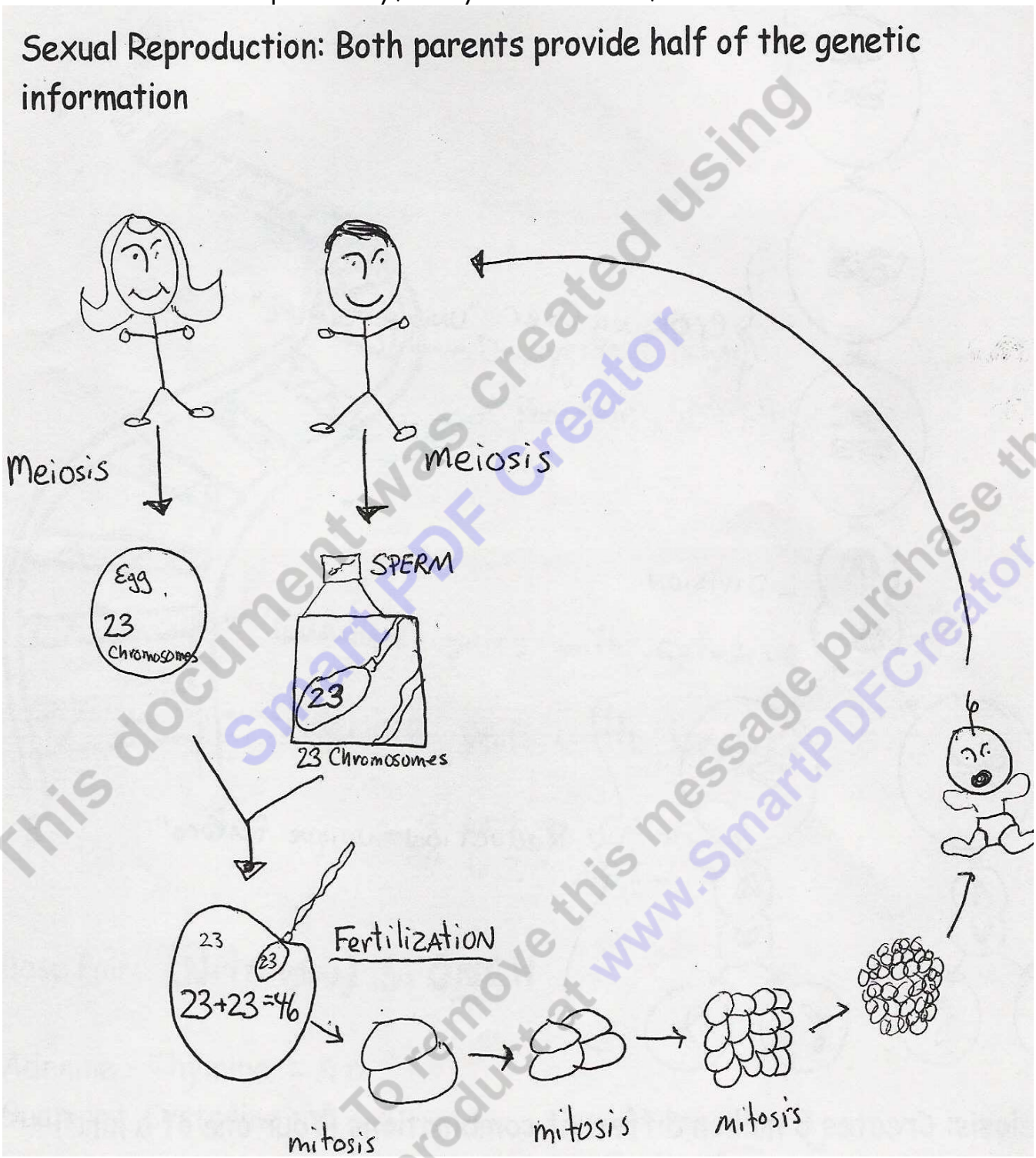


The Egg: a haploid _____ reproductive cell or gamete.

- Much larger than the _____

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

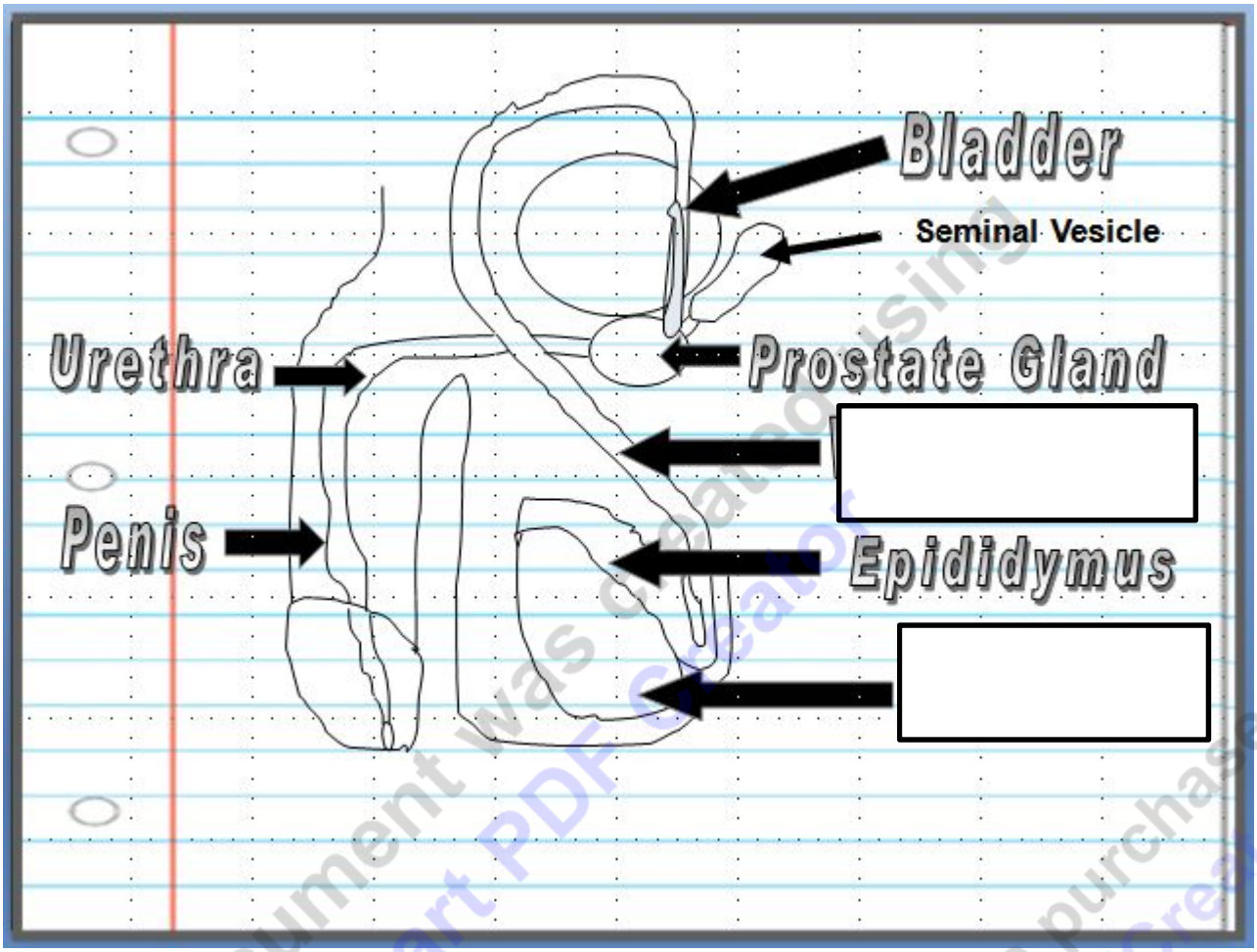
- At birth, there are approximately 1 million eggs; and by the time of puberty, only about 300,000 remain



This document was created using SmartPDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Fertilization: The process of _____ an egg.

- The fusion of male and female gametes to form a zygote.



Vas Deferens: The tube connecting the _____ with the urethra.
Seminal Vesicle: Small tubular _____ that are near the prostate. The primary function involves the production of fluid that makes up a significant percentage of _____.

Penis: This is the duct for the transfer of _____ during copulation.
Testicles: This is either of the two oval organs that _____ sperm in men.

Urethra: This is the duct by which _____ is conveyed out of the body from the bladder

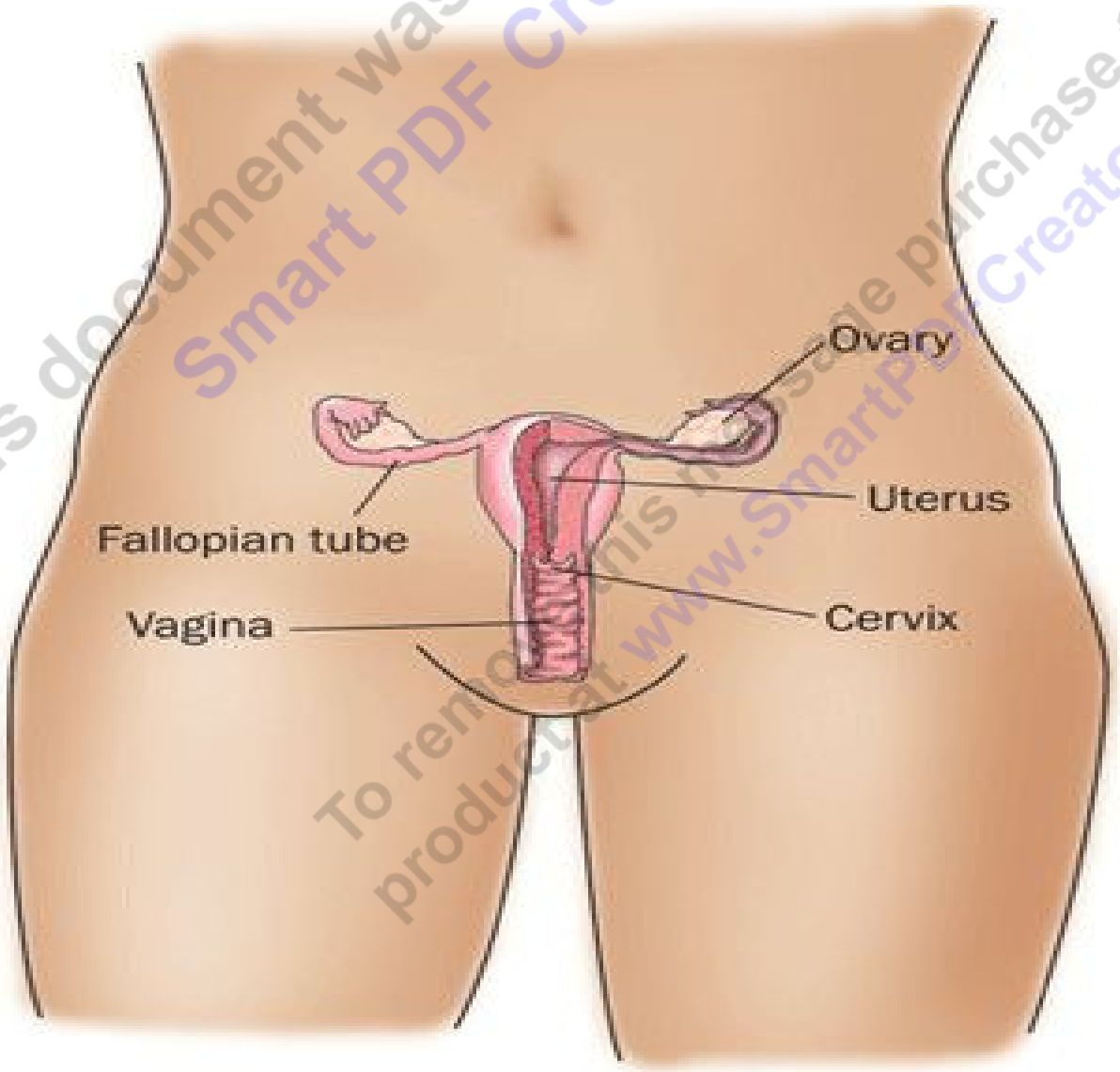
This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Prostate Gland: This is a firm partly muscular chestnut sized gland in males at the neck of the urethra; produces a viscid secretion that is the _____ part of semen.

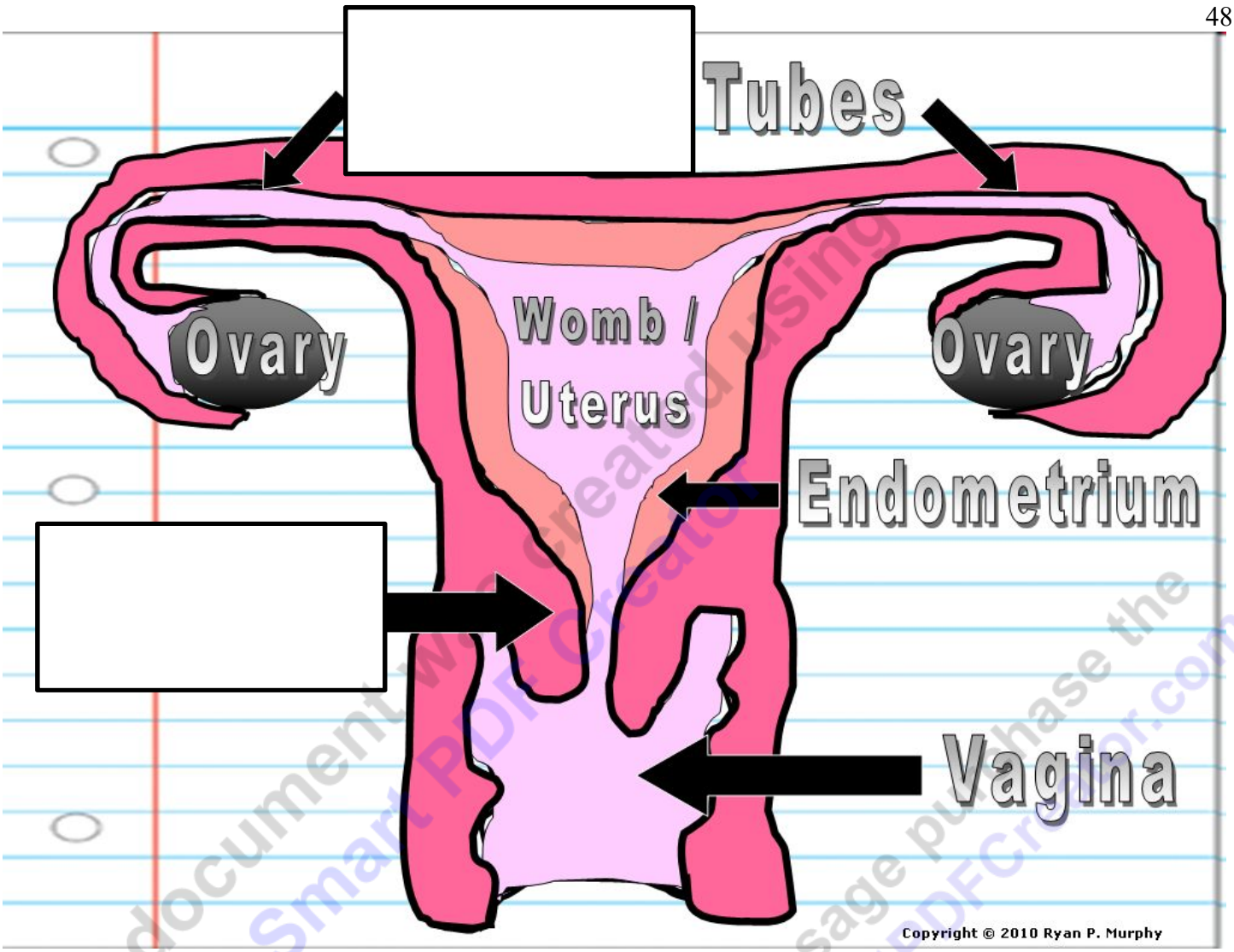
Bladder: A membranous sac in humans and other animals, in which _____ is collected for excretion.

Epididymus: This is a highly convoluted duct behind the testis, along which sperm _____ to the vas deferens.

Female Reproductive System: The primary _____ reproductive organs are the ovaries.



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com



This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

Cervix: Located between the vagina and _____, it serves as a passageway for menstrual blood on the way out, and semen on the way in. (During childbirth, the cervix slowly thins and opens, allowing the _____ to move from the uterus and into the vaginal canal.)

Ovary: A female reproductive organ in which ova or _____ are produced.

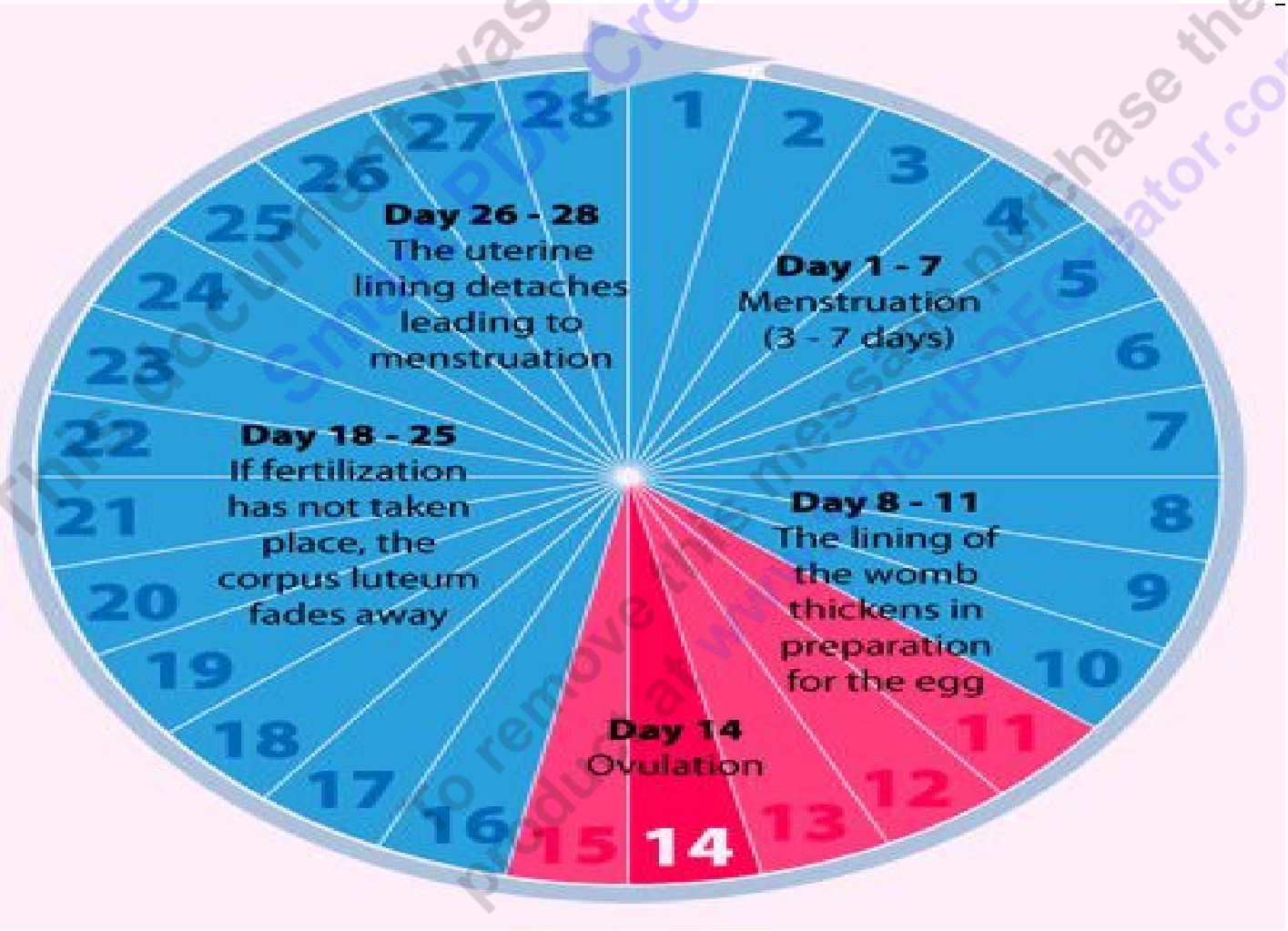
Uterus / Womb: This is a muscular organ, containing and _____ the young prior to birth.

Fallopian Tube: These transport the egg from the ovary to the _____ (the womb).

Vagina: M_____ tube leading from the external genitals to the cervix of the uterus.

Endometrium: This is the _____ membrane lining the uterus, which thickens during the menstrual cycle in preparation for possible implantation of an _____.

The Menstrual Cycle: A series of _____ a woman's body goes through to prepare for a pregnancy.



The Placenta: Organ that _____ the developing fetus to the uterine wall.

- Allows nutrient uptake

- Eliminates _____
- Gas exchange via the mother's _____supply.

The growing fetus gets all of its _____ directly from its mother blood supply.

- Smoking, drinking alcohol, and exposing the _____ to any dangerous drugs can have severe consequences to the developing fetus.

Part XIII: The Immune System

Infectious Diseases will include

- V_____
- Bacteria
- P_____

A virus a nucleic acid (_____ or RNA) enclosed in a _____ shell or coat.

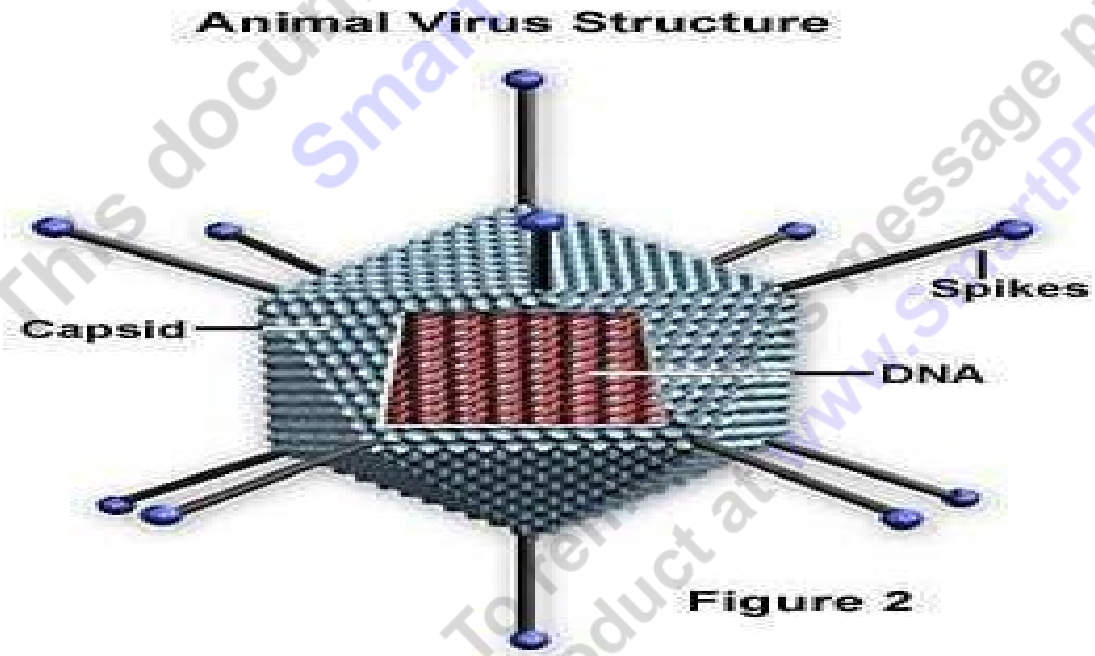
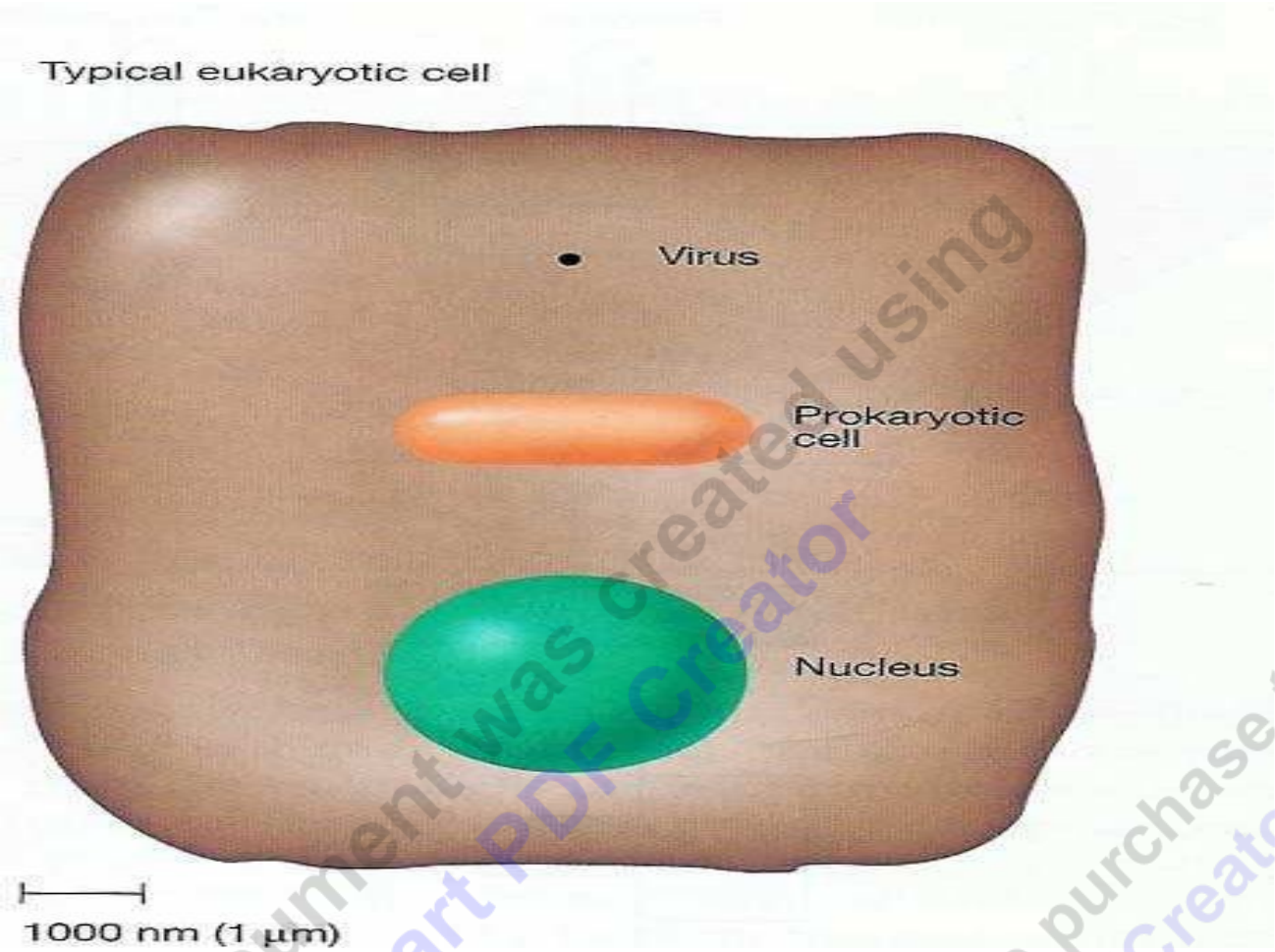


Figure 2

Viruses are extremely _____, approximately 15 - 25 nanometers in diameter

This document was created using Smart PDF Creator To remove this message purchase the product at www.SmartPDFCreator.com

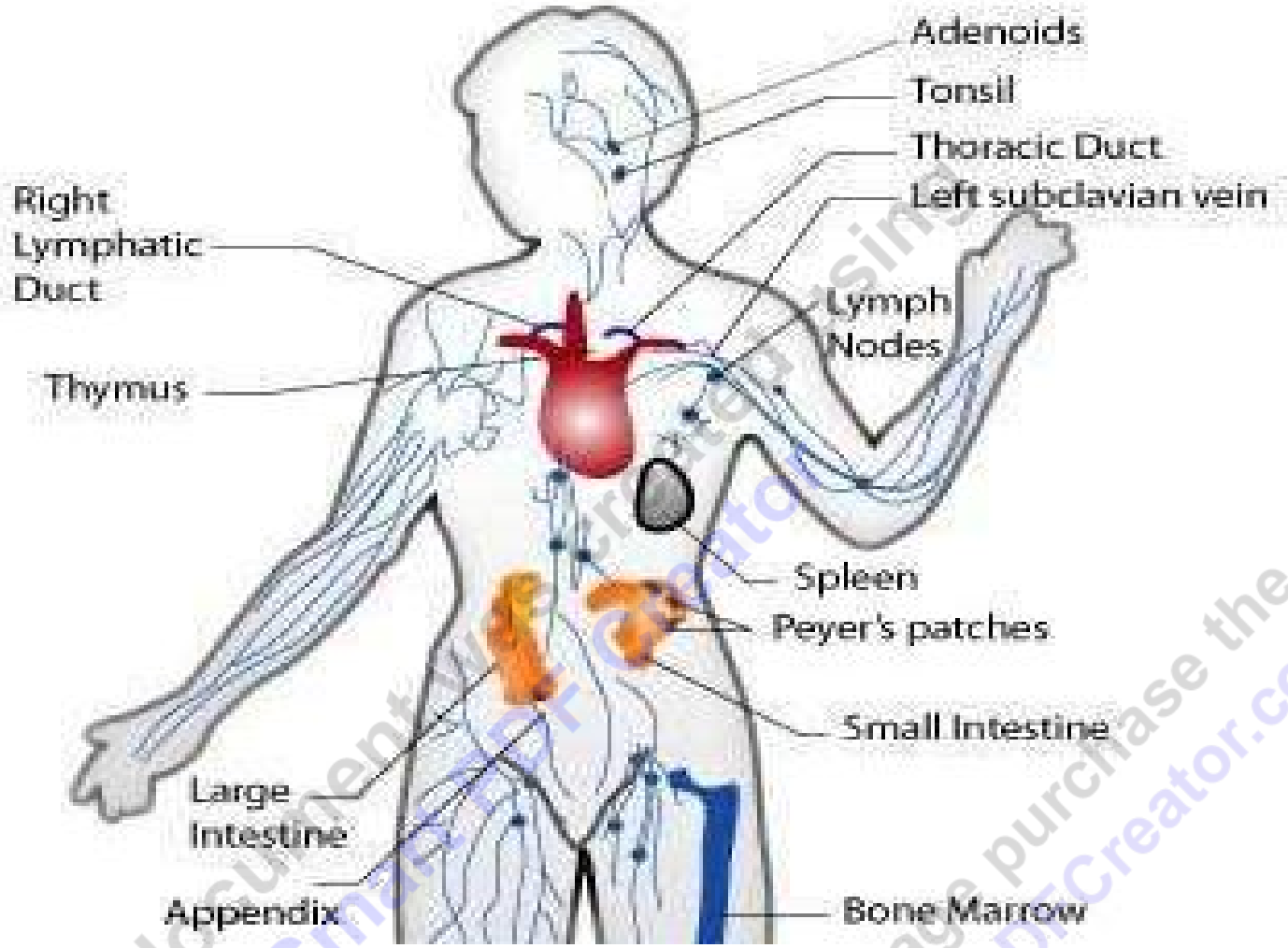


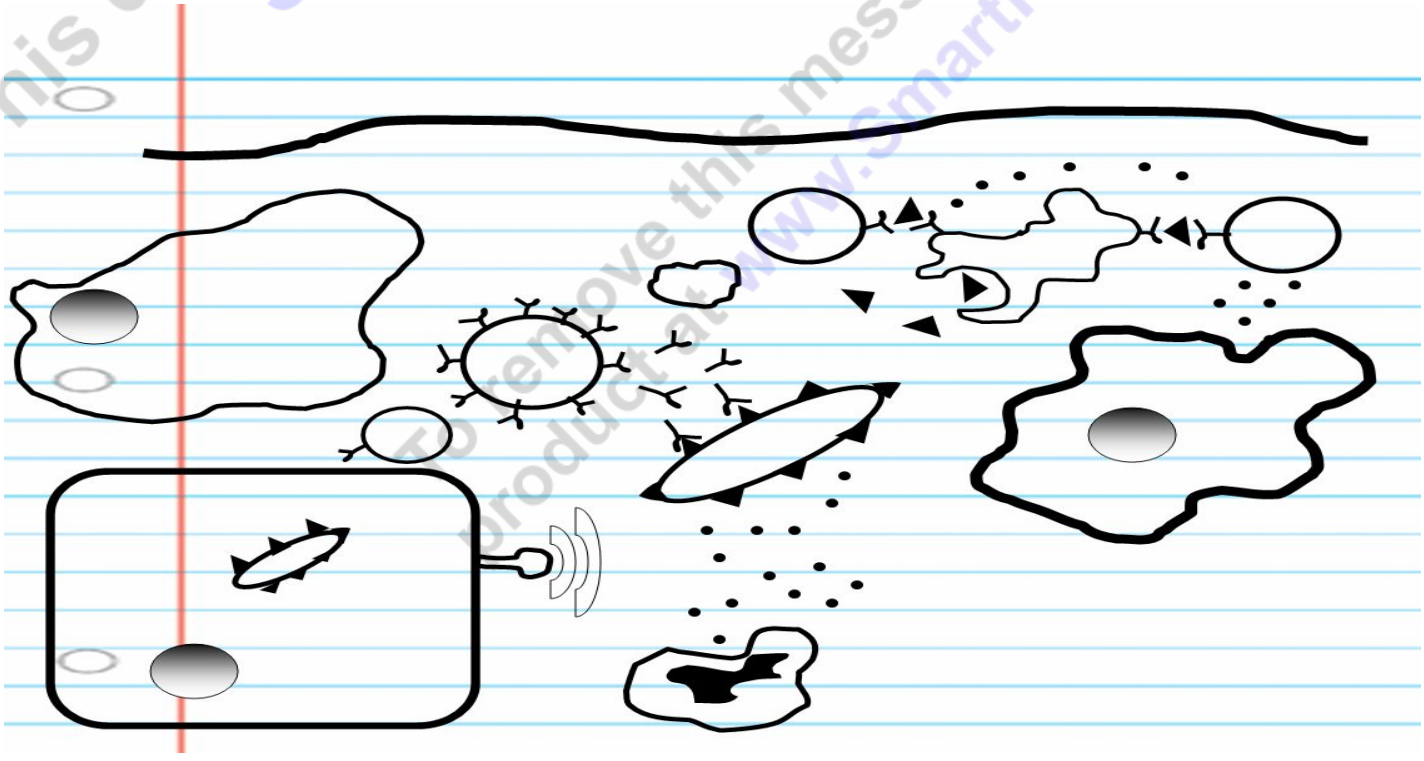
They can reproduce only by _____ and taking over other cells as they lack the cellular machinery for self _____.

Diseases can be spread by…

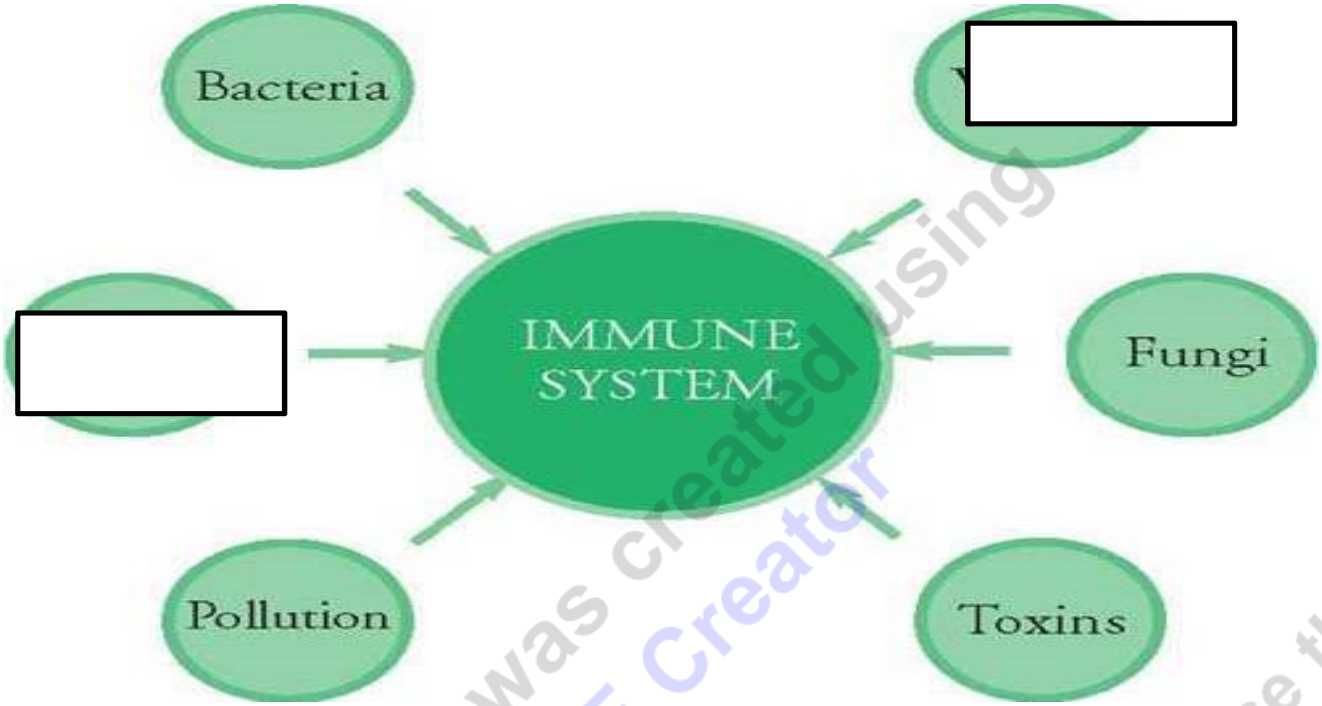
- In_____
- Air
- Water
- F_____
- Person to Person
- Animal to P_____

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com





This document was created using SmartPDFCreator.com
To remove this message purchase the product at www.SmartPDFCreator.com



1st Line of Defense

S_____prevents disease from entering body

Interleukins – Tell body it's under attack

2nd Line of Defense

The inflammatory response: Damaged cells release _____.

- These chemicals cause blood vessels to leak fluid into the tissues, causing sw_____.
- This helps isolate the foreign substance from further contact with body tissues.

3rd Line of Defense

Interleukins: These tell the body it's under _____.

- These give you the aches and pains. "Time to rest!" (Warning System)

Leukocytes: White blood cells (made in _____ marrow)

- - Phagocytes: Cells that _____ invaders.
- - Lymphocytes: Cells that remember the invaders and help the body destroy them if they come back.
  - B-Cells

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

- T-Cells

Dendritic Cells: These cells function to obtain _____ in tissues, they then migrate to lymphoid organs and activate T cells.

- Antibodies cling to _____ making it difficult to attach to cell.

Immunity: Your immune system is now _____ with the invaders and can summon antibodies quickly.

Vaccine: A suspension of weakened or dead _____ cells are injected in order to stimulate the production of antibodies and boost immunity.

Virus prevention

- Minimize _____ with reservoir animal (birds, mice, etc.)
- Minimize person to _____ contact.

HIV=Human Immunodeficiency V_____

- The virus attacks the cells of our _____ system.
- This makes the host susceptible to _____.

Please record the ways in which you can be infected with HIV as a class.

Unprotected sexual intercourse with an _____ person.

- That is all types of sex, where bodily _____ is released for either gender.

- Contact with an infected person's blood

- From mother to _____ (Breastmilk)

-Use of infected blood-Most blood banks are tested but always a risk

- Injecting _____ (needles are often shared between users)

AIDS -Acquired I_____ Deficiency Syndrome

The disease AIDS occurs when the immune system cells left in the body _____ below a particular point.

This document was created using Smart PDF Creator To remove this message purchase the product at www.SmartPDFCreator.com

STD's - The types of sexual activity that can _____a disease are

- penetrative sex (vaginal, anal or oral)
- genital foreplay.

Some diseases are transmitted through -

- skin to_____ contact
- Fluids such as _____, blood or saliva
- some are passed from mother to baby

Review! A_____is best, (Means no contact!) if you can't abstain, than use a condom. Condom use doesn't prevent the skin to skin, and only helps against the others.

GREAT WORK!
HOLD ON TO THESE NOTES FOR THE BUNDLED HOMEWORK PACKAGE!
DO NOT LOSE!
PUT IN YOUR BINDER!

Copyright 2011 Ryan Murphy

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com

This document was created using Smart PDF Creator
To remove this message purchase the product at www.SmartPDFCreator.com