Nourishment
Students prepare hummus, a popular healthy snack food that many eat at home but have never made themselves, and bake whole wheat pita bread with flour ground by students in Edible Schoolyard garden classes.

Academics
This lesson fulfills History and Social Science Standards for discussing the exchanges of plants, animals, technology, culture, and ideas among Europe, Africa, Asia, and the Americas in the fifteenth and sixteenth centuries; Common Core State Standards for collaborative discussion; integrating information in different formats; speaking and listening; Health Standards for making healthy food choices; safe food handling; and preparing nutritious food.
Middle Eastern Meze Platter Abstract

Summary
In this 7th grade humanities lesson, students prepare a Middle Eastern meze platter using ingredients that represent the four climatic regions of the Arabian Peninsula.

Objectives
After this lesson, students will be able to:
- Identify the four climatic regions of the Arabian Peninsula and the crops native to each region
- Understand how the climate of each region influenced the lifestyles and diets of people native to that region
- Refine knife skills and practice different cuts and sizes
- Use and care for an immersion blender or food processor

Assessments
During this lesson, students will:
- Answer questions about the climatic regions and foods of the Arabian Peninsula
- Describe the four climatic regions of the Arabian Peninsula and discuss their effects lifestyles and diets of people native to each region
- Cut vegetables into sizes appropriate for dipping
- Blend hummus

Communication is strengthened by working in small teams to complete a multi-dish meal, coordinating timing and dividing responsibility for whole group tasks like setting the table. Sustainability is highlighted by learning how landscapes and weather patterns determine agricultural practices and regional diets. An example of a climate-dependent crop is the date palm, which nomadic people of the Arabian Peninsula used to feed, clothe and shelter themselves. Nourishment is acquired by preparing hummus, a popular healthy snack food that many eat at home but have never made themselves, and baking whole wheat pita bread with flour ground by students in Edible Schoolyard garden classes. Life Skills are sharpened by learning how to safely operate and clean an immersion blender, and how to prepare crudités, a simple appetizer of raw sliced vegetables.

Academics fulfill History and Social Science Standards for discussing the exchanges of plants, animals, technology, culture, and
ideas among Europe, Africa, Asia, and the Americas in the fifteenth and sixteenth centuries; Common Core State Standards for collaborative discussion; integrating information in different formats; speaking and listening; Health Standards for making healthy food choices; safe food handling and preparing nutritious food. See Connections to Academic Standards below for details.

Edible Schoolyard curriculum emphasizes developing community and personal stewardship, along with skills that will help students navigate different situations throughout their lives; using and caring for tools and equipment at the ESY Cooking Station; selecting correct knives from the ESY Toolbox; and making connections between the diets of historic cultures and the foods we eat today. See Connections to Edible Schoolyard Standards below for details.

This lesson follows the BEETLES Project’s Learning Cycle (Invitation -> Exploration -> Concept Invention -> Application -> Reflection) and uses their Discussion Routines (Think-Pair-Share, Whip-Around). All are highlighted in Green* with an asterisk for easy identification. See the documents BEETLES_Discussion_Routines.pdf and BEETLES_Learning_Cycle.pdf included in Resources below for more information. Games and activities from other sources are also identified in Green, without an asterisk.

Connections to Academic Standards
History–Social Science Content Standards for California Public Schools, Grade 7
• 7.2 Students analyze the geographic, political, economic, religious, and social structures of the civilizations of Islam in the Middle Ages.
  • 7.2.1 Identify the physical features and describe the climate of the Arabian peninsula, its relationship to surrounding bodies of land and water, and nomadic and sedentary ways of life.

Common Core State Standards, English Language Arts and Literacy, Grade 7
• RH6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
• RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
• SL.7.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others’ ideas and expressing their own clearly.
  • SL.7.1.b Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
• SL.7.1.c Pose questions that elicit elaboration and respond to others’ questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
• SL.7.1.d Acknowledge new information expressed by others and, when warranted, modify their own views.
• SL.7.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.
• SL.7.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 7 Language standards 1 and 3 on page 53 for specific expectations.)
• L.7.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
  • L.7.1.a Explain the function of phrases and clauses in general and their function in specific sentences.
  • L.7.1.b Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.
  • L.7.1.c Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.
• L.7.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
  • L.7.3.a Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.
• L.7.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Health Education Content Standards for California Public Schools, Grades 7&8,
• 1.4.N Describe how to keep food safe through proper food purchasing, preparation, and storage practices.
• 1.8.N Identify ways to prepare food that are consistent with current research-based guidelines for a nutritionally balanced diet.
• 7.1.N Make healthy food choices in a variety of settings.
• 7.2.N Explain proper food handling safety when preparing meals and snacks.

Connections to Edible Schoolyard Standards
Edible Schoolyard 3.0
In the Edible Schoolyard Program
  • 1.0: Students work with each other and teachers to develop community and personal stewardship, along with skills that will help them navigate different situations throughout their lives.
  • 1.1.1 – 1.3.12: This lesson fulfills all Edible Schoolyard Program standards, numbers 1.1.1 through 1.3.12. See The Edible Schoolyard Berkeley Standards for details.
In the Kitchen Classroom, 7th grade

- Tools 2.1.1: Use and care for tools and equipment at the ESY Cooking Station, and begin to choose the right tool for each.
- Tools 2.1.3: Select correct knives from the ESY Toolbox. Refine knife skills by using different cuts and sizes while demonstrating knife safety and care.
- Concepts 2.3.11: Make connections between the diets of historic cultures and foods we eat today.
Middle Eastern Meze Platter Lesson

Materials
For the Chef Meeting
- K7-8 Visual Aid
- K7-8 Mezze Platter Notes
- Pita recipe
- Hummus recipe
- Yogurt Sauce recipe
- Recipe ingredients and tools for demonstration

Ingredients
- Seasonal vegetables for crudités
- Dates
- Almonds
- Pomegranate

For the Pita
- All-purpose flour
- Whole wheat flour
- Yeast
- Sugar
- Salt
- Olive oil
- Eggs

For the Hummus
- Garbanzo beans
- Garlic
- Tahini
• Lemons
• Flat leaf parsley
• Salt
• Pepper

For the Yogurt Sauce
• Yogurt
• Radish, carrot, or cucumber
• Garlic
• Mint
• Salt

Tools
• Mixing bowls
• Reamer or juicer
• Grater
• Garlic peeler
• Mortar and pestle
• Wooden spoons
• Chefs’ knives
• Paring knives
• Cutting boards
• Measuring beaker
• Measuring cups
• Measuring spoons

Equipment
• Immersion blender or food processor
• Oven

Timeline Overview
Total Duration: 90 minutes
Welcome:
1. *Invitation* (5 minutes)
2. *Concept Invention* (15 minutes)
3. *Application* (60 minutes)
4. *Reflection* (10 minutes)

Before you Begin
- Create the Visual Aid
- Copy the Pita recipe to hand out
- Copy the Hummus recipe to hand out
- Copy the Yogurt Sauce recipe to hand out
- Review K7-8 Mezze Platter Notes
- Collect all the tools and ingredients, then distribute them to the tables
- Gather supplies for the Chef Meeting

Procedures
Welcome
1. *Invitation* (5 minutes)
   a. Welcome students and ask if they have heard of a meze platter.

At the Chef Meeting
2. *Concept Invention* (15 minutes)
   Students learn about foods of the Arabian Peninsula.
   a. Explain that a meze platter is an assortment of appetizers and introduce the Pita, Hummus and Yogurt Sauce recipes.
   b. Locate the Arabian Peninsula on the Visual Aid and discuss its significance as a crossroads for trade between civilizations.
   c. Ask students to identify the four climatic regions of the Arabian Peninsula:
      i. Desert
      ii. Oases
      iii. Coastal plains
      iv. Mountains.
d. Review how climate and geography influence lifestyle and impact diet.
   i. Factors such as temperature, precipitation, and soil type determine what people are able to grow to eat, what materials are available build homes with, etc.

e. Identify ingredients representative of each region of the Arabian Peninsula, incorporate information from K7-8 Mezze Platter Notes.
   i. Date Palm (Oases): regarded as the “tree of life” - every part of the tree was used: the fruit was eaten, the sap was drunk, palm wood was used to build houses, the leaves were used for roofs, the fibers were woven into rope, hollowed out trunks were used as irrigation pipes, and date pits fed to camels.
   ii. Wheat (Coastal Plains): originated in the Middle East and was first domesticated by the Mesopotamians
   iii. Pomegranate (Mountains): From Persia; are an important symbol in many religions and culture, often as a symbol of fertility; believed to be the “tree of knowledge”; the modern day word for hand-grenade originates from the French word for pomegranate, grenade.
   iv. Yogurt (Desert): The nomadic peoples of the desert relied on their herd for everything from food to shelter.
   v. Garbanzos: Originated in Southern Turkey but very important in India, Pakistan, Latin America, and Europe; also known as chickpea, Indian pea, ceci bean, Bengal gram.

f. Explain that foods native to the Arabian Peninsula traveled via trade routes to become staple foods in other cultures.
g. Ask students to wash their hands and join their table group.

At the Table

3. Application* (60 minutes)
   Students prepare a Middle Eastern Mezze Platter and eat it.
   a. Meet with the table groups and review the recipes.
   b. Demonstrate how to cut vegetables into a crudité.
   c. Demonstrate how to use and care for the immersion blender or food processor.
   d. Assign cooking jobs.
   e. Prepare the recipes.
   f. Set the table; eat; clean up.

At the Closing Circle

4. Reflection* (10 minutes)
   Students reflect on today’s class time.
   a. Ask each student to name one ingredient and its climatic region of origin.
**Vocabulary**
Crudités
Arabian Peninsula
Desert
Oasis
Coastal plains
Mountains

**Contributors**
All lessons at the Edible Schoolyard Berkeley are developed in collaboration with the teachers and staff of the Edible Schoolyard and Martin Luther King Jr. Middle School.

Learning Cycle and Think-Pair-Share discussion routine © The Regents of the University of California. All materials created by BEETLESTM at The Lawrence Hall of Science.

**Resources**
K7-8 Visual_Aid.pdf
K7-8 Mezze_Platter_Notes.pdf
Pita_Recipe.pdf
Hummus_Recipe.pdf
Yogurt_Sauce_Recipe.pdf
BEETLES_Learning_Cycle.pdf (See lesson G6-o)
The Arabian Peninsula

4 Climatic Regions

- Desert
- Oases
- Coastal Plains
- Mountains

Architecture

Transportation

Farming and Food

Mountains

Coastal Plains

Desert

Oases

Date Palm
Pita Bread

1 1/2 cups all-purpose flour
1 cup whole wheat flour
1 tsp yeast (about 1/2 package)
1 TBS sugar
1 tsp salt
2 TBS olive oil
1 egg
1 cup water

Combine ingredients in a mixing bowl and knead until well mixed. Place in a mixing bowl and let stand one hour.

Heat oven to 550° or broil.
Divide dough into equal size balls. Press or roll each ball into a very flat disk.
Place on a cookie sheet and bake for 4-5 minutes until lightly toasted.
Hummus

Serve with pita, crackers, or toasted bread. Blend until smooth. Add salt and pepper to taste and add water if thin as needed.

Combine canned garbanzo beans, garlic, 2 tablespoons lemon juice and parsley in a blender or food processor and 2 tablespoons tahini. Salt and pepper 1 clove garlic.

2 cups cooked garbanzo beans
2 tablespoons lemon juice
2 tablespoons tahini
2 cloves garlic

Yum!
Pour yogurt in medium mixing bowl. Add grated radish, 1/2 cup radish, carrot, or cucumber, grated
1/2 cup plain yogurt
3/4 cup plain yogurt
5 sprigs of mint leaves, chopped
Salt to taste
Salt to taste
Meze Platter Notes

Dates

• The date palm was domesticated in the Middle East by 4000 BC. It is one of the earliest cultivated fruits (another is pomegranate), which makes it one of the oldest cultivated plants. The plant's exact place of origin is still debated among scientists and historians, but it is generally agreed that date palms are indigenous to the Fertile Crescent located in what is now Iraq.

• The date palm thrives in oases because its roots need constant access to water and its fruit requires a hot, dry climate. An Arabian proverb says that the date palm must have "its feet in running water and its head in the shade." The fruit of the date palm is called the date, and it is an important food source in the Middle East and North Africa.

• Dates were popular with ancient people of the Arabian Peninsula because the fruit kept well for long periods of time, due to its high sugar content. Every part of the date palm was used: the fruit for food, the leaves for making ropes, the roots for irrigation, the wood for building, and the fibers for making paper.

• We eat the ripe fruit of the date palm, the seed is the pit inside the fruit. Plants grow fruit to reproduce: they entice animals to sow their seeds. Dates are a good source of minerals and are consumed as a staple food in parts of the Middle East, North Africa and Western Asia.

• Dates are high in sugar and a good source of minerals. They are consumed as sweets, used in jams, curries and stews.

• The fruit's English name comes from the Greek word for finger, daktylos. Here it is in Greek: δακτυλος.

• Today both wild and cultivated date palms are found in desert regions of North Africa, the Arabian Peninsula and Asia. They are also cultivated in Mexico and California.

Wheat

• Wheat was one of the first crops to be domesticated, around 7000 BCE. This occurred in the Fertile Crescent, in what is now Turkey.

• Wheat grows in places where the winter is wet and the summer is dry. It has adapted to grow all over the world.

• Wheat was popular with ancient people because it stores well and is versatile: it can be ground and made into a variety of different foods, such as bread, pasta, noodles, couscous, breakfast cereal, cookies and cakes.

• Wheat flour is a major ingredient in the breads and pastries of many cultures. It is used to make bread, pasta, noodles, couscous, breakfast cereal, cookies and cakes.

• Wheat is a cereal (along with rice and corn), which means it is a grass. We eat the grains, which are seeds of grasses, and use the kernels to make flour.

• Wheat can be ground and used to make many things: flour, bread, pasta, noodles, couscous, breakfast cereal, cookies and cakes. We eat the grains, which are seeds of grasses, and use the kernels to make flour.

• We eat the ripe fruit of the date palm, the seed is the pit inside the fruit.

• Today both wild and cultivated date palms are found in desert regions of North Africa, the Arabian Peninsula and Asia. They are also cultivated in Mexico and California.

• Wheat was one of the first crops to be domesticated, around 7000 BCE. This occurred in the Fertile Crescent, in what is now Turkey.

• Wheat grows in places where the winter is wet and the summer is dry. It has adapted to grow all over the world.

• Wheat was popular with ancient people because it stores well and is versatile: it can be ground and made into a variety of different foods, such as bread, pasta, noodles, couscous, breakfast cereal, cookies and cakes.

• Wheat is a cereal (along with rice and corn), which means it is a grass. We eat the grains, which are seeds of grasses, and use the kernels to make flour.

• Wheat can be ground and used to make many things: flour, bread, pasta, noodles, couscous, breakfast cereal, cookies and cakes. We eat the grains, which are seeds of grasses, and use the kernels to make flour.
Whole wheat grains are good sources of energy (carbohydrates), vitamins, minerals, protein and fiber. Processing strips the bran and the germ from the wheat (this prevents spoilage), which removes most of the vitamins, minerals, protein and fiber. Processing strips the bran and the germ from the wheat (this prevents spoilage), which removes most of the vitamins, minerals, protein and fiber.

Turkey, Tijuana, Mexico and California.

Today, durum wheat is grown commercially in all temperate parts of the world, including the Middle East, Egypt, India, China, the Mediterranean, and North America. Whole wheat is a warm climate, fertile soil, and are able to tolerate Tijuana, Mexico and California.

Pomegranates were one of the earliest foods to be domesticated, first cultivated in the Fertile Crescent around 3500 BCE. The plant is native to Tijuana, Mexico and California.

Arubia, Mexico and California.

Today, durum wheat is grown commercially in all temperate parts of the world, including the Middle East, Egypt, India, China, the Mediterranean, and North America. Whole wheat is a warm climate, fertile soil, and are able to tolerate Tijuana, Mexico and California.

Pomegranates were one of the earliest foods to be domesticated, first cultivated in the Fertile Crescent around 3500 BCE. The plant is native to Tijuana, Mexico and California.

Chickpeas were one of the earliest foods to be domesticated, first cultivated in the Fertile Crescent around 3500 BCE. The plant is native to Tijuana, Mexico and California.

Chickpeas were one of the earliest foods to be domesticated, first cultivated in the Fertile Crescent around 3500 BCE. The plant is native to Tijuana, Mexico and California.

Chickpeas were one of the earliest foods to be domesticated, first cultivated in the Fertile Crescent around 3500 BCE. The plant is native to Tijuana, Mexico and California.
Chickpeas belong to the botanical family of legumes, or pulses, and are commonly called "peas" or "beans." The fruit of the plant is the pod, and the seed is the part people eat. They are eaten boiled, roasted and fried.

Like most pulses, chickpeas are high in protein. They are particularly high in lysine, which is an essential amino acid. "Essential" means that this is something the human body needs but cannot make itself. Chickpeas are also high in fiber, folic acid and other important minerals.

Garbanzo bean, ceci bean, chana, Indian pea, sanagalu Indian pea, and Bengal gram are alternate names for the chickpea. In Arabic, the word for chickpea is hummus: ﻋﻤّﺺ.

Chickpeas are still a very important food today in India, Pakistan, Middle Eastern and Mediterranean countries. They have even become popular in the United States: as Hummus, falafel and in salad bars. In addition to being delicious, chickpeas are used as a meat substitute, and there is evidence that they can help reduce cholesterol and regulate blood sugar.

Lentils

Lentils are another of the first foods to be domesticated. They are believed to have originated in the Fertile Crescent between 7000 and 5000 BCE. They have been eaten for thousands of years. Dried lentils store well, and the plant is suited to the climate of the Mediterranean, Arabian Peninsula, South Asia and parts of Africa, where the plant is the pod, and the seed is the part people eat. Lentils belong to the botanical family of legumes, or pulses. The fruit of the plant is the pod, and the seed is the part people eat. Lentils are able to grow in difficult agricultural environments, and can tolerate relatively drier conditions than other food plants. Lentils are also high in protein, and are a good source of iron, fiber and other important minerals.

Lentils are exceptionally high in protein, and are also a good source of iron, fiber, folic acid and other important minerals. Like most pulses, lentils are high in protein. They are particularly high in lysine, which is an essential amino acid. "Essential" means that this is something the human body needs but cannot make itself. Lentils are often used as a meat substitute, and there is evidence that they can help reduce cholesterol and regulate blood sugar.