

**Thematic Interdisciplinary Lesson Unit**

Name of the student

Instructor

Instructor

Institutional affiliation

Date

# Introduction

Interdisciplinary or thematic learning is beneficial to the learners in that it challenges them to discover the connection between different disciplines and how they can be used to support each other. It encourages critical thinking skills empowering learners to have a sense of the world around them through different perspectives. It is also a way of allowing learners to develop a problem-solving mentality, helping them create problem solving strategies that fit different thematic areas in studies and their life.

In this lesson, the student will use their prior knowledge and critical thinking to determine the types of food that they eat in the society, in school and at their homes. They will determine the nutritional values of each of the foods and compare the foods to each other based on identified nutritional values. Learners will then be required to document their findings through creating a table and essay on the different foods using superlative and comparative analysis. They are to do so in the English language as a way of helping develop their proficiency in the language.

## MODULE 3

### Part 1 Template

| **Objectives/Outcomes: Teaching comparatives and superlatives** | **Objectives/Outcomes: Teaching nutrition and how different foods affect health of the body** |
| --- | --- |
| ***Objectives*:** To use English to describe nouns by comparing them to other nouns  To recognize and recall various adjectives and use the same to create a degree of comparison  To use rules of using adjectives and apply same to explain comparison  To explain and describe adjectives  ***Outcomes***: Learners will manage to describe different nouns based on the theme of the lesson  Learners will recall and recognize adjectives | ***Objectives*:** To understand nutrition and foods that are beneficial to the body  To understand different foods, their classifications and nutritional values  To know healthy and unhealthy foods  ***Outcomes***: Learners can differentiate nutrients in different types of food  Learners can demonstrate an understanding on how nutrition affects the body  Learners will apply nutritional knowledge to their personal diets |
| **Grade Level of Students Served:**  3rd to 5th grade | **Language Level of Students Served:**  Intermediate |
| **Unit Theme:**  Nutrition based on different foods around us | |

## MODULE 3

### Part 2 Template

| **Brainstorm Associations** | | |
| --- | --- | --- |
| **Content Area 1:**  ESL | **Theme:**  Comparing nutritional value of different foods | **Content Area 2:**  Science |
| **Ideas:**  Writing down ideas on a piece of paper  Having group discussions related to the thematic area  Exchange/compare writing  Providing learners with informational texts related to nutrition  Right choice of words such as chemical reactions, cell anatomy etc | **Ideas:**  Story impressions  First hand investigations that involve going through evidence  K-W-L-H + (Know, Want to Learn, Learned, and How to Find Out More)  (Tyler et al., 2017) |

## MODULE 3

### Part 3 Template

| **Guiding Questions** |
| --- |
| **1.**  What role does proper nutrition play in the body and why should we study nutrition? |
| **2.**  Are processed foods healthier than organic foods? |
| **3.**  Do fast food restaurants contribute to the nutrition problem in the country? |
| **4.**  What are the healthiest foods that you consume in a day? |

# Bloom’s Taxonomy of Learning Domains

Bloom’s Taxonomy comes in handy when planning and designing training, educational and learning processes. The taxonomy was developed under the guidance of Dr Benjamin Bloom who believed that it was necessary to promote higher forms of scholarly thinking. The psychologist believed in better ways of thinking such as evaluating concepts, procedures and processes other than following a traditional approach that was only based on elements of remembering such as cramming facts, without understanding them (Bloom et al., 1956).

Bloom’s taxonomy focuses on major domains of learning such as the cognitive domain, affective and the psychomotor domains. A lot of focus is placed on the cognitive domain and it was further subdivided into various categories such as knowledge; comprehension; application; analysis; synthesis and evaluation. The categories follow the stated order where the first one has to take place before the other.

The categories are different in the revised Bloom’s Taxonomy. The prominent changes evident in the revised version include a change in the names of the categories from nouns to verbs. The new version also has a processes and levels of knowledge matrix and a rearranged order of how categories follow each other. The new domain categories are: remembering; understanding; applying; analyzing; evaluating and creating. The revised taxonomy therefore puts an emphasis on student learning outcomes by use of refined terms. The revised taxonomy changes could be grouped into three categories: emphasis, terminology and structure. The revised taxonomy therefore provides students with clearer learning goals compared to the older version (Anderson et al., 2001).

## MODULE 3

### Part 4 Template

| **Week 1** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Remembering** | **Understanding** | **Applying** | **Analyzing** | **Evaluating** | **Creating** |
| Defines vegetables and fatty foods | Distinguishes the difference between fatty foods and vegetables | Predicts the body changes when one constantly takes unhealthy fatty foods | Compares a healthy person and obese person based on their BMI and also what they eat | Criticizes the definition and nutritional arguments of classmate | Designs a flier for fatty unhealthy foods and healthy fruits and vegetables |
| Labels all ingredients needed to make a healthy meal | Estimates the quantities of each ingredient based on recommended nutritional intake | Prepares a salad based on nutritional value and calories needed | Compares their salad to other students’ recipes | Justifies the use of each ingredient based on nutritional value | Summarizes challenges and lessons learned when preparing a nutritious meal |
| Names places where we get our food | Explains how the places grow their food | Produces picture evidence to show the areas we get/grow food | Distinguishes between organic food growing and the use of GMO methodologies to grow food | Defends take on the benefits of organic foods compared to GMO in nutrition | Summarizes case files of negative impacts of GMO on the health and nutrition of individuals |

| **Week 2** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Remembering** | **Understanding** | **Applying** | **Analyzing** | **Evaluating** | **Creating** |
| Recognizes different foods from different parts of the world | Comprehends how different food habits across the world affects population’s health | Applies gained knowledge to create a nutritious international diet | Breaks down the components of a foreign diet stating whether it is nutritious | Justifies how their meals are superior in nutrition to the foreign diets identified | Generates a nutritional guide containing foreign and local healthy foods |
| Selects items to include in the class garden | Give example of how the decided items once harvested will contribute to the health of consumer | Modifies the plant management practices to ensure that they are organic in nature | Breaks down the process from planting to harvesting (plant life cycle) | Summarizes nutritional benefits of plant grown in the class garden | Writes an essay on nutritious plants and nutritional benefits of each |
| Matches different healthy and unhealthy foods using flash cards | Generalizes the health benefits of eating nutritious foods by creating an analogy |  |  |  | Plans to create a new nutritional game to help demonstrate understanding of concepts |

## Cooperative learning

It is a method that is used in coaching or learning where the learners work in small groups, usually face to face settings. The learners in cooperative learning work under the guidance of an instructor who follows through to ensure that they are on the right track. Cooperative learning has five basic elements: individual accountability; positive intercedence; face to face interactions; social skills and group procession (Veldman & Kostons, 2019).

One of the activities that students will complete in cooperative learning groups is creating and developing the class garden. The activity will involve each student planting a food plant provided by the instructor such as a tomato. The students then have to work together during lesson hours and free time to care for the garden and plant until their plants mature. It will create a sense of personal responsibility, interactions and social skills that are critical to understanding concepts of nutrition and also learning the art of communication in the English language.

## Incorporating technology

Incorporating technology in learning about science and promoting the use of the English language creates adaptability and flexibility. For instance, it exposes the learners to digital tools making them adaptable to numerous tools used by instructors. Incorporating technology also empowers the instructor as they can create interactive classes.

An example of incorporating technology is the use of the fishbowls in the learning environment. In an activity such as preparing a healthy meal, some students would be in the inner circle of the fishbowl while others in the outer circle (Han & Hamilton, 2021). Those in the inner circle would prepare the salad stating the nutritional value of each ingredient and how it compares to the other using superlative and comparative language. The outer circle would observe the processes keenly ensuring that the inner circle uses only nutritious products to create their healthy salad.

## Language experience

Language experience is the way the instructor promotes writing and reading based on personal experiences of the learners and also on oral language. It helps create awareness among the learners as they can identify connections between the words or images used.

Example of a learning activity from the table is the teacher prompting the students into conversation asking them to describe and write down the nutritional meals they take in a typical day. In the activities the student will write down or present their daily meals and state whether they are nutritious.

# Conclusion

Interdisciplinary learning is where students combine learning from more than one discipline to create new ways of thinking and solving problems. The use of science to create an understanding of English as identified in the lesson unit above promotes creative thinking amongst the students that try to analyze nutrition facts based on noun comparison. For instance, they understand foods that are healthier to the body and those comparing them with the less healthy junk foods. It is critical to ensure that an appropriate integration strategy is used in interdisciplinary lessons as it is the only way to create cohesion between the thematic area of discussion within two completely different disciplines.

Bloom’s taxonomy allows instructors to inform their teaching instructions by the use of action verbs. It is also a way through which teachers can prompt critical and deeper thinking related to the lesson themes and also a way to differentiate lessons. This paper thus provides an example of an interdisciplinary unit that can be used as a benchmark to understand the impact of such units on students' learning, especially for the ESL students.

# References

Anderson, L.W., Krathwohl, D.R., Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., Wittrock, M.C. (2001). A Taxonomy for Learning, Teaching, and Assessing: A revision of Bloom's Taxonomy of Educational Objectives. New York: Pearson, Allyn & Bacon.

Bloom, B.S. (Ed.). Engelhart, M.D., Furst, E.J., Hill, W.H., Krathwohl, D.R. (1956). Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain. New York: David McKay Co Inc.

Han, M., & Hamilton, E. R. (2021). Promoting engagement and learning: using the fishbowl strategy in online and hybrid college courses. *College Teaching*, 1-9. <https://doi.org/10.1080/87567555.2021.2024127>

Tyler, B., Britton, T., Iceland, A., Nguyen, K., Hipps, J., & Schneider, S. (2017). The Synergy of Science and English Language Arts: Means and Mutual Benefits of Integration. Evaluation Report# 2. WestEd. <https://files.eric.ed.gov/fulltext/ED596729.pdf>

Veldman, M. A., & Kostons, D. (2019). Cooperative and collaborative learning: considering four dimensions of learning in groups. Pedagogische Studien, 96(2), 76-81. <http://onderwijsdatabank.s3.amazonaws.com/downloads/downloadcooperatiefencollaboratiefleren.pdf>