

Theme 4 - Nutrition

Outcomes	Content	Activities/Resources	Assessment
<p>1. Understand what foods are in the 5 food groups.</p> <p>Target Standards 4.R.CI.13 Read and comprehend literary nonfiction in texts, appropriate for NRS Level 4, independently and proficiently.</p> <p>4.S.CC.1 Engage effectively in a range of collaborative discussions...</p>	<p>What foods are in the 5 food groups?</p>	<p>Provide the article "Healthy Eating as You Age" to students. Have them work in groups of 2-3 to read the article and record information about one of the five main food groups. Groups can then share their findings with the whole class.</p>	<p>Group Project: Grocery List As a class, collect food ads, either on paper or digitally. Create a poster or slide show of food groups using the pictures from the food ads. This could be an individual or group project.</p>
<p>2. Learn to read nutrition labels.</p> <p>Target Standards 4.R.RS.11 Transcribe and interpret information, data, and observations to apply information learned from reading to actual practice.</p> <p>4.R.FW.3 Apply environmental reading to life skills</p> <p>3.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations...</p>	<p>What concepts are important to know when reading food labels?</p> <ul style="list-style-type: none"> ● Percents ● Serving size ● Calories ● Fat ● Protein ● Carbohydrates ● Sugar 	<p>This page about understanding nutrition facts and labels describes each nutrient and how it is written on a food label. There are lots of examples to view.</p> <p>Use the handout Food Label Unit to complete activities for reading food labels and learning about the nutrients found in food.</p>	<p>Nutrition Label Worksheet Complete one of the labels together and then have students complete some independently.</p> <p>IL IELCE Civics Competency: HW4. Explain the importance of good nutrition and where to find information about it.</p>

<p>3. Calculate the amounts of nutrients on a food label using percentages.</p> <p>Target Standards 3.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations...</p> <p>4.RP.1 Use ratio and rate reasoning to solve real world and mathematical problems d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.</p> <p>4.RP.4 Use proportional relationships to solve multistep ratio and percent problems.</p> <p>4.R.S.11 Transcribe and interpret information, data, and observations to apply information learned from reading to actual practice.</p>	<p>How do I know the food I am eating has the correct amount of nutrients?</p>	<p><u>The Mathematics of Nutrition Science</u> Activity: Unit 1: Food Labels Prewriting from pg.6 of the document: Have students write about how healthy their last meal was. Discuss. (Teachers can use other components of this document for additional lesson material.)</p> <p>Math skill: percent proportions <u>Ratio and Proportion Chapter</u> This unit provides mathematical practice with percents and proportions on a food label. Use pp. 19-23, "The Nutritional Application of Proportions."</p> <p><u>Math and Nutrition Packet</u> Compare and contrast food labels and discuss the amount of nutrients according to health guidelines. Use the percent proportion to calculate the percentages of nutrients in the food.</p> <p><u>The New and Improved Nutrition Facts Label - Key Changes (fda.gov)</u> Explain the parts of the food label using this handout. Have students bring in food labels from home and work in groups to create a list of questions that could be asked about their labels. Students should include both reading/critical thinking questions AND math questions dealing with percent and proportions. Have groups exchange labels and questions and provide written answers to each question set.</p>	<p><u>Math and Nutrition Packet</u> This packet is full of activities that can be used for assessment.</p> <p><u>Activity: Comparing Food Labels</u> Use two food labels of the same type of food to compare nutritional values. The teacher could provide the labels or have students find them at home or a store.</p>
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<p>4. Read and interpret graphs and tables relating to nutrition.</p> <p>Target Standards 4.R.RS.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flow chart, diagram, model, graph, figure, or table).</p> <p>4.RP.4 Use proportional relationships to solve multistep ratio and percent problems.</p> <p>4.SP.8 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.</p>	<p>Which foods have the greatest nutritional value? Which foods have the least nutritional value?</p>	<p><u>The Mathematics of Nutrition Science</u> Activity: Unit 2: Graphing Nutrition Intake Use as much of Unit 2 as is appropriate for your class. Of the three examples provided, teach the ones most relevant to your student needs.</p> <p>Access a selection of nutrition tables from chain restaurants, provided at this site: https://www.nutrition-charts.com/. Ask students to compare and contrast the nutritional value of similar foods from several restaurants. Students should create a chart of their own, one per each type of food, demonstrating the range of nutritional value in each.</p>	<p>Completed exercises in the <u>Mathematics of Nutrition Science</u> handout - Unit 2, Graphing Nutrition Intake.</p> <p>Completed nutritional value charts</p>
<p>5. Identify the main nutrients we need in our bodies</p> <p>Design well balanced meals</p> <p>Target Standards 4.W.WL.6 Conduct short research projects to answer a question (including a self-generated question) drawing on several sources...</p> <p>4.W.TT.2 Write</p>	<p>What does a healthy diet look like?</p>	<p>Use “<u>A Brief History of USDA Food Guides</u>” Read through the evolution of the food guides and discuss the changes throughout the years.</p> <p>https://www.nutrition.gov https://www.myplate.gov/ Explore ‘My Plate’ and ask students to create 2 sample well-balanced meals using this strategy. Students record their findings in a written document explaining what makes their meals well-balanced and healthy.</p>	<p>Each student creates a well-balanced food chart appropriate for themselves. Students have the choice of displaying their charts on paper or in a digital format such as Canva.</p> <p>IL IELCE Civics Competency: HW4. Explain the importance of good nutrition and where to find information about it.</p>

<p>informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.</p> <p>b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. Include tables, graphs, and other visuals as effective.</p>			
<p>6. Explain features and functions of the digestive system</p> <p>Target Standards</p> <p>4.R.RS.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical contexts</p> <p>4.S.CC.1 Engage effectively in a range of collaborative discussions...</p> <p>c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.</p> <p>f. Review the key ideas</p>	<p>What are the components of the digestive system?</p>	<p><u>Digestive System Chapter</u> from <i>Medical Terminology, An Illustrated Guide</i>, 9th edition, 2021 by Jones and Bartlett Learning. The digestive system chapter from this online textbook has informational readings and a variety of quizzes and exercises for students to complete. There are vocabulary, fill in the blank, and matching activities. <i>(The first page of the chapter has a pre-test that could be used as an assessment for the unit, if you need to determine students' background knowledge.)</i></p> <p><u>Slide show: See how your digestive system works - Mayo Clinic</u></p> <p>Watch this slide show as a class and read aloud the text beneath each slide. Tell students to identify vocabulary words that are unfamiliar to them. Collect these lists to create a class vocabulary slideshow.</p> <p>ELL Support: Create a class list of key vocabulary words, and ask students to work</p>	<p><u>Digestive System Review</u></p> <p>Use these activity pages as a summative assessment after the Digestive System chapter work is done.</p>

<p>expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.</p>		<p>with a partner to find definitions for all (or a specified set) of the words.</p> <p><u>Activity: Digestive System Vocabulary</u> (Students should read the article once to identify the vocabulary and a second time for comprehension.) As students read the first time, ask them to underline/highlight vocabulary words they recognize from the earlier activity. As a class, refer back to the created slideshow and adjust definitions and add vocabulary, as needed. Students should then read the article a second time, annotating for:</p> <ul style="list-style-type: none"> ● What I already know - checkmark ● Something new I learned - circle text ● Things that surprise me - exclamation mark ● Questions I have - question mark <p>Discuss the article as a class, using the “Digestive Process” chart on page 3 as an overview of this article and the “Points to Remember” section on page 6 as a closing summary.</p>	
<p>7. Understand various digestive disorders</p> <p>Target Standards 4.R.RS.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific</p>	<p>What types of diseases are connected to the digestive system?</p>	<p>Use the handout “<u>Digestive System Disorders</u>” to review parts of the digestive system and to read about various digestive disorders. <i>There is a lot of information in the handout; consider selecting items of most relevance for your class.</i> Encourage students to discuss their previous knowledge of the material during the presentation. After covering the select material, students</p>	<p>Completed comprehension questions</p> <p>Extension: Informational display about their chosen disorder</p>

<p>scientific or technical contexts...</p> <p>4.S.CC.1 Engage effectively in a range of collaborative discussions...</p> <p>4.W.WL.6a. Gather relevant information from multiple print and digital sources.</p> <p>e. Draw evidence from informational texts to support analysis, reflection, and research.</p>		<p>answer the questions on the handout, "Digestive System Disorder Questions."</p> <p>Extension: Digestive Disorders Research Activity</p> <p>Students select one digestive disorder to research, taking notes on the causes and symptoms. Students then create a handout/poster displaying information about the disease.</p>	
<p>8. Create and interpret Punnett Squares</p> <p>Target Standards</p> <p>4.R.RS.3 Follow precisely a multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks.</p> <p>4.R.RS.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical contexts...</p> <p>4.RP.4 Use proportional relationships to solve multistep ratio and percent problems.</p>	<p>What types of traits do you inherit from your parents?</p> <p>What is the probability of inheriting a specific trait?</p>	<p>As an introduction to Punnett Squares, review the reasons for disorders and diseases. Explain that certain diseases are hereditary and there is a way to calculate your chances of having a specific disease.</p> <p>Introduction to heredity review (article) Khan Academy</p> <p>As a whole-class presentation, introduce the concept of Punnett Squares including relevant vocabulary and specific examples. Discuss how eye color is determined by using a Punnett Square. Have students identify and discuss how their own eye color was determined. Use the handout Punnett Squares Practice to practice the concepts and evaluate student comprehension, including vocabulary. Work through this handout together as a class.</p> <p>ELL Support: The handout is long. Consider identifying the most relevant portions of the handout and asking students to complete</p>	<p>Handout: Punnett Square Worksheet - Human Characteristics</p> <p>Have students work independently to assess their understanding of how to cross two characteristics and how to calculate the percentages of the outcomes.</p>

only those sections.

Activity: Probability and Percent

[Genotypic and Phenotypic Ratios for Punnett Squares](#).

This video shows how to calculate the percentages for genotypes and phenotypes of a trait. After watching the 5 minute video and reviewing together how to do this, have students return to the Punnett Squares Practice worksheet and calculate the percentages for select examples.

ELL support: Turn on subtitles/closed captions while playing the video.