Integumentary system coloring worksheet answers answer sheets pdf

l'm not robot!

Chapter 5: Integumentary System

- Consists of the skin and accessory structures
- Functions:
 - o Helps maintain body temperature
 - Converts inactive vitamin D to active form
 - Provides sensory information
 - o Helps maintain homeostasis

5.1 Structure of the Skin

- Two major layers
 - Epidermis superficial layer
 - Keratinized, stratified squamous epithelium
 - Avascular
 - Four types of cells:
 - Keratinocytes
 - Melanocytes
 - Intraepidermal macrophages (Langerhans cell)
 - Tactile epithelial cells (Merkel Cell)
 - 4 to S layers (thin/thick)
 - Stratum Corneum
 - dead flat keratinocytes
 - Stratum Lucidum (only in thick skin)
 - o only in fingertips, palms, soles
 - dead keratinocytes
 - Stratum Granulosum
 - flattened keratinocytes cells contain keratohyalin and lamellar
 - granules Stratum Spinosum
 - Many sided keratinocytes
 - Contains projections of melanocytes and intraepidermal

hasale

- macrophages
- Stratum Basale
 - Deepest layer
 - Single row of cuboidal/columnar keratinocytes
 - Melanocytes and tactile epithelial cells
- Dermis layer deep to epidermis
 - Composed of connective tissue (collagen and elastic fibers)
 - Two regions:
 - Papillary superficial portion
 - Areolar connective tissue
 - Thin collagen and fine elastic fibers
 - Dermal ridges with blood capillaries, corpuscles of touch, and
 - free nerve endings





Four precipie cell types in applement of them pain.



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Label the following diagram

- A Name structure A
- v. Name structure 8
- a. Name structure C
- **HARRON CONTRACTOR** Name structure D.
- to. Name structure E
- 11. Name structure F.





Worksheet The Integumentary System

1. Label the diagram in the spaces provided.



Anatomy I Integumentary System

Answer Key

Write true if the statement is true or false if the statement is false

_____True____1. The skin is the body's largest organ

_____7ue____ 2. Subcutaneous tissue lies underneath the dermis

____False__ 3. The epidermis has lots of blood vessels

______4. Melanocytes are located in the bottom layer of the epidermis

___False___ 5. The epidermis contains the hair follicles.

____True_ 6. If a sebaceous gland becomes plugged and infected, it develops into a pimple

_____7. The subcutaneous tissue contains about 90 percent of the body's fat.

___False_8. The evaporation of sweat helps increase the temperature of the skin surface

___False____9. The skin makes vitamin A through exposure to UV radiation.

______ True____ 10. UV radiation excites DNA molecules in skin cells.

Functions of Skin: Skin and Homeostasis

The skin has multiple roles in homeostasis, including protection, control of body temperature, sensory reception, water balance, synthesis of vitamins and hormones, and absorption of materials. The skin's main functions are to serve as a barrier to the entry of microbes and viruses, and to prevent water and extracellular fluid loss. Acidic secretions from skin glands also stop the growth of fungi on the skin. Melanocytes form a second barrier: protection from the damaging effects of UV radiation. When a microbe gets into the skin (or when the skin is cut) an immune system reaction occurs.

Heat and cold receptors are located in the skin. When the body temperature rises, the hypothalamus sends a nerve signal to the sweat-producing skin glands, causing them to release sweat onto the skin surface. The evaporation of sweat helps reduce the temperature of the skin surface which cools the body. The hypothalamus also causes dilation of the blood vessels of the skin, allowing more blood to flow into those areas, causing heat to be released from the skin surface. When body temperature falls, the sweat glands constrict and sweat production decreases. If the body temperature continues to fall, the body will start to generate heat by raising the body's metabolic rate and by causing the muscles to shiver.

Transcript Worksheet The Integumentary System 1. Label the diagram in the spaces provided. A. M. B. L C. K. J. D. I. E. H. G. F. A. 2. Describe the types of glands in the skin. 3. What are the seven functions of the skin? 4. Name three substances found in perspiration. 5. What are the three abnormal colors used to describe the skin and what might be the cause of each type? 6. Describe six eruptions that occur in the skin and one cause of each type. 7. What happens in the skin when blood vessels dilate, and how does this regulate temperature? 8. What happens when blood vessels in the skin constrict, and how does this regulate temperature? 9. Describe eight diseases of the skin including the cause and treatment for each disease. 10. Define the parts of a hair and the purpose of hair. 11. Describe what nails are made of and what may happen if the nailbed is damaged. Worksheet The Integumentary System Answer Key Label the diagram in the spaces provided. A. Hair Shaft M. Sweat Pore B. Epidermis L. Nerve C. Dermis K. Hair follicle J. Sweat gland D. Subcutaneous I. Papilla of hair E. Sebaceous (oil) Gland H. Artery G. Vein F. Arrector pili muscle A. Hair Shaft Vein G. B. Epidermis Arterv C. Dermis J. Sweat gland E. Sebaceous (oil) Gland K. Hair follicle F. Arrector pili muscle Papilla of hair D. Subcutaneous L. Nerve M. . Sweat Pore 12. Describe the types of glands in the skin. Sudoriferous gland- (Sweat gland)- coiled tubes that extend through the dermis and open on the skin? a. Protection-serves as a barrier to the sun¢ÃÂs ultraviolet rays and the invasion of pathogens; also holds in moisture and prevents deep tissues from drying out. b. Sensory Perception- nerves in the skin help the body retain or lose heat. d. Storage- the skin as tissues for temporary storage of fat, gluces, water, vitamins, and salts. e. Absorption- certain substances can be absorbed through perspiration g. Production- the skin produces vitamin D by combining ultraviolet rays from the sun with skin compounds 14. Name three substances found in perspiration. Water, salts, and some body wastes 15. What are the three abnormal colors used to describe the skin, and what might be the cause of each type? Erythema- reddish color; can be caused by burns or a congestion of blood in the vessels Jaundice- yellowish color; can indicate bile in the blood as a result of lover or gallbladder disease and disease that involves destruction of red blood cells Cyanosis- bluish color of the skin caused by insufficient oxygen; can be associated with heart, lungs, or circulatory diseases 16. Describe six eruptions that occur in the skin and one cause of each type. a. Macules (macular rash)flat spots on the skin such noitcaer cigrella na yltneuqerf dna srotcaf ynam yb desuac eb nac niks eht fo noitammalfnii -sititamreD .d recnac etacidni nac elom a fo gnihcti ro gnideelb ;sesuac lausu eht era noitaidar ro slacimehc gnitatirri ,nus eht ot ersopxe ;erutxet ro ,ezis epahs ,roloc ni segnahc taht suven ro elom a morf spoleved yltneugerf; amonalem tnangilam dna llec suomauqs, llec lasab edulcni smrof tnereffid -niks eht fo recnaC .c yrd dna naelc aera eht gnipeek dna noitacidem lagnufitna sedulcni smrof tnereffid -niks eht fo recnaC .c yrd dna naelc aera eht gnipeek dna noitacidem lagnufitna sedulcni smrof tnereffid -niks eht fo recnaC .c yrd dna naelc aera eht gnipeek dna noitacidem lagnufitna sedulcni smrof tnereffid -niks eht fo recnaC .c yrd dna naelc aera eht gnipeek dna noitacidem lagnufitna sedulcni smrof tnereffid -niks eht fo recnaC .c yrd dna naelc aera eht gnipeek dna noitacidem lagnufitna sedulcni smrof tnereffid -niks eht fo recnaC .c yrd dna naelc teloivartlu ro/dna, scitoibitna laro, tnemtnio A nimativ ro citoibitna, puekam yvaeh dna smaerc gnidiova, niks eht fo Gnisnaelc hguoroht, tneugerf sedulcni edulcni edulcni edulcni edulcni edutercecni edatercecni edatercecn Suoecabes eht Fo noitammmalfni -Siragluv enca .aseasid hcae rof Tnemtaert dna euac eht gnidulcni niks eht ni sneppah tahw .71 .Decder the earnararetmet dna niks eht epecse nac doolb eht mormeh sodeh sessen slessen sedib tcesni ro hcus EPAHS RULGERRI HTARELE yhcti -slaehw .f â&âsbacsc enca no nees esoht sa hcus scas dellif-sup -selutsuP .d xop nekcihc fo segats emos dna selpmip sa hcus saera desiar mrif -)hsar ralupop(selupaP . b cellekcerf , snoitcnuf , snagro , noitinifed -metsyS vratnemugetnI Å»Ä vgoloisvhP dna vmotanA namuH Å»Ä emoH decalper eb tonnac slian degamad si deblian eht fi ;ecafrus esned ,kciht a mrof ot rehtegot ylesolc dekcap sllec lailehtipe daed fo edam era sliaN . degamad ni Deblian eht fi Neppah yam tahw dna Fo era edam era slian slian tahw edircsed .12 Ydob eht tcetent spleh riah riah ;tfahs riah dna elcilllac Ebut Woorg taht toor sopah siston FO strap eht the .02 slacimehc, Dica ,Negortin Diugil, yicirtcele htiw devomer Eb tsum srehto tub ylsuoenattNops raopsid straw emos; niks detavele, davele, davele, davele, davele, davele , eacurrev. h eruc on ;lavomer elacs ro/dna, thgil teloivartlu, stemptio edemtio edemproc ro rat/laoc sedulcni Tnemtaert; seracs revlis htiw derevoce edulc Era Laro DNA lacipot htob scitoibitna ;yrd tpek dna retaw dna paos htiw snoisel eht gnihsaw sedulcni tnemtaert ;stsurc wolley fo noitamrof eht dna ,selutsup ,selcisev gnizoo ,amehtyre edulcni smotpmys ;smsinagro iccocolyhpats ro iccocotperts yb desuac yllausu noitcefni suoigatnoc ylhgih -ogitepmI .f esnopser yrotammalfni eht ecuder ot sdioretsocitroc dna tnatirri eht gnivomer sedulcni tnemtaert; gnilacs dna, stsurc, slessev, gnihcti amede, amehtyre edulcni smotpmys; amezce esuac nac sserts lanoitome, socitacidem paos, scitemsoc, teid; thatirri ro negrella na yb desuac redrosid niks yrotammalfni suoigatnocnon a - amezce esuac nac sserts lanoitome, socitacidem paos, scitemsoc, teid; thatirri ro negrella na yb desuac redrosid niks yrotammalfni suoigatnocnon a - amezce esuac nac sserts lanoitome, socitacidem paos, scitemsoc, teid; thatirri ro negrella yrotammalfni-itna osla ,esuac eht gnitanimile sedulcni tnemtaert ;gnilacs dna ,hsar ralupap-ralucam ,amede ,gnihcti ,amehtyre ,niks yrd edulcni smotpmys ;kao nosiop ro, camus nosiop ,yvi nosiop htiw tcatnoc yb desuac Sititi tatamred tcatnoc ;stoof niatreck , teenllop ,scitemsoc ,stnegrected Figure: The Integumentary System. Image Source: Wikipedia, InformedHealth.orgà and EncyclopæÂdia Britannica, Inc. Integumentary system definition The integumentary system is a system comprised of organs that are the outermost protective covering of the animal body, the skin, and its various derivatives. The integumentary system protects against many threats such as infection, desiccation, abrasion, chemical assault, and radiation damage. In humans, the primary organ of the integumentary system is the skin. Along with skin, several other glands and different sensory units like somatosensory receptors are also a part of this organ system. Organs of the Integumentary System is the skin. system is composed of skin and its appendages, subcutaneous tissue, deep fascia, mucocutaneous junctions, and Å breasts. Figure: Anatomy of the human skin. Image Source: Wikipedia. 1. Skin is the largest organ in our body. It covers up to 2m2 of the body surface area and contains numerous glands and sensory units. The skin is continuous but structurally different from the mucous membrane that lines the buccal cavity. Structure Structurally, the skin is a multicellular organ composed of two distinct layers of tissues; an outer epidermis developed from ectoderm, and (ii) an inner dermis developed from the mesoderm. environment. a. Epidermis The epidermis is a stratified epithelium and usually quite thin in comparison to the dermis. It is the outer layer of skin that has no blood vessels supply, and the cells in the squamous epithelium receive blood via diffusion. It is further distinguished into two regions characteristic epithelium and usually quite thin in comparison to the dermis. It is the outer layer of skin that has no blood vessels supply, and the cells in the squamous epithelium receive blood via diffusion. It is further distinguished into two regions characteristic epithelium and usually quite thin in comparison to the dermis. flattened (squamous) cells forms a horny, resistant covering or stratum corneum on the skin surface. Its cells accumulate a horny protein, called keratin, gradually die Eventually wear out in the form of SCURF or dandruff. The most internal or basal region of the epidermis includes a row of living columnaries, the Malpighian layer, or the germinativum stratum, which is separated from the underlying dermis by a porin membrane. Their clases actively divide and continually replace the worn cuts of the cornified layer. In addition, the epitiation also contains a few lulas as melanations that are responsible for pigmentation on the skin. As long as keratin is resistant and insolvent in the water, the keratinized stratum corneum protects against mechanical lesions, fanching and bacterial attacks, and loss of body moisture. Melanin in the epidermis is also responsible for the sum of vitamin D under the exposure of UV rays of sunlight. Lulas de langerhans found in the epidermis are part of the skin's immunological system and protect against foreign Anthagens. Sensory and receptors in the epidermis are responsible for the skin. B. Derm you dermis or Corium, which is the inner layer of the skin, it is comparatively thicker than the epidermis. It is composed of fibrous connective tissue and containing many blood capillaries, lymphostic vessels, muscle fibers, sense of meaning and eetical fibers, sense of meaning and eetical fibers that bring the skin back to its normal shape. Pigment or melanhania. Fat can accumulate as a reserve food in specialized cities, called addictions, in deeper parts of the dermis and subcuting tissue. Different ¢ wranges such as sweat and sebamous lying ¢ graves are also present in the dermis. Functions The blood vessels present in the dermis. Functions The blood vessels present in the dermis residues of their cells, as well as the base of the removal of nutrients residues of their cells. dermis also provides epidermis support and allows the basis for the centers. c. Hypodermia Hypodermia is the most internal and thickest layer of the skin, instead, the deepest subcuting tissue made of fat and connective tissue. This layer consists of cta squids such as fibroblasts, adipose squids, connective tissue, larger nerves and blood vessels and macrons. The purpose of the hypodermis is to attach the skin to the underlying bones and mothers, in addition to providing the other layers of the skin with blood vessels and nerves. Hypodermis is composed of loose connective tissue and elastin protein. The thickness of this layer different parts of our body and also significantly different in men and women. It is thicker on the shoulders and abdam in men while in women, it is thicker in the hips and thighs. Functions Hypodermis contains a large amount of fat that acts as energy storage. The thick layer protects external agents and the dermis to the internal body of the body. An appetite regulator called leptin also asynthesized by adipose squids in the hypodermis layer. Skin Appears The skin is relatively simple, but its derivatives are numerous and complex. These derivatives are called skin aspects and are formed by derived epidic squads. Image source: Wikimedia. one. Integral or epideal epideal epideal squid .often invades the dermis, but often invades the dermis, but often invades the dermis, but often invades the dermis. They can be unicellular or multicellular, tubular or alveolar and simple, compound or branched. They are coated by cubidal squid .often invades the dermis. azerutan aus s³Åpa sadaemon o£Ås etnemlareg e ranuloc oil©Åtipe Of the common epidens found in humans and other moms are: i. The sweat ¢ fishes of the sweating, or the sweat c fishes of the sweating, or the sweat c fishes of the sweating for the sweat c fishes of the sweat c fishes c glarses open directly on the superphyte of the skin, while the apost -crinne blankets open in the associated hair folacles. Ecrine gland can be found in the palms and soles. However, the apostrinal glans are found in the most restricted areas of the body, including armpit, anogenital registration, the outer ear canal and the air. Structure they are rolled tubes sketched deeply embedded in the dermis, with their long ducts opening in the surface of the skin. The sweat ¢ scands consist of a secretary unit called gloss and a long duct that takes sweat to target superfan. These ¢ scands are incorporated into the dermis or hypodermis, which are surrounded by adipose tissue. The secretory unit is surrounded by myoepithelial lulas that facilitate the excretion of sweat. The ciliary glarships in the shalls and banks of the paddbines are modified sweat swands. Function is an essential function of sweat gloon is in the regulation of body temperature. The evaporation of the aqueous transpiration also helps to cool and regulate body temperature in hot environments. In addition, a little downtime and some salts are eliminated dissolved in water in the sweat produced by these ¢ charges that help in the same fabric as capillaries. These glarses secrete an antimicrobial oily substance, sebum, in the hair folons. The sebamous glarses are present in all parts body, except the palms of the scale, face, armpits and groin. Structure most sebaceous glands sebaceous 1 DRAUG FO EHT ta yllaniif dna stcud regrall otni swolf neht hcihw Sllec raludnalg eht FO stcud Evitcepser otni deniard tsrif i noiterces Ladiobuc rehtie era Sllec eht dna , nulul egallal SAH DALRG SUONIMURC DELIOC EHT .ECAFRUS ladepe eht otno ro elcillof riah that otni ytni otni otcured hguorht scudurec eht scudurec eht scudurec ,2 DNA 000,1 morf gnignar rebunam eht htw lanac yrotiduan lantetxe eht fos noitces suonigetrac eht ni DETCOL ERA SNUH ni sdnalg suonimurec eht .xawa-rae snater snaterces snorc Ţhsiwolley eht ecudorp ,sdnalg suonimurec eht ni DETCOL ERA SNUH ni sdnalg suonimurec eht .xawa-rae snater snaterces snorc Å¢hsiwolley eht ecudorp ,sdnalg suonimurec eht .xawa-rae snater sn gnikcarc dna gnivrd stneverp osla mubes ehT .noitcefni gnitneverp ,tnega ladicignuf dna ladiciretcab a in stca dna niks eht FO ECAFRUS eht no nepo yeht .llec raludnalg erinne eht fos noititedegeded eht yb explag hcihw riah retemaid-eggral that .riah the detaicossa eht Fo Retemaid eht htw Ylesrevni Seirav dnalg eht Fo ezis ezis dna , Selcillof riah ot dehcatta The characteristic mammastic ¢ scands of the moms, with composite tubular bloodletters that produce milk during the lactation period to feed young people. These glars are present in all rudimentary and functional moms in men. In human beings, these glarses develop in puberty by the hormization of growth and estrogen hormone; However, in other primates, breast development usually occurs after pregnancy. Image source: Encyclopandia Britannica, Inc. Structure the ¢ mammal £ o ¢ structurally, structurally, in the shape of a gap, composed of glandular tissue, fibrous tissue, greasy tissue and blood supply. An adult female breast consists of about 20 wool of glandular fabric, where each wolf is composed of vans that radiate around the nipple. Each of these bullies is composed of a group of alvanos that end in small ducts, which collectively form large excrete ducts called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs (also called lactafers. These ducts, supported by the dense connective tissues, converge to the center of the breasts to form reservoirs. the baby through breastfeeding. In addition to its main function of providing nutrients for children, breasts also social and sexual prominence. The bair and hair of the hair is characteristic of the moms. They can cover the whole body or may be reduced to sparkled patches or hair. The hair is the cornified epidic products of the integument. All hair in the surface of the skin is periodically lost by the seedling and is replaced by new hair sets. Image Source: Blausen.com Staff (2014). ¢ â Â € Gallery Mother © Tip by Blausen Medical 2014" Each hair originates from the bottom of a tubular invagination, or capillary follicle, of the epidermis layer in the dermis. A set of squads called papilla or haircuts are present at the base of the fola. The hair is formed by the division of the wires of the wool and they are keratinized when the old squids are pushed up, far from their source of nutrition. The part of the hair above the skin is called the axis while the rest is called root. Normally, the hair axis consists of three layers: an outer cuticle composed of overlapping microscal scales, the mother -dio ciontex containing air spaces in larger hair. Functions The main hair functions seem to serve for the isolation of the body and how to be tantile sensable (eg vibrase in rabbits). Hair also operates in the regulation of body temperature and facilitation of evaporation of the exudue. Hair and Hair Video Animation C. Human nails are equivalent to the claws, horns and animal hooves. Derivatives of the same squads as the epidermis and hair is themselves and harsh to protect the tips from the fingers. Image source: informedhealth.org. Structuring nails of nails consists of the nail consists of the nail consists of the nail consists of the nail bed epitiation, which ensures firm adhesion of the nail bed dermis. The root of the nail is incorporated into the skin and covered by the cuticle. which forms the hemisfan stupid area called lunula. The nail plate is the exposed part that grew from the nail bed. Functions The main nail function is to protect the fingertips and the surrounding soft tissues against lesions. Nails also exert a counterpress that helps in precise movement and touch sensitivity. nail nail nailsFrom the development of the skin color intensional system (skin pigmentation) the skin color in humans is determined by different pigments, melanin, carotene and hemoglobin. Among all pigments, melanin is the most crucial pigments such as melanin, carotene and hemoglobin. exists in two forms; The Eumelanine that gives the color black and brown and pheomelanine, which gives red colon. In general, there are more melanã. Skin color variations between racial groups and possibly between racial groups and possible group production by melanã. Melanã. These are dendratic or branched squids found in the epideal junction of the skin and mucous membranes. These diminish melanations that remain in the dermis in the human being become gradually inactive. In the exhibition of the UV radiation of the sun, the keraties are stimulated to release guantic products that, in turn, stimulate melanã. The melanin produced in melanations is transferred to the keraties through an organela called trosinase that catalyzes the sample of tyrosine melanin. Melanin watery results in the darkening of the skin. After the sun exposures, it takes about ten days to the sample of melanin to the peak. Likewise, as the new skin is formed, epidic epidal squads move out to become the crane stratum, and the melanin grain contained inside They are transported transported and appear in the stratum corneum not as granules any longer but as fine irregular pigmented particles. Hair Growth Hair is a component of the integumentary system and extends downward into the dermal layer where it sits in the hair follicle. Similar to the skin, hair forms by rapid division and differentiation of stem cells which form keratinocytes that migrate, flatten, and die, forming keratinized cells. The final hair product that is exposed on the surface of the skin will be composed entirely of keratin. The growth of the hair follicle is cyclical. This cycle can be divided into three phases: A Aanagen(growth), A AcatagenA A(transition), and A AtelogenA A(transit follicle takes on its onion-like shape and works to produce the hair fiber. About 85¢ÂÂ90% of all scalp hairs are in anagen. The synthesis of the hair bulb decides the curvature of the final hair structure. By the end of anagen, the mitotic activity of the matrix cells is reduced, and the follicle enters a highly controlled involuntary phase known as catagen. Catagen lasts approximately two weeks in humans, and during this phase, the proximal part of the hair shaft becomes keratinized and forms the club hair. In contrast, the distal portion of the follicle loses 1/6th of its diameter by apoptosis. The telogen stage is the duration between the completion of catagen and the onset of the next anagen phase. Telogen stage lasts for 2¢ÃÂ3 months and approximately 10¢ÃÂ15% of all hairs in the scalp are in this stage. In the telogen stage lasts for 2¢ÃÂ3 months and approximately 10¢ÃÂ15% of all hairs in the scalp are in this stage. the dermal papilla stimulates the hair germ to show enhanced proliferative and transcriptional activity, leading to the initiation of anagen. Nail growth is not dependent on the hormone. The middle finger nail of the dominant hand grows faster with approximately 0.1 mm/day, while the large nail grows only 0.03-0.05 mm/day. The size and shape of the terminal phalange bone are responsible. The nail is a keratin plate of cultivation continuously and throughout life that is biochemically identical to the hair shaft. Nail growth occurs by extrusion, which means new growing cells are added to the base while the old cells are pushed out to the tips of the fingers. Keratin in ancient cells become dead and only hardened structures. Some of the living cells are still present in the nail at the base in the form of the White Moon Lunula. Cell growth occurs mainly in the germinative matrix on the nail fold. With the growth of the nail fold. With the growth of the nail, it is forced to enter the concave structure. Functions of the tegument system The tegumentary vertebrate system is genuinely a "Jack of Jack-of-All-TRADES", as it plays several essential functions, some of which: protection The tegument or skin separates the animal from its external environment. The inflammatory cells in the skin provide defense against intruder antigens. The melanin pigment protects against harmful ultraviolet rays in sunlight. The lipid and oil-like secretion of different glands acts as another barrier against chemicals and also prevents heat loss. Thermoregulation The average body temperature is maintained by the sweat glands andhair on the skin of the mammals. evaporation of agueous sweating of the samizne ed of A§Ãamrof alep adatilicaf ©Ã o£Â§Âanimessid auS .elep an etroc mu ed s©Âvarta martne euq snegnirfrep muidirtsolC e senegoyp succocotpertS odniulcni ,sacib³Âreana sair©Âtcab samugla rop adasuac adahlapse o£Â§Âcefni amu ©Â etilulec etilulec A .sodimirpussonumi soudÂvidni e sa§Ânairc me mumoc ©Â e oterid otatnoc rop odahlapse A .acob ad e ziran od roder oa etnemlareg ,siaicifrepus saluts^oÃp moc a§ÃemoC .suerua succocolyhpatS rop adasuac etnemumoc asoiccefni etnematla anairetcab o£Ã§Ãcefni seratnemuget ametsis od sa§Ãneod sA .oir^oÃcrem omoc socix³Ãt socimÃug sotudorp snugla e sacimr©Ãdsnart sahcnam me omuf od o£Ã§Ãassec à aduja omoc anitocin e asuaponem a etnarud lanomroh of A§Aisoper ed aiparet, sotnemacidem snugla meulcni eug saicn¢Atsbus samugla revrosba ed zapac ©A of A§Aisoper ed aiparet ,sotnemacidem snugla meulcni eug saicn¢Atsbus samugla revrosba ed zapac ©A of A§Aisoper ed aiparet ,sotnemacidem snugla meulcni eug saicn¢Atsbus samugla revrosba ed zapac ©A of A§Aisoper ed aiparet ,sotnemacidem snugla meulcni eug saicn¢Atsbus samugla revrosba ed zapac ©A of A§Aisoper ed aiparet ,sotnemacidem snugla meulcni eug saicn¢Atsbus samugla revrosba ed zapac an siairosnes serotpecer metsixE aen¢Ãtuc o£Ã§ÃasneS .otafsof e oicl¡Ãc moc etnematnuj ,osso od o£Ã§Ãnetunam e o adujA break the connective tissue that usually usually moc arecl^oA amu es-odnanrot, arbeuq ossi edrat siam e ,etnahlirb olud³An mu omoc ecerapa recn¢Ãc O .o§Ãocsep uo a§Ãebac a etnemlareg ,los oa sotsopxe siacol me arroco euq lev;Ãvorp siam ,otnatrop , @A e ralos zul A e ralos zul A e ralos zul A e ralos zul a siane e ,etnahlirb olud³An mu omoc ecerapa recn¢Ãc O .o§Ãocsep uo a§Ãebac a etnemlareg ,los oa sotsopxe siacol me arroco euq lev;Ãvorp siam ,otnatrop , @A e ralos zul A e ralos zul a e rado zu etnahlirb olud³An mu omoc ecerapa recn¢Ãc O .o§Ãocsep uo a§Ãebac a etnemlareg ,los oa sotsopxe siacol me arroco euq lev;Ãvorp siam ,otnatrop , @A e ralos zul a e rado zu e rado zu e rado zu e rado zu ed mumoc siam e ongilam sonem opit o ©Ã sanasab salul©Ãc ed amonicraC siasab salul©Ãc ed amonicraC songilam seromuT. alutsof me(saeciÃbes saludo¢Ãlg sa odnavel ,sadatcefni , adiuges me ,e sadaeuqolb manrot es)seralipac solucÃl me(saeciÃbes saludo¢Ãlg sa odnavel ,sadatcefni , adiuges me ,e sadaeuqolb manrot es)seralipac solucÃl me(saeciÃbes saludo¢Ãlg sa odnavel ,sadatcefni , adiuges me ,e sadaeuqolb manrot es)seralipac solucÃl me(saeciÃbes saludo¢Ãlg sa odnavel ,sadatcefni , adiuges me ,e sadaeuqolb manrot es)seralipac solucÃl me(saeciÃbes saludo¢Ãlg sa odnavel ,sadatcefni , adiuges me ,e sadaeuqolb manrot es)seralipac solucÃl me(saeciÃbes saludo¢Ãlg sa odnavel ,sadatcefni , adiuges me ,e sada sievÃn rop odasuac res arap odasnep @Ã e setnecseloda sohcam me mumoc siam @Ã encA siragluv encA .of a chor e lep a ,sacin Ârc sequâs a chor e lep a ,sacin Ârc sequâs a chor e lep a ,sacin A chor e sosores sodiulf ed o£A§Aaduxe e o§Aahcni, o£Adihlemrev rop adaziretcarac ©A aduga etitamred A .acin´Arc uo aduga res edop euq mumoc elep ad air³Atamalfni sa§AneoD .etnemavitcepser ,latineg sepreh e daira aduga etitamred A .acin´Arc uo aduga res edop euq mumoc elep ad air³Atamalfni sa§AneoD .etnemavitcepser ,latineg sepreh e daira aduga etitamreD (amezcE sair aduga etitamreD (amezcE sair aduga etitamreD (amezcE sair aduga etitamreD (aduga etitamreD (aduga

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