

05 How the Body Uses Food

Content Area: **Special Education**
Course(s):
Time Period: **Full Year**
Length: **On-going**
Status: **Published**

General Overview, Course Description or Course Philosophy

Nutrition and Fitness

Fundamentals of nutrition include factors that influence healthy eating behaviors, the ability to make healthy food choices, and access to products and services. The course is designed to teach students about good eating habits and exercise which influence overall health. In this class students are presented with a multisensory approach to learning the content infused with Howard Gardner's multiple intelligences to enhance student learning about how to apply concepts of nutrition to their lives. Students will use knowledge about their cultural background by engaging in high interest authentic learning activities within the school, family, and community where they can apply nutritional education and practices to their everyday lives.

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

The body digests and absorbs the food we eat.

The body needs certain nutrients and physical activity to maintain energy balance.

CONTENT AREA STANDARDS

HPE.2.1.8.B.3	Design a weekly nutritional plan for families with different lifestyles, resources, special needs, and cultural backgrounds.
HPE.2.1.8.B.CS1	Eating patterns are influenced by a variety of factors.
HPE.2.6.8.A.2	Use health data to develop and implement a personal fitness plan and evaluate its effectiveness.
HPE.2.6.8.A.CS1	Knowing and applying a variety of effective training principles over time enhances personal fitness level, performance, and health status.

RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

LA.L.6.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.W.6.10	Write routinely over extended time frames (time for research, reflection, metacognition/self correction, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

LA.SL.6.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
LA.SL.6.5	Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
TECH.8.1.8.C.CS2	Communicate information and ideas to multiple audiences using a variety of media and formats.
TECH.8.1.8.F.1	Explore a local issue, by using digital tools to collect and analyze data to identify a solution and make an informed decision.

STUDENT LEARNING TARGETS

Declarative Knowledge

Students will understand that:

- Eating patterns are influenced by a variety of factors.
- The body breaks down food and uses it for energy.
- Applying a variety of effective training principles over time enhances personal fitness level, performance, and health status.
- Inadequate nutrients can result in health problems.
- Energy balance is the balance your body needs between nutritious foods and physical activity.
- Individuals can use health data to develop a personal fitness plan and evaluate its effectiveness.
- Individuals can use health data to implement a personal fitness plan and evaluate its effectiveness.

Procedural Knowledge

Students will be able to:

- Outline the process of digestion and absorption.
- Recognize that eating patterns are influenced by a variety of factors.
- Recognize specific enzymes and hormones that act in digestion of various nutrient groups.
- Explore a local issue, by using digital tools to collect and analyze data.
- Explore a local issue, by using digital tools to identify a solution and make an informed decision.
- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade topics, texts, and issues, building on others' ideas and expressing their own clearly.
- Communicate information and ideas to multiple audiences using a variety of media and formats.
- Identify the major nutrition-related health problems and typical approaches to treatment.

- Design a weekly nutritional plan for families with different lifestyles, resources, special needs, and cultural backgrounds.
- List nutritious foods and daily activities that promote energy balance.
- Develop and implement a personal fitness plan.
- Design a weekly nutritional plan for families with different lifestyles, resources, special needs, and cultural backgrounds.
- Write routinely over extended time frames (time for research, reflection, metacognition/self correction, and revision) for a range of discipline-specific tasks, purposes, and audiences.
- Write routinely over shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
- Demonstrate command of the conventions of standard English grammar and usage when writing.
- Demonstrate command of the conventions of standard English grammar and usage when speaking.
- Apply multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
- Explore a local issue, by using digital tools to collect and analyze data and to identify a solution and make an informed decision.

EVIDENCE OF LEARNING

Formative Assessments

Create a song to help recall the process of digestion and absorption.

Teacher made quiz about the digestive system.

Trace the digestion of major nutrients (e.g., carbohydrates, fats and proteins) in a meal or a food such as whole milk, pizza, chocolate pie, tacos, etc.

Modified Harkness discussion about the implications of having GERD; discuss how the process of digestion and absorption may be altered.

List the exercises that you perform daily and the calories that you burn.

Role play: given a scenario identify the major nutrition-related health problems and typical approaches to treatment.

Role play, class discussions, class participation, teacher made assessments.

Summative Assessments

Devise a one day menu for digestive complications: ulcers, heartburn, constipation, and irritable bowel; prepare and share your menu and critique for accuracy.

Design a weekly nutritional plan for families with different lifestyles, resources, special needs, and cultural backgrounds.

Create a personal fitness plan (include a nutritious food plan with daily exercises).

RESOURCES (Instructional, Supplemental, Intervention Materials)

The Digestive System -<https://www.niddk.nih.gov/health-information/digestive-diseases/digestive-system-how-it-works>

Lesson 8.2 Energy Balance: Physical Activity and Nutrition - (pages 99-102)

<http://www.humankinetics.com/acucustom/sitename/K12DAM/c8d7b5cd-9e2e-4ede-968b-9088307af40a/Ch08%20Body%20Composition,%20Activity,%20and%20Nutrition.pdf>

INTERDISCIPLINARY CONNECTIONS

English/Language Arts - Information Writing; Implementation of Conventions of Standard English.

Technology/Multimedia - Research based writing; Google; Media Literacy; Educational Tech Applications.

Math - Computations.

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

See link to Accommodations & Modifications document in course folder.

Seating

- Balance ball and exercise bike to reduce hyperactivity (if available).
- Preferential seating (e.g., facing instruction and/or seat away from distractions and/or near the source of instruction w/easy access to the ICS teacher).

Instruction

- Repeat/restate directions.
- Provide multisensory instruction by utilizing all learning modalities of V.A.K.T.
- Provide frequent checks for understanding to ensure students understands the assignment expectations.

Content

- Write using speech to text or text to speech.
- Oral in lieu of written responses (if writing is not being assessed).
- Provide access to audio.
- Provide and encourage use of graphic organizers.
- Provide rubric or checklists.
- Provide one page of tests/quizzes at a time to reduce anxious behaviors.
- Provide access to guided notes to support students own note-taking.
- Pair visual with auditory instruction to enhance understanding.
- Provide study guides one week in advance of tests.
- Allow access to laptop to type assessments and for access to educational learning tools.
- Allow alternative forms of assessments (e.g., verbal responses when not assessing writing, project-based assessment in lieu of written exam).
- Break down tasks into manageable units.
- Modify assessments (e.g., word banks, lessen multiple choice options, avoid embedding negative clauses in the question).
- Provide timelines or benchmarks for work completion.
- Break down tasks into manageable units.
- Help with organization of materials (e.g., Google classroom).
- Provide supplemental reading material depending on students reading level
- Heterogenous grouping (if working in groups and as determined by ICS teacher).

Testing

- Allow for small group testing.
- Read assessments aloud at students' request.
- Arrange for a scribe, if necessary.
- Must have access to the ICS teacher during testing.
- Modify content and length as determined by the ICS teacher.
- Verbal in lieu of written responses if writing is not being assessed.

Accommodations

- Allow extra time for task completion.
- Allow extra time for tests and quizzes.

- Provide short breaks when refocusing is needed.