NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SUBJECT: Biology

DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CLASS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SEMESTER: \_\_\_\_\_\_\_\_\_\_\_\_

ACTIVITY: WORKSHOP. DATA GATHERING Parent signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Statement of Inquiry** | **Global Context:** Identities and relationships |
| Healthy habits help to maintain systems in balance as we understand how energy works in our body. |
| Exploration to Develop:* Physical, psychological and social development
* Transitions
* Health and well-being
* Lifestyle choices
 |
| **Approaches to learning** |
| • Take effective notes in class• Reading, writing and using language to gather and communicate information•Managing time and tasks effectively• Use appropriate forms of writing for different purposes and audiences• Create plans to prepare for summative assessments (examinations and performances)• Gather and organize relevant information to formulate an argument•Utilizing skills and knowledge in multiple contexts* Reading, writing and using language to gather and communicate information

• Read critically and for comprehension• Use and interpret a range of discipline-specific terms and symbols• Structure information in summaries, essays and reports |
| **Activity: Data collecting and reading comprehension workshop** |

**Terms of instruction:**

**Recall:** Remember or recognize from prior learning experiences

**Apply:** Use knowledge and understanding in response to a given situation or real circumstances

**State:** Give a specific name, value or other brief answer without explanation or calculation

**Outline:** Give a brief account

**Interpret:** Use knowledge and understanding to recognize trends and draw conclusions from given information

**Describe:** Give a detailed account or picture of a situation, event, pattern or process

**Analyse:** Break down in order to bring out the essential elements or structure. To identify parts and relationships, and to interpret information to reach conclusions.

**Summarize:** Abstract a general theme or major point(s)

**Discuss:** Offer a considered and balanced review that includes a range of arguments, factors or hypotheses. Opinions or conclusions should be presented clearly and supported by appropriate evidence

**Calculate** Obtain a numerical answer showing the relevant stages in the working.

**Draw** Represent by means of a labelled, accurate diagram or graph, using a pencil. A ruler (straight edge) should be used for straight lines.

**Estimate** Obtain an approximate value for an unknown quantity.

**Label** Add title, labels or brief explanation(s) to a diagram or graph.

**SKILLS**: 1. The student gathers information from different sources. 2. The student organizes data and information in charts and graphics. 3. The student states descriptions and explanations from her/his observations.

**THROUGHLINE: WHY IS IT IMPORTANT TO CHECK THE NUTRITION FACTS CHART OF THE FOOD WE CONSUME?**

**BACKGROUND INFORMATION**

In order to stay **alive** and **healthy**, our body demands a supply of **nutrients** that play a role in our homeostasis. We are using **energy** all time, so that is why we need **carbohydrates** such as sugar and starch. We need to **build** **up** cell membranes, and substances such as hormones and steroids. For this we get **lipids** such as fats and oils. We use **proteins** to **build up** and to **repair** tissues and DNA. We need **minerals** to help many **reactions** and cell processes such as neurotransmission, absorption, cell respiration, etc. In other words, to **keep** our metabolism. Finally, we need **vitamins** to maintain our body **healthy**. **Water** is not a nutrient by itself, but it is very important as a **universal** **solvent** to help carry on different **chemical** **reactions**. **Fiber** is not digested, but it helps to **sweep** **away** the intestinal contents.

Because we need to get these nutrients, we need to be aware on the **proportions** of each one, because any **deficiency** or any **excess** can cause a serious disorder that can affect our welfare.

We also use to think that **calories** are some kind of bad substance that we must avoid and reduce. Nothing furthest from the truth. **Calories** are the **units of measurement of energy**, so we must be aware on the amount of energy we need during a day, so in that way we can know the number of calories we need in our diet. That is why it is important to **consult** a **nutritionist** in order to follow a **healthy diet**, because according to our age, genetics and habits, it is not so possible to standardize a diet for everybody. A **gram** of **carbohydrates** and **proteins** contain both **4** **calories**, and a **gram** of **fat** contains **9 calories**. The average calorie intake is about 2000 to 2500 C per day.

The **excess** of **carbohydrates** and **fats** lead to **obesity** and **circulatory diseases**. The **excess** of **proteins** can cause **kidney disorders**, the **excess** of **minerals** can cause **stones** in some glands and organs, and the **excess** of **vitamins** can cause **malfunctions** in some organs, can be toxic, cause uncomfortable reactions such as diarrhea, or allergies. The **excess** of **water** can cause **hyperhidrosis** that leads to the **dissolution of electrolytes** and therefore the **loss** of them by sweat and urination generating malfunctions in the electricity of our nervous system. The **excess** of **fiber** causes **damage** in the **intestines**, so nutrients cannot be properly absorbed, and other diseases can be produced because of irritation.

In the other hand, the **lack** of **carbohydrates** can cause **laziness** and **weakness** because of the low levels of energy. The **lack** of **fats** can cause **malfunctions** in the **nervous** **system**, irritation and damage in some tissues. The **lack** of **proteins** can cause **weakness**, **damage** in tissues and **growth** problems. The **lack** of **minerals** can cause **failure** in the **metabolism**, and the **lack** of **vitamins** can cause **disease** and **weakness**. The **lack** of **water** causes **dehydration**, so many body functions won’t work properly. The **lack** of **fiber** causes **constipation** which leads to pain and reabsorption of wastes in the long term.

**1. ACCORDING TO THE READING, WRITE AN ACCURATE ANSWER TO THE THROUGHLINE.**

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**PROCEDURE:**

1. **Watch** the **video** “How to Read Nutrition Facts | Food Labels Made Easy” by The Healthy Nerd <https://www.youtube.com/watch?v=Orj7p3KQcyQ>

2. **Observe** the following **nutrition facts charts**.

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| **SPAGHETTI** | **DELACTOSED MILK** | **PEANUT BUTTER COOKIES** |
| Resultado de imagen para informacion nutricional de spaghetti | Resultado de imagen para informacion nutricional de la leche deslactosada | Resultado de imagen para peanut butter nutrition facts |

1. **Which** information is **provided** by the **nutrition** **chart**? **Why** is it important?

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2. **Use** the information provided to **complete** a table. Measurements are given in **grams** and **percentage** per **serving**.

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| **FOOD** | **PROTEINS** | **CARBOHYDRATES** | **FATS** |
| **SPAGHETTI** |  |  |  |
| **DELACTOSED MILK** |  |  |  |
| **PEANUT BUTTER** |  |  |  |

3. **Use** the information of the tables to **plot** a **bar** **graph**. Don’t forget to write a title for the graph, and to name each variable.

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4. **Which** one contains the **highest** amount of **fat**? **which** one is a good **source** of **proteins**? **Which** one contains the **lowest** amount of **carbohydrates**?

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5. People usually say, “you should avoid eating calories.” **Explain** the meaning of this sentence and if it is accurate to say that.

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6. **Complete** the table with the main function of each nutrient.

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| **NUTRIENT** | **FUNCTION** |
| **CARBOHYDRATES** |  |
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| **PROTEINS** |  |
|  |
| **VITAMINS** |  |
|  |
| **LIPIDS (FATS)** |  |
|  |
| **MINERALS** |  |
|  |
| **WATER** |  |
|  |
| **FIBER** |  |
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7. **Explain** the sentence “everything in excess is bad” when talking about food.

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8. **Redpapaz** is a Colombian organization of **parents** that share and make **projects** in order to **improve** the conditions of **children** in **schools** and within their **families**. They are asking food industry to include a **label** or a **tag** in front of **processed** **food**, especially these offered to kids for their snacks, such as chips, packed juices and sodas, and crackers, with the contents of sodium, processed sugars, saturated fats and other ingredients that are said to cause health problems such as obesity, diabetes, and even, cancer. **Which** is your **opinion** about this **petition**? **Explain** your answer.

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