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| Campestre sj_blanco_bajas (2) | **TERM EVALUATION** | **Code** | GS-FR-084 D |
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| **Designed:** Edith Ceferino | **Revised:** Judith Foero U. | **Approved:** Edith Ceferino |
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DEPARTMENT: Science SUBJECT: Science **TERM II**  STUDENT’S NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ GRADE: 4 A B C

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| IM1 | IM2 | CT1 | CT2 | CR1 | CR2 | MC1 | MC2 |
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**\*\*\*\*Read the following information and complete the activities on a separate sheet of recycled paper.**

**The Integumentary System: The Skin**

The human body’s largest organ is the skin. Skin is the outer covering of humans and of all other animals with a backbone. It protects the body from germs, injuries, and extremes of hot or cold. The average skins weighs about 4.5 kg and covers a surface area of about 1.8 m². Some of the main components of the skin system are:

**Hair:** Hair is an accessory organ of the skin made of columns of tightly packed dead keratinocytes found in most regions of the body. Hair helps to protect the body from UV radiation by preventing sunlight from striking the skin. Hair also insulates the body by trapping warm air around the skin.

**Nails:** Nails are accessory organs of the skin made of sheets of hardened keratinocytes and found on the distal ends of the fingers and toes. [Fingernails](http://www.innerbody.com/anatomy/integumentary/arm-hand/fingernails) and [toenails](http://www.innerbody.com/anatomy/integumentary/leg-foot/toenails) reinforce and protect the end of the digits and are used for scraping and manipulating small objects.

**Sudoriferous Glands**: Sudoriferous glands are exocrine glands found in the dermis of the skin and commonly known as sweat glands. Sweat is delivered via a duct to the surface of the skin and is used to lower the body’s temperature through evaporative cooling.

**Sebaceous Glands**: Sebaceous glands are exocrine glands found in the dermis of the skin that produce an oily secretion known as sebum. Sebum acts to waterproof and increase the elasticity of the skin. Sebum also lubricates and protects the cuticles of hairs as they pass through the follicles to the exterior of the body.

**Ceruminous Glands**: Ceruminous glands are special exocrine glands found only in the dermis of the ear canals. Cerumen protects the ears by trapping foreign material such as dust and airborne pathogens that enter the [ear canal](http://www.innerbody.com/image_nerv13/nerv159-new.html).

Human skin is an organ. Human skin has three layers. The epidermis is the thin outer layer. Dead cells of the epidermis constantly flake off as new ones form. Cells in the epidermis produce a substance called melanin. The interaction with the endocrine system produces melanin in the pineal gland and this interaction creates different skin colors.

The middle skin layer is called the dermis and here you will find components of the nervous and circulatory system. It is thicker than the epidermis, which it supports and strengthens the skin. The dermis has fibers that make the skin tough and stretchable. The dermis also contains blood vessels and nerves. Nerves are fibers that send information picked up by the senses to the brain.

The third, deepest layer of the skin is made up mostly of fat. This fat supplies nutrients to the other two layers specifically fat that is stored from the digestion process. It also cushions the body and protects the body from the cold.

Eczema or dermatitis is a superficial inflammation of the skin. It can result from an allergic reaction to poison ivy, dyes, or medical drugs. Such irritants as acids, solvents, or excessive use of soap or detergents also can provoke an outbreak, itchy sensation, redness, or uncomfortable bumps on the skin. Nearly all types of eczema can be relieved by the application of corticosteroid creams. Skin damage caused by reaction to the ultraviolet, or UV, radiation in sunlight is known as sunburn. When the skin is overexposed to the sun, ultraviolet radiation from the sun destroys the outer layers of the skin. People feel heat, hypersensitivity, and an uncomfortable sensation. Tiny blood vessels beneath the skin are also damaged. Sunburn can best be prevented by avoiding overexposure to the sun. Sunscreens can also be used to help prevent sunburn. Sunburn can be treated with deep hydration of the skin using special lotions in the affected area.

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| IM1 & IM2: Based on the reading about the integumentary system, organize the information into the following categories on a separate sheet of paper using your own words: Components, Functions, Interactions, and Malfunctions |
| CT2: Pick two systems. Use a Venn Diagram to compare and contrast the two systems by explaining similarities and differences using examples about:  \_\_\_\_components  \_\_\_\_functions  \_\_\_\_interactions  \_\_\_\_malfunctions |
| CT1, CR1, and CR2: Answer the following questions for both patients in complete sentences. Verify grammar and spelling.     1. Give each patient a diagnosis. And explain the diagnosis to each of your patients using an analogy. 2. Tell the patient what systems are being affected and why. Use analogies to help your patient understand better. 3. Explain to each patient possible solutions to help them. Provide a clear treatment. 4. Explain to each patient if their problem is extremely serious or not too serious. 5. Duncan comes to your office 7 days later. Duncan’s condition is worse. What questions will you ask Duncan to help him understand what is happening to his systems? 6. Peter returned to your office 3 days later. Peter is feeling much better. What questions will you ask him to see if his systems are working properly?   Patient A: “My name is Duncan and I am 14 years old. Doctor, I am here because I don’t feel normal and I have a lot of pain in my body. I am always tired. I can’t breathe very well after I walk up the stairs at home. My knees hurt and my lower back does, too. Last week, I checked my blood pressure and it was 140/90. I try to eat vegetables, but I prefer to eat pizza. It has cheese and carbohydrates, but I don’t like anything green. Can you help feel better, doctor? “  Patient B: “Hello Doctor. My names is Peter and I am 12 years old. Yesterday, my body was burning and I felt so hot, then cold, and then hot again. Today, I feel really bad. My eyes wont’ stop watering. When I eat anything, my throat hurts. I can’t eat or drink anything today because it hurts so much. I want to scratch the inside of my neck and my ears. Doctor, it is so gross all the things that are coming out of my nose. The mucus is green and yellow. I need to go to school tomorrow. I have a math evaluation. Help me, please doctor.” |
| MC1: After reading each statement, write **T**rue or **F**alse about yourself and your habits. Give one example for each statement on a separate sheet of paper.   1. \_\_\_I stop and ask myself questions when I don’t understand something in science. 2. \_\_\_I wait for my grades from the teacher to improve in science. 3. \_\_\_I know what my grades are before the teacher gives me back my evaluations in science. 4. \_\_\_I understand the science indicators. 5. \_\_\_I know how to get an Excellent in each indicator in Science. 6. \_\_\_I don’t study at home. 7. \_\_\_I study only for exams. 8. \_\_\_I investigate more information without the teacher telling me to do so because I want to learn more. 9. \_\_\_My notebook is organized because I know it is learning and studying tool. 10. \_\_\_I used my agenda or planner to organize myself.   MC2: You only 5 days to collect all this information and prepare a presentation about the Female and Male Reproductive Systems. Your presentation will include components, functions, interactions and malfunctions of the Reproductive System.   * What steps will you take? * What will you need? What kind of presentation will you prepare? * How will you check if your information is correct? * How will you know if you are learning? * Will you put the information in your own words when you take notes? Explain why. * What will be easy for you? Why? What will be difficult for you? Why?   <http://www.innerbody.com/anatomy/integumentary#full-description> <http://school.eb.com/levels/middle/article/277082> |

Study Guide Science Term II (for the weebly page)

* Review indicator MC1 and be able to give examples of what you did or didn’t do during the term
* Review indicator MC2 and be able to write a plan with the steps for a future presentation
* Review indicators CT1, CR1, and CR2. Be able to provide diagnoses, analogies, and treatments for two different patients based on symptoms and scenarios
* Review indicator CT2 and be able to compare two different human body system of your choice and give examples of the comparisons and differences about components, functions, interactions, and malfunctions
* Review indicators IM1 and IM2. Be able to extract information from a reading about the integumentary system and organize the information into components, functions, interactions, and malfunctions