Unit 10: Protein Preparation: Eggs

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Department of Curriculum and Instruction

Belleville Public Schools

Curriculum Guide

Advanced Culinary Arts

Grade 12

Protein Preparation: Eggs

Belleville Board of Education

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Unit Overview

Eggs are a nutritious, inexpensive, and versatile food. Eggs serve a number of functions in recipes: emulsifiers, foams, structure, thickeners, binders, flavor, color, leavening ingredient, and an interfering agent. Eggs are perishable and require careful handling and thorough cooking to protect against foodborne illness. Pasteurized eggs can be substituted for eggs in dishes that call for raw or lightly cooked eggs. Eggs can be prepared in numerous ways and in various dishes utilizing moderate cooking temperatures and carefully monitored cooking times. These factors will prevent egg proteins from shrinking and becoming tough. Principles of egg cookery must be practiced to develop these skills.

Enduring Understanding

- Eggs are a TCS food containing salmonella bacteria and must be stored at temperatures of 41 or lower.
- Eggs are a nutritious, low cost, complete source of protein.
- Eggs are very versatile, and used in egg dishes as well as ingredients in recipes.
- Eggs function as emulsifiers, foaming agent, thickeners, binding agents, and interfering agents. They also add structure, nutrients, flavor, and color to foods.
- Egg foams are used to add air to foods. The stage depends on the beating time: foamy, soft peak and stiff peak.
- Egg substitutes and pasteurized eggs can be used in recipes as substitutes for standard eggs.
- Eggs are protein foods and require moderate cooking temperatures and carefully monitored cooking times.

Essential Questions

- Is the student able to select and apply appropriate solutions to solve and prevent dangerous situations and accidents in the kitchen?
- Is the student able to develop a kitchen work plan to efficiently participate in the food lab to prepare a recipe exhibiting safe and sanitary kitchen practices?
- Can the student select kitchen utensils and perform appropriate operations based on function for a specific task?
- Is the student able to safely operate major and small appliances used in food preparation?
- Can the student identify factors to select, purchase and store eggs?
- Can the student use eggs as ingredients to add color, flavor, bind ingredients, leaven ingredients, emulsify and/or add nutrition to a recipe?
- Is the student able to utilize proper principles and methods for cooking eggs as protein foods?
- Can the student limit cholesterol and saturated fats in recipes by utilizing egg substitutes in recipes and egg dishes?

Exit Skills

Student will be able to:

- select, purchase, and store eggs to maintain high quality food standards.
- utilize eggs as ingredients to: color, flavor, bind ingredients, leaven, emulsify, and as protein foods.
- utilize principles and methods for properly cooking eggs as protein foods.
- limit cholesterol and saturated fats by utilizing egg substitutes in recipes and egg dishes.
- prepare egg foams to achieve the stages of foamy, soft peak and stiff peak.
- fold in egg foams.

New Jersey Student Learning Standards (NJSLS-S)

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.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

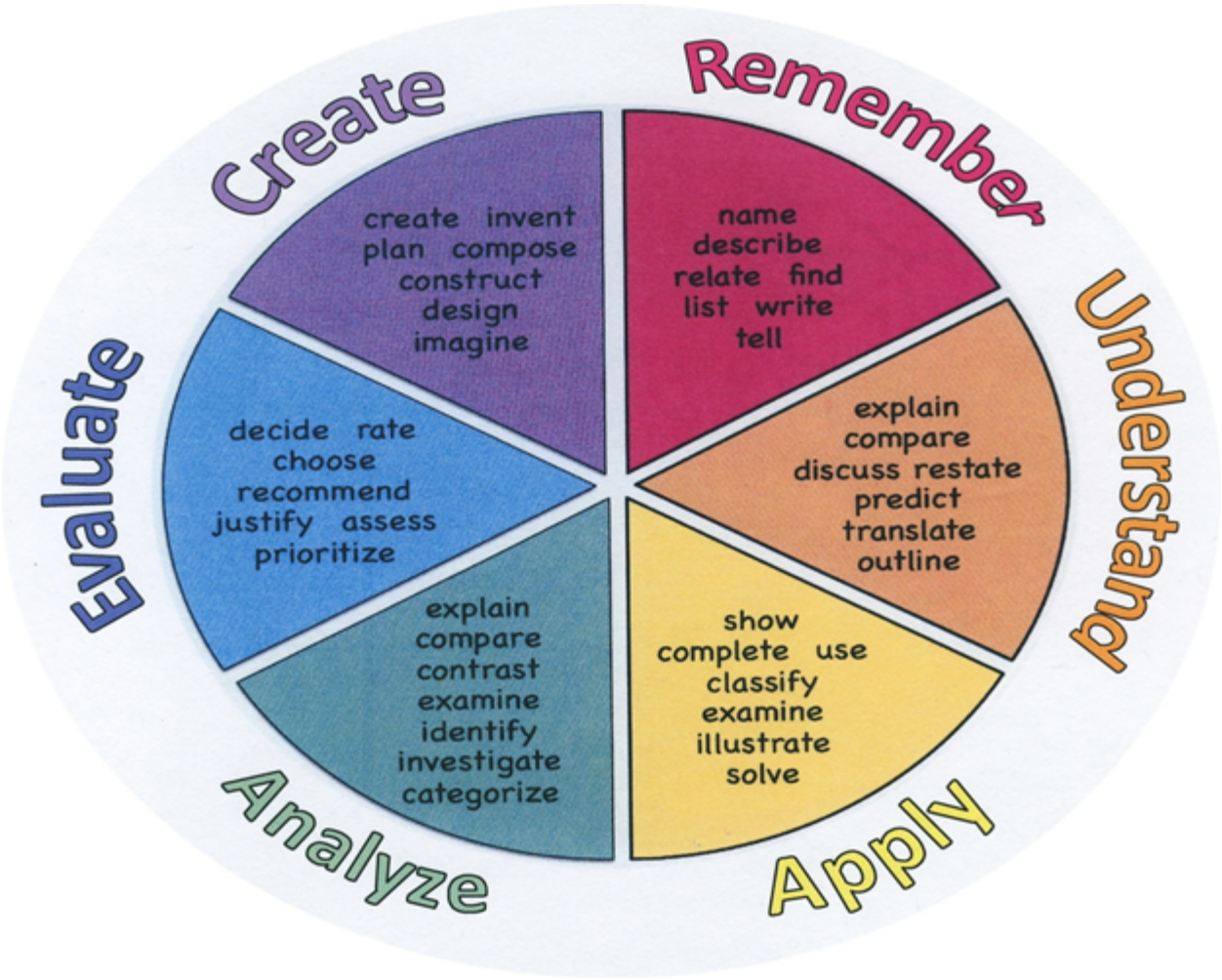
LA.RST.11-12.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
LA.RST.11-12.4	Determine the meaning of symbols, key terms, and other domain-specific words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

Learning Objectives

Student will demonstrate the ability to:

- select and utilize kitchen utensils based on function for specific tasks.
- select, purchase and store eggs based on set factors.
- use eggs as ingredients in recipes to add color, flavor, bind ingredients, leaven ingredients, emulsify and/or add nutrition to a recipe.
- produce three stages of egg foams: foamy, soft peaks and stiff peaks.
- fold in egg foams to maintain volume.
- prepare eggs utilizing proper principles and methods for cooking eggs as protein foods.
- formulate recipes to limit cholesterol and saturated fats by utilizing egg substitutes.
- evaluate food product based on established 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

- read and follow recipe directions to produce a quality food product.
- select, purchase and store eggs based on set factors.
- use eggs as ingredients in recipes to add color, flavor, bind ingredients, leaven ingredients, emulsify and/or add nutrition to a recipe.
- produce three stages of egg foams: foamy, soft peaks and stiff peaks.
- fold in egg foams to maintain volume.
- prepare eggs utilizing proper principles and methods for cooking eggs as protein foods.
- formulate recipes to limit cholesterol and saturated fats by utilizing egg substitutes.

Assessment Evidence - Checking for Understanding (CFU)

- Common Benchmarks
- Unit 10 Test-summative assessment
- Unit Review/Test prep
- Study Guides
- Egg Products, Dishes 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

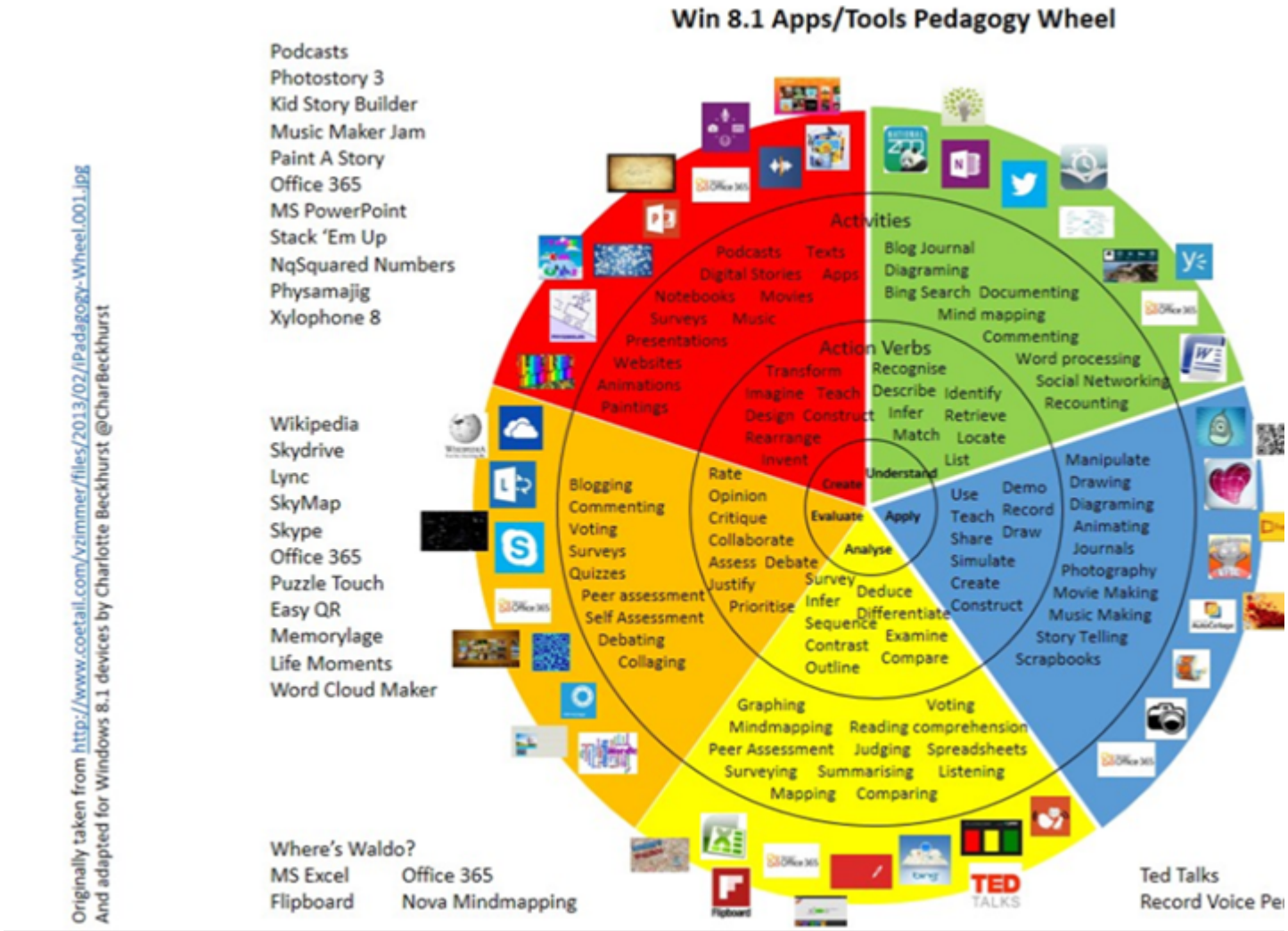
- Textbook: *Guide to Good Food*
- Textbook: *Culinary Essentials*
- Textbook – *Foundation of Restaurant Management*
- Video Clip:Cooking Methods
- Power Point Presentations
- Internet Recipe Demonstrations

Ancillary Resources

- Career Training Education Presentations/Discussions
- The Food Industry
- Video – Egg Study Guide
- Chapter worksheets/questions
- Filling out culinary learning logs

Technology Infusion

- Google Classroom
- Interactive Smart TV Technology
- Technology Internet Research and Word Processing
- Video Demonstration
- Calculations
- Online Appliancations
- 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.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CAEP.9.2.12.C.2	Modify Personalized Student Learning Plans to support declared career goals.
TECH.8.1.12	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
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.E	Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
TECH.8.1.12.F	Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

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)

- Teach Key Concepts
- Visual Teaching Aids: Videos, Illustrations, Pictures and Drawings
- Use of note cards, study guides and open book during testing
- Small Group Instruction
- Student Working with an Assigned Partner
- Preview of Content, Concepts, and Vocabulary
- Check Work Frequently for Understanding
- Peer Tutoring

- 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