Unit 8: Grain Preparation

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Department of Curriculum and Instruction

Belleville Public Schools

Curriculum Guide

Introduction to Culinary Arts

Grades 11-12

Grain Preparation

Belleville Board of Education

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Unit Overview

Cereal-grains are major staple foods for people throughout the world. Grains are low in cost and high in energy value. They have a long-term storage capacity. They are used to make a wide variety of food products. Grains contain a large amount of starch. Knowledge of starch cooking principles and techniques are needed when preparing these foods. The amount of water, heat and time needed to make the starch granules swell in cereal products depends on the product. Grains differ in size and shape, but they all have similar structure. Grains are either whole grains or refined during a process which removes the bran and germ, along with the nutrients they provide. Refined grains are enriched to replaced lost nutrients.

Enduring Understanding

- Grains are essential to a healthy diet.
- Whole grains have 3 basic parts with difference nutritive values and health benefits.
- Processed grains have the bran and germ removed.
- Processed grains are enriched to add nutrients.

- Do not rinse processed grain products.
- Flour is produced from the endosperm of grains.
- There are different types of flour.
- Gluten is a protein in the endosperm of wheat, barley and rye grains.
- A person may have a sensitivity to gluten that effects their diet.
- There are difference types of grains from different plants.
- Grains must be stored properly to prevent pest invasion and ensure freshness.
- Different grains are prepared using different cooking techniques.
- Grains absorb liquids and increase in volume.
- Starches swell and thicken liquids when heat is applied.

Essential Questions

- Does the student display effective interpersonal communication skills?
- Is the student able to work cooperatively with others to accomplish a task?
- Is the student able to use time efficiently and effectively?
- Is the student able to develop a kitchen work plan to efficiently participate in the food lab to prepare a recipe?
- Is the student able to identify and demonstrate the safe operation and care of major and small appliances used in food preparation?
- Can the student identify, select, and properly use common kitchen utensils based on function for specific tasks?
- Does the student demonstrate the ability to think critically through the practical application of basic skills and knowledge?
- Is the student able to identify a variety of grain products and their form: rice, pasta, corn, and oats?
- Can the student identify the parts of a grain, and their nutritive value?
- Does the student know how to properly store different types of grains and grain products?
- Is the student able to explain how grains fit into a healthy eating plan?
- Can the student describe how heat and liquid affect starches?
- Is the student able to identify the different types and forms of rice?
- Explain and demonstrate the proper preparation technique for each grain type?
- Can the student prepare a variety of grain products using proper and safe cooking methods: rice, pasta, corn, and oats?
- Is the student able to modify a recipe to increase/decrease its yield?

Exit Skills

Students will be able to:

- develop a kitchen work plan to efficiently participate in the food lab to prepare a recipe.
- identify and demonstrate the safe operation and care of major and small appliances used in food preparation.
- identify, select, and properly use common kitchen utensils based on function for specific tasks.tThink critically through the practical application of basic skills and knowledge.

- identify a variety of grain products and their form: rice, pasta, corn, and oats.
- identify the parts of a grain, and their nutritive value.
- explain a healthy eating plan utilize grains and grain food products.
- explain and demonstrate proper storage of different types of grains and grain products.
- describe and demonstrate how heat and liquid effects on starches.
- explain and demonstrate the proper preparation technique for each grain type.
- prepare a variety of grain products using proper and safe cooking methods: rice, pasta, corn, and oats.
- modify a recipe to increase/decrease its yield.

New Jersey Student Learning Standards (NJSLS-S)

9.3.12.ED.1	Apply communication skills with students, parents and other groups to enhance learning and a commitment to learning.
9.3.12.ED.2	Demonstrate effective oral, written and multimedia communication in multiple formats and contexts.
9.3.12.ED.3	Use critical thinking to process educational communications, perspectives, policies and/or procedures.
9.3.12.ED.4	Evaluate and manage risks to safety, health and the environment in education and training settings.
9.3.12.ED.5	Demonstrate group collaboration skills to enhance professional education and training practice.
9.3.12.ED.10	Apply organizational skills and logic to enhance professional education and training practice.
9.3.12.ED.11	Demonstrate group management skills that enhance professional education and training practice.
9.3.HT-RFB.2	Demonstrate safety and sanitation procedures in food and beverage service facilities.
9.3.HT-RFB.4	Demonstrate leadership qualities and collaboration with others.
9.3.HT-RFB.10	Apply listening, reading, writing and speaking skills to enhance operations and customer service in food and beverage service facilities.

Interdisciplinary Connections

LA.RST.11-12.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
LA.RST.11-12.4	Determine the meaning of symbols, key terms, and other domain-specific words and

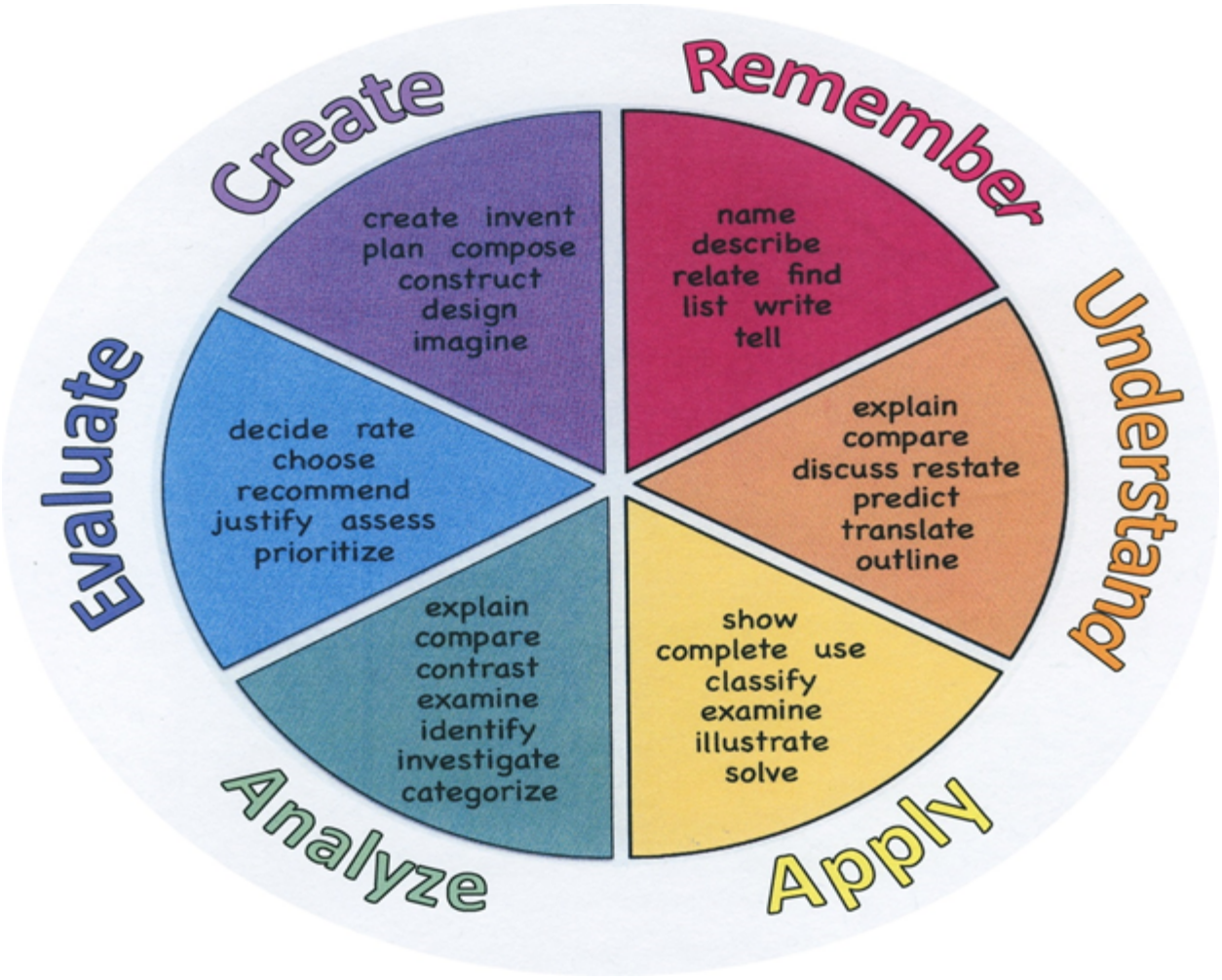
	phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.
LA.RST.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
LA.RST.11-12.9	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

Learning Objectives

Student will be demonstrate the ability to:

- illustrate and label the parts of a whole grain kernel.
- explain and demonstrate the effects of moist heat on grain kernels, both whole and refined grains.
- produce a refined grain product formulated by following a multi-step recipe.
- compare and contrast the results of moist heat on grain kernels in preparing grain dishes.
- produce pasta to use as an ingredient formulated by following a multi-step recipe.
- prepare a refined grain product, demonstrating correct safety and sanitation practices.
- explain and demonstrate proper techniques when using grain starches as thickening agents in multi-step recipes.
- evaluate food product based on establish food industry criteria.

Remember	Understand	Apply	Analyze	Evaluate	Create
Choose	Classify	Choose	Categorize	Appraise	Combine
Describe	Defend	Dramatize	Classify	Judge	Compose
Define	Demonstrate	Explain	Compare	Criticize	Construct
Label	Distinguish	Generalize	Differentiate	Defend	Design
List	Explain	Judge	Distinguish	Compare	Develop
Locate	Express	Organize	Identify	Assess	Formulate
Match	Extend	Paint	Infer	Conclude	Hypothesize
Memorize	Give Examples	Prepare	Point out	Contrast	Invent
Name	Illustrate	Produce	Select	Critique	Make
Omit	Indicate	Select	Subdivide	Determine	Originate
Recite	Interrelate	Show	Survey	Grade	Organize
Select	Interpret	Sketch	Arrange	Justify	Plan
State	Infer	Solve	Breakdown	Measure	Produce
Count	Match	Use	Combine	Rank	Role Play
Draw	Paraphrase	Add	Detect	Rate	Drive
Outline	Represent	Calculate	Diagram	Support	Devise
Point	Restate	Change	Discriminate	Test	Generate
Quote	Rewrite	Classify	Illustrate		Integrate
Recall	Select	Complete	Outline		Prescribe
Recognize	Show	Compute	Point out		Propose
Repeat	Summarize	Discover	Separate		Reconstruct
Reproduce	Tell	Divide			Revise
	Translate	Examine			Rewrite
	Associate	Graph			Transform
	Compute	Interpolate			
	Convert	Manipulate			
	Discuss	Modify			
	Estimate	Operate			
	Extrapolate	Subtract			
	Generalize				
	Predict				



Suggested Activities & Best Practices

- illustrate and label the parts of a whole grain kernel.
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- produce a refined grain product formulated by following a multi-step recipe.
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Assessment Evidence - Checking for Understanding (CFU)

- Common Benchmarks
- Unit 8 Test-summative assessment
- Unit Review/Test prep
- Study Guides
- Grain Products and Presentation-benchmark assessment
- Evaluation Rubrics
- Teacher Observation Checklist
- Self Assessment
- Explaining-formative assessment
- Teacher Student Conference-alternate assessment

- Admit Tickets
- Anticipation Guide
- Common Benchmarks
- Compare & Contrast
- Create a Multimedia Poster
- DBQ's
- Define
- Describe
- Evaluate
- Evaluation rubrics
- Exit Tickets
- Explaining
- Fist- to-Five or Thumb-Ometer
- Illustration
- Journals
- KWL Chart
- Learning Center Activities
- Multimedia Reports
- Newspaper Headline
- Outline
- Question Stems
- Quickwrite
- Quizzes

- Red Light, Green Light
- Self- assessments
- Socratic Seminar
- Study Guide
- Surveys
- Teacher Observation Checklist
- Think, Pair, Share
- Think, Write, Pair, Share
- Top 10 List
- Unit review/Test prep
- Unit tests
- Web-Based Assessments
- Written Reports

Primary Resources & Materials

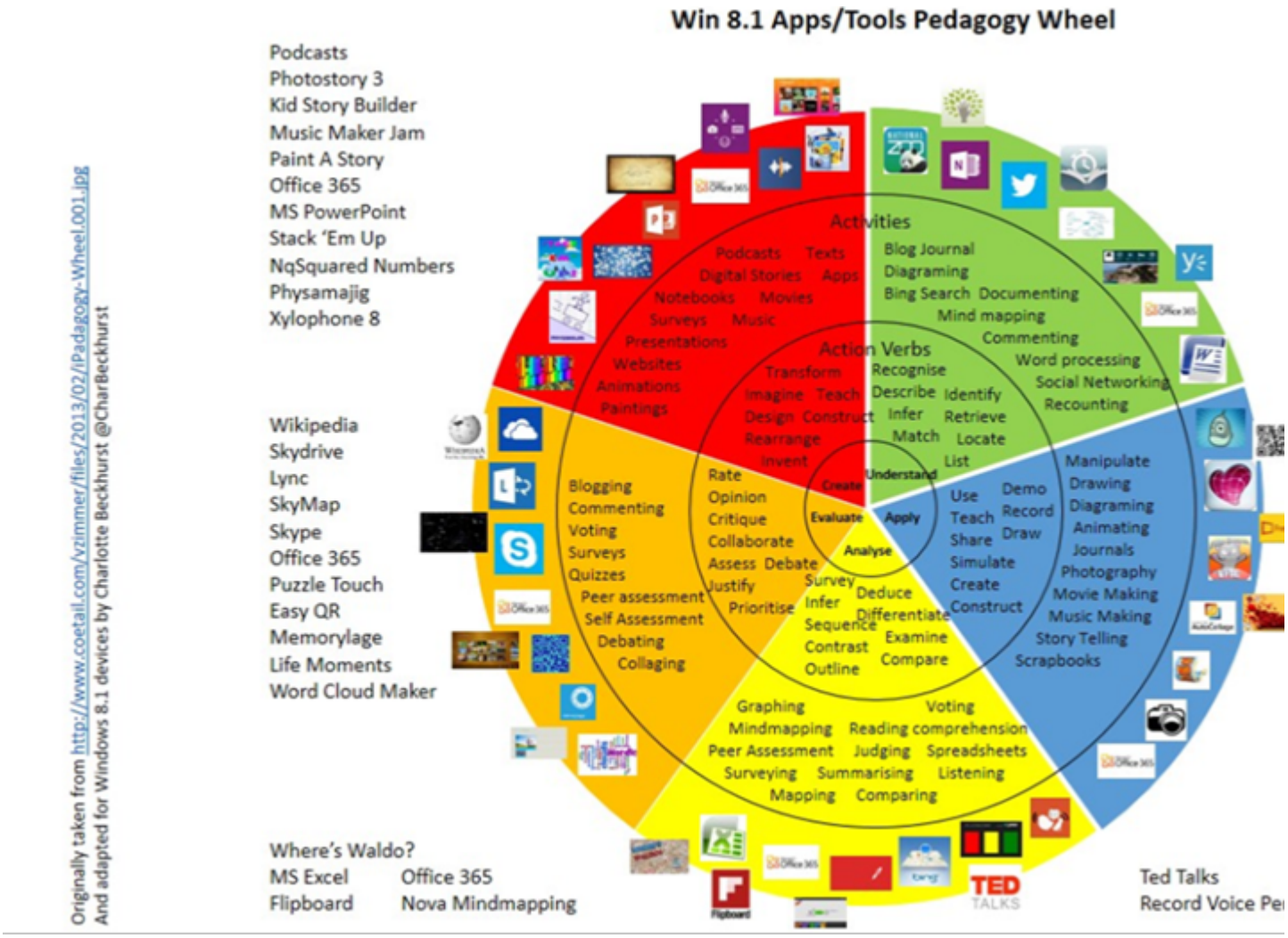
- Textbook: *Guide to Good Food*
- Textbook: *Culinary Essentials*
- Textbook – *Foundation of Restaurant Management*
- Video: Grain Preparation
- Power Point Presentations
- Internet/Recipe Research

Ancillary Resources

- Demonstrations
- exit questions
- lab plans
- unit recipes
- Chapter worksheets/questions
- Filling out culinary learning log

Technology Infusion

- Google Classroom
- Interactive Smart TV Technology
- Technology Internet Research and Word Processing
- Video Demonstration
- Calculations
- Online Applications
- Power Point



Alignment to 21st Century Skills & Technology

- Communication Skills – English, Reading, Writing
- Mathematics
- Economics
- Science
- Social Skills/Interpersonal Skills

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CAEP.9.2.12.C.2	Modify Personalized Student Learning Plans to support declared career goals.
TECH.8.1.12.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.12.C.CS1	Interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media.
TECH.8.1.12.C.CS2	Communicate information and ideas to multiple audiences using a variety of media and formats.
TECH.8.1.12.E	Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.

21st Century Skills/Interdisciplinary Themes

- Communication and Collaboration
- ICT (Information, Communications and Technology) Literacy
- Interpersonal Communication
- Critical Thinking and Problem-Solving
- Financial, Economic, Business and Entrepreneurial Literacy
- Life and Career Skills

- Communication and Collaboration
- Creativity and Innovation
- Critical thinking and Problem Solving
- ICT (Information, Communications and Technology) Literacy

- Information Literacy
- Life and Career Skills
- Media Literacy

21st Century Skills

Students will be able to use their learning to …

- Use effective oral and written communication strategies for creating, expressing, and interpreting information and ideas.
- Use critical and creative thinking strategies to facilitate innovation and problem-solving both independently and in teams.
- Use technology is used to access, manage, integrate, and disseminate information.
- Use effective leadership and teamwork strategies to foster collaboration and cooperation to accomplish goals.
- Develop life skills in order to achieve continuing success in various life roles related to continuing education, career development, and personal growth.

- Develop employable skills to build the capacity for successful careers.

- Civic Literacy
- Environmental Literacy
- Financial, Economic, Business and Entrepreneurial Literacy
- Global Awareness
- Health Literacy

Differentiation

Differentiations:

- Small group assignments
- Added time to complete assignments
- Pairing oral instructions with visuals

- Repeat directions as needed
- Reinforcing on-task behaviors and skill acquisition
- Reduce amount of assignments that are due
- Rephrase written directions
- Study guides provided
- Additional time for skill mastery
- Test read to student
- Visual presentation
- Small Group Instruction
- Additional Time

Hi-Prep Differentiations:

- Project-based Learning
- Problem-based Learning

Lo-Prep Differentiations

- Goal Setting with Students
- Mini Workshops to re-teach or extend skills

Special Education Learning (IEP's & 504's)

- Study Guides/Board Notes
- Additional Time for Skill Mastery
- Assistive Technology
- Computer or Electronic Device Utilizes
- Multi-sensory Instruction
- Preferential Seating
- Student Working with an Assigned Partner
- Small Group Instruction
- Check Work Frequently for Understanding
- Extended Time on Tests/Quizzes

- printed copy of board work/notes provided
- additional time for skill mastery
- assistive technology

- behavior management plan
- Center-Based Instruction
- check work frequently for understanding
- computer or electronic device utilizes
- extended time on tests/ quizzes
- have student repeat directions to check for understanding
- highlighted text visual presentation
- modified assignment format
- modified test content
- modified test format
- modified test length
- multi-sensory presentation
- multiple test sessions
- preferential seating
- preview of content, concepts, and vocabulary
- Provide modifications as dictated in the student's IEP/504 plan
- reduced/shortened reading assignments
- Reduced/shortened written assignments
- secure attention before giving instruction/directions
- shortened assignments
- student working with an assigned partner
- teacher initiated weekly assignment sheet
- Use open book, study guides, test prototypes

English Language Learning (ELL)

- Study Guides/Board Notes
- Additional Time for Skill Mastery
- Assistive Technology
- Computer or Electronic Device Utilizes
- Multi-sensory Instruction
- Preferential Seating
- Student Working with an Assigned Partner
- Small Group Instruction
- Check Work Frequently for Understanding
- Extended Time on Tests/Quizzes

- teaching key aspects of a topic. Eliminate nonessential information
- using videos, illustrations, pictures, and drawings to explain or clarif
- allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slide shows, videos, etc.) to demonstrate student's learning;
- allowing students to correct errors (looking for understanding)
- allowing the use of note cards or open-book during testing
- decreasing the amount of workpresented or required
- having peers take notes or providing a copy of the teacher's notes
- modifying tests to reflect selected objectives
- providing study guides
- reducing or omitting lengthy outside reading assignments
- reducing the number of answer choices on a multiple choice test
- tutoring by peers
- using computer word processing spell check and grammar check features
- using true/false, matching, or fill in the blank tests in lieu of essay tests

At Risk

- using videos, illustrations, pictures, and drawings to explain or clarify
- teaching key aspects of a topic. eliminate nonessential information
- tutoring by peers
- providing study guides
- allowing students to correct errors (looking for understanding)
- allowing products to demonstrate student's learning
- using authentic assessments with real-life problem-solving

- allowing students to correct errors (looking for understanding)
- teaching key aspects of a topic. Eliminate nonessential information
- allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slide shows, videos, etc.) to demonstrate student's learning
- allowing students to select from given choices
- allowing the use of note cards or open-book during testing
- collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be

determined prior to giving the test.

- decreasing the amount of workpresented or required
- having peers take notes or providing a copy of the teacher's notes
- marking students' correct and acceptable work, not the mistakes
- modifying tests to reflect selected objectives
- providing study guides
- reducing or omitting lengthy outside reading assignments
- reducing the number of answer choices on a multiple choice test
- tutoring by peers
- using authentic assessments with real-life problem-solving
- using true/false, matching, or fill in the blank tests in lieu of essay tests
- using videos, illustrations, pictures, and drawings to explain or clarify

Talented and Gifted Learning (T&G)

- Create a plan to solve an issue presented in the class or in a text
- Advanced problem-solving
- Higher order, critical and creative thinking skills, and discovery
- Teacher-selected instructional strategies that are focused to provide challenge, engagement, and growth opportunities
- Utilize project-based learning for greater depth of knowledge

- Above grade level placement option for qualified students
- Advanced problem-solving
- Allow students to work at a faster pace
- Cluster grouping
- Complete activities aligned with above grade level text using Benchmark results
- Create a blog or social media page about their unit
- Create a plan to solve an issue presented in the class or in a text
- Debate issues with research to support arguments
- Flexible skill grouping within a class or across grade level for rigor
- Higher order, critical & creative thinking skills, and discovery
- Multi-disciplinary unit and/or project
- Teacher-selected instructional strategies that are focused to provide challenge, engagement, and growth opportunities
- Utilize exploratory connections to higher-grade concepts
- Utilize project-based learning for greater depth of knowledge

Sample Lesson

See first unit: Employability and Career Development for an example.