FOOD Ed.

FOOD EDUCATION FOR CHANGE

UNIT 1:
FOOD AND CULTURE

L.4

FOOD CLASSIFICATION SYSTEMS

Note to Teachers

Over the course of history, systems have emerged to help omnivorous humans select among edible foods. Many scholars consider the loss of these systems to be central to understanding current societal food issues including health and obesity. The humoral system and its variants is the oldest and most enduring example of these systems, and has helped societies in different regions of the world decide what is "edible" and "inedible."

This discussion is fairly abstract and can be difficult for students, but pursuing this topic helps students understand why scholars often describe food as a language and how deeply and richly food can be studied. The conversation about culture helps students to regard food as a carrier of meaning that deserves greater thought and discussion.

Goals *In this lesson, students will*

- learn what it means to be an omnivore
- explore how scholars make sense of what humans choose to eat
- understand that food systems reflect and confirm a society's deeply held beliefs

Objectives

- Students will gain historical perspective by learning about long-enduring systems of eating and health.
- Students will read, analyze, and apply two different theories explaining how humans make choices about what they eat, thereby engaging in scholarly debate.
- Students will learn how perceptions of food fit into the larger worldviews of cultures by exploring the Chinese system of the cosmos.
- Students will consider the concept of gastro-anomie, the idea of having no guide as to what to eat.

L.4

FOOD CLASSIFICATION SYSTEMS

Please use this margin to notate how to best adapt this curriculum to your students.

Materials

- The attached handout.

Instructions

1. Ask students whether they have ever heard of eating chicken soup when they are not feeling well. Have they ever done so?

   Then ask students whether they understand why; solicit responses from the class.

2. Tease them that their answers, while they may be perfectly logical, are all incorrect.

   And tell them that eating chicken soup when under the weather comes from a way of understanding HOW we should eat that developed almost 2500 years ago!

   This ancient system—called the humoral system—taught that food was medicine. Food helped to keep the body in balance, thereby helping to prevent or cure disease. Some foods, however, were too powerful for ordinary people; only people who did very hard manual labor, for example, could digest the healthful properties of meat. So, the best way to make the nourishing properties of meat available to all people was to make a broth made from the meat. Chicken soup, in other words, is chicken prepared in a way to maximize its healthful benefits.

   The humoral system took somewhat different forms in different regions, and provided guidelines for what and how to eat for people in many parts of the world for about 2000 years—and still exists today in East and South Asia.

3. Today's discussion addresses the food rules that taught people how to eat for a large part of human history.

   Warn the students that these ideas are complex and abstract, and can be hard to understand.

   Scholars tell us that the food rules are important because they gave people guidelines by which to make choices. Those rules are not scientific by today's standards, but they were created by ancient scientists and are based in principles that would, in fact, have aided long term health. Those same scholars tell us that we now mostly live in a culture with no guidelines for how we should eat—and the result is a decline in health and wellbeing. In the today's discussion, students will explore two different types of guidelines that scholars use to explain how food classification systems emerge in the first place: 1) ideas shape rules, and 2) environmental conditions shape rules.

4. Distribute handout and work with it together.
   The material may be a bit dense for reading aloud together, but employ the reading practice that works best for your students.

   a. Begin with the first two sections and discuss any questions students might have.

   b. Read together the first part of the "Food and Classification systems" section to the first subheading.

L.4

FOOD CLASSIFICATION SYSTEMS

c. Depending on the needs and abilities of your students, assign all students to read the first subsection (and begin to answer the questions), or give students one of the two subsections (and relevant questions). The first subsection is the most difficult to understand.

   d. Discuss each of these subsections in turn or have one half of the class teach each section to the other.

5. **Take away:** What do your students take away from this discussion? Listen for comments about eating with the seasons (the Chinese Traditional Medicine system), and environmental health (in the Jewish/Islamic prohibition against pork) that might help to ensure long term individual and community health.

   Listen too for ideas that show how food can be connected to larger belief systems, such as the Chinese belief that everything is connected. The balance in the body, therefore, is both a parallel and a contributor to larger cosmic balance. Food, in other words, is important to the body but also carries the values of the culture.

6. Gastro-anomie: So while these systems may—in their particulars—seem very foreign and even nonsensical, these systems gave people clear rules for selecting the foods they ate. In the case of the humoral system, they also encouraged eating diverse, seasonal foods, which we now know is the healthiest way to eat.

   So what might happen if there are no rules? Or if the rules that exist have no deeper meaning than daily recommended amounts of sodium or calcium?

   See where this question takes your students, before you introduce the idea that, for many scholars, we live in an age of gastro-anomie—an age where we don't have rules to guide our selection of food, or those rules are as shallow as most of the diets people try.

   Can a lack of rules account for our mounting health costs associated with obesity and its accompanying conditions?

7. Wrap up this discussion by asking students to mull over the following: If students were to write down everything they ate for a week, would they be able to discern any food rules? And would they be able to identify the ideas or conditions that helped to shape those rules?

Lab

Lesson 4's lab builds on the notion of ancient classification systems by cooking a dish that comes follows the Chinese Traditional Medicine system. Chinese Traditional Medicine (TCM) is extremely old and complex, and the cooking lab cannot do it justice. What is worth stressing in this lab is that this system encourages eaters to pay attention to how they feel, use food to ensure and restore health, and to eat a vast array of foods across the seasons.

You can read a very short introduction to food and TCM at http://www.shen-nong.com/eng/lifestyles/food_diet_advice_season.html. This recipe included here was designed for a winter lab. Nina Simond's 2011 cookbook, *A Spoonful of Ginger*, is also an excellent resource to tailor a recipe to the season and locally available vegetables. This lab is an excellent time to introduce one or two ingredients that might be unfamiliar to students—to continue to add to their food experiences and to remind them that the widest variety of foods will offer the best nutrition!

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FOOD CLASSIFICATION SYSTEMS

MUNG BEAN NOODLES with Vegetables and Black Bean Sauce

Serves 12 students when you give them each about ¾ cup taste portion

Adapted from https://healthynibblesandbits.com/vegetable-stir-fry-mung-bean-noodles/

Equipment List

- 1 large saucepan with lid
- 1 large pan
- 2 induction burners
- 1 whisk
- 8 cutting boards
- 8 knives
- 1 wooden spoon
- 1 strainer
- 1 pair tongs
- 2 peelers
- 1 large bowl
- 2 medium silver bowls
- 2 small silver bowls
- 1 tablespoon measure
- 1 ½ tablespoon measure
- 1/3 cup measure
- 1 teaspoon measure

Food Items

- 5 oz. mung bean noodles
- ½ large sweet onion
- 3 garlic cloves
- 2 Tbsp. minced ginger
- 1 chili pepper
- 1 lb. Spinach
- 3 large carrots
- 1/3 cup tamari
- 1 1/2 Tbsp. brown sugar
- 2 Tbsp. Black Bean Sauce
- 3 Tsp. Sesame Oil

FOOD CLASSIFICATION SYSTEMS

MUNG BEAN NOODLES with Vegetables and Black Bean Sauce

Ingredients

- 5 oz. mung bean noodles
- ½ large sweet onion
- 3 garlic cloves, minced
- 2 Tbsp. minced ginger
- 1 chili peppers, seeds removed and sliced
- 1 lb. Spinach, stems trimmed and roughly chopped
- 3 large carrots, small dice
- 1/3 cup tamari
- 1 1/2 Tbsp. brown sugar
- 2 Tbsp. Black Bean Sauce
- 3 Tsp. Sesame Oil

Directions

1. Fill a large saucepan with 3-4 inches of water and bring it to a boil. Drop the noodles into the boiling water, and let it cook for about 4 to 5 minutes or until the noodles look translucent. Drain the liquid and run the noodles under cold water.
2. Heat a large stir fry pan with olive oil over medium high heat. Once the pan is hot, add the onions and let it cook for a minute. Add the garlic, ginger, and chili, and stir until the onions start to brown.
3. Add the spinach and carrots and cook for about 3-5 minutes.
4. Mix the soy sauce, sugar, sesame oil, and black bean sauce in a small bowl and pout into the noodles and vegetables. Cook for an additional 2 minutes. Serve hot.

L.4 RUBRIC

FOOD CLASSIFICATION SYSTEMS

Use the space below to note key ideas, themes, or surprising takeaways from the reading.

Humans are Omnivores

Omnivore (noun), omnivorous (adjective), omnivorousness (noun)
From Latin: omnis "all" + vorare "devour, swallowing"
An organism that eats both plants and animals, drawing from a wide variety of food sources to meet its nutritional needs.

How did we become omnivores?

The human species developed over the course of millions of years, and our species, Homo Sapiens, evolved 200,000 years ago in Africa.

As humans evolved, their ability to walk on two legs (bipedalism) and their big brains demanded a lot of energy. Therefore, our ancestors had the need to feed themselves with the widest variety of food sources.

The invention of cooking was revolutionary in helping humans to get more energy out of their foods. Cooking softens foods, making them easier to digest. Digestion is the process of breaking down our food and extracting nutrients from it.

Culture and Food Classification Systems

We are omnivores, but human societies still make choices about what they eat – they don't all eat everything that is safe to digest. Some foods that humans could eat are defined as inedible or taboo, while others are deemed edible. These choices are cultural, rather than nutritional, decisions and could have been made by societies thousands of years ago and passed down through the generations.

Scholars have two general theories about how we classify food as edible or inedible.

Theory One: Values and beliefs. Or, Practices Put Beliefs Into Action.

One theory argues that the edible foods, and ideas about the proper ways to cook and eat them, reflect a society's deepest values. Whether a food is categorized as edible or inedible, beneficial or harmful, expresses how a culture believes that both the individual and community can survive and thrive.

Likely the oldest and definitely most widespread classification system is called the **humoral system**. Regional variations of the humoral system developed in Europe, the Middle East, Asia, North Africa, and into the Western Hemisphere as Europeans colonized the Americas. Health, in the humoral system, came from the balance of bodily fluids, known as humors.

While the humoral system looks and sounds very odd to our modern sensibilities, it was the most common way to describe organisms for 2,000 years, and forms the basis of the Indian Ayurvedic medical system and what we call Chinese Traditional

L.4 RUBRIC

FOOD CLASSIFICATION SYSTEMS

Medicine. Applying the idea that food rules put deeper beliefs into action, we can use the humoral system as it developed in China to identify two big ideas central to traditional Chinese thought.

In the particular form taken by the humoral system in China, food is one part of the cosmos (the system in which everything in the universe is ordered).

#1 In traditional Chinese culture, aspects of the human, natural and supernatural world tended to be grouped into fives, and associated with one of the five elements: wood, fire, earth, metal and water. These elements, described as "Movement" in the Chinese system, are transformed from one to the other: wood to fire, fire to earth, etc. Change, in other words, is the natural state of things. Examine the chart below, which illustrates some of those categories, and the order of change (from left to right and then cycling back to left).

MOVEMENT	WOOD	FIRE	EARTH	METAL	WATER
COLOR	Green	Red	Yellow	White	Blue or black
DIRECTION	East	South	Center	West	North
HEAVENLY CREATURE	Azure dragon	Vermillion bird	Yellow dragon	White tiger	Black snake or tortoise
PHASE	New yang	Full yang	Yin/yang balance	New yin	Full yin
ENERGY	Generative	Expansive	Stablizing	Contracting	Conserving
SEASON	Spring	Summer	Change of seasons	Autumn	Winter
CLIMATE	Windy	Hot	Damp	Dry	Cold
DEVELOPMENT	Sprouting	Blooming	Ripening	Withering	Dormant
LIVESTOCK	Dog	Sheep/goat	Cattle	Chicken	Pig
FRUIT	Plum	Apricot	Jujube	Peach	Chestnut
GRAIN	Wheat	Beans	Rice	Hemp	Millet
EMOTION	Anger	Happiness	Anxiety	Grief/sadness	Fear
ZANG (YIN ORGANS)	Liver	Heart/ pericardium	Spleen/pancreas	Lung	Kidney
FU (YANG ORGANS)	Gall blader	Small intestine	Stomach	Large intestine	Urinary tract
SENSORY ORGANS	Eye	Tongue	Mouth	Nose	Ears
SENSE	Sight	Speech	Taste	Smell	Hearing
TASTE	Sour	Bitter	Sweet	Pungent (spicy)	Salty
SMELL	Rancid	Scorched	Fragrent	Rotten	Putrid
LIFE	Birth	Youth	Adulthood	Old age	Death

L.4 RUBRIC

FOOD CLASSIFICATION SYSTEMS

QUESTIONS TO CONSIDER:

1. Categories

a. What aspects of the world around them did the ancient Chinese put into categories? *(Remember the table provides examples of categories rather than the full system.)*

b. Can you identify two categories that seem related? And two categories that seem like they would have no relationship?

c. In a society that believes heavenly creatures, climates, and the senses exist in a clear relationship, what other things might also be related?

d. On the basis of this chart, how does it seem that the Chinese understood the world around them?

L.4 RUBRIC

FOOD CLASSIFICATION SYSTEMS

2. Edible Foods

a. If food in the humoral system is both nourishment and medicine, food-related categories should be important. What food-related categories do you notice?

b. What kind of eating habits might these categories encourage, according to this chart?

#2 In the humoral system, all organisms (plants and animals) were perceived as being hot or cold, and wet or dry. Health came from eating foods that corrected a too-dominant humor. A fever, for instance, reflected too hot and dry an organism. Eating cooling, moist foods would treat a fever. Bitter foods could dry dampness, spicy foods could warm, etc. Food, in other words, served as medicine.

As a general rule, you could not count on being able to identify the characteristics of an organism by its appearance, texture, or smell. While the qualities of organisms were sometimes apparent to the senses (a cucumber was, for example, perceived as a cooling food), the system was a conceptual, complex one that set out the relationship between the natural and spiritual worlds.

QUESTION TO CONSIDER:

In what ways, then, does an eater act as his or her own doctor? What is the goal of eating in this system?

L.4 RUBRIC

FOOD CLASSIFICATION SYSTEMS

Use the space below to note key ideas, themes, or surprising takeaways from the reading.

Theory Two: Environmental demands. Or, Beliefs Grow Out of Practices.

Another theory about how a culture defines what is edible and what should not be eaten was developed by anthropologist Marvin Harris. He argues that food taboos grew out of environmental dictates. That is, foods that were suited to a particular environment were deemed edible, while foods that used too many natural resources became taboo. Harris has written, for example, about the sacred cow of India. Not all of India's Hindus are vegetarian, but none eat beef. In his model, living cows offered labor (by pulling a plough), food (through their milk), and fuel and fertilizer (from their manure). A cow offered more, in other words, when kept alive than when killed for meat.

Consider another example. Both Jewish and Muslim traditions forbid pork. Harris argues that this ban *grew out of* (rather than preceded) environmental concerns. The selection below explains his thinking:

Pigs are omnivores, but they are not ruminants [like goats or sheep that thrive on grasses, bushes and leaves--high cellulose foods unfit for human consumption]. In fact in digestive apparatus and nutrient requirements, pigs resemble humans in more ways than any mammal except monkeys and apes... [In other words, they do best when they eat the same foods as humans.] But there was more to the ban on pork than the pig's inability to thrive on grass and other high-cellulous plants. Pigs carry the additional onus [burden] of not being well adapted to the climate and ecology of the Middle East. Unlike the ancestors of cattle, sheep, and goats, which lived in hot, semiarid, sunny grasslands, the pig's ancestors were denizens [inhabitants] of well-watered, shady forest glens and riverbanks. Everything about the pig's body heat-regulating system is ill suited for life in the hot, sun-parched habitats which were the homelands of the children of Abraham. Tropical breeds of cattle, sheep, and goats can go for long periods without water, and can either rid their bodies of excess heat through perspiration or are protected from the sun's rays by light-colored short fleecy coats (heat-trapping heavy wool is a characteristic of cold-climate breeds). Although a perspiring human is said to "sweat like a pig," the expression lacks an anatomical basis. Pigs can't sweat—they have no functional sweat glands.

[Harris goes on to say that pigs cool off by wallowing in moisture. A pig can use water, but mud is even more effective in dispersing the heat. A pig without a source of moisture is vulnerable to heatstroke in the hot temperatures common to the Middle East, and the bigger the pig, the more intolerant of heat it becomes.]

Raising pigs in the Middle East therefore was, and still is, a lot costlier than raising ruminants, because pigs must be provided with artificial shade and extra water for wallowing, and their diet must be supplemented with grains and other plant foods that humans themselves can eat.

[Furthermore], pigs have less to offer by way of benefits than ruminants. They can't pull plows, their hair is unsuited for fiber and cloth, and they are not suited for milking. . . Their meat is their most important produce.

L.4 RUBRIC

FOOD CLASSIFICATION SYSTEMS

QUESTIONS TO CONSIDER:

1. Why, according to Harris, are pigs poorly suited to the environment in the Middle East?

2. All farmers have limited resources. Why might a farmer in the ancient Middle East decide to put his resources elsewhere—say in sheep or goats?

3. How long do you think it takes for a practice that is bad for the environment to become a food taboo? How do you think it might happen?