

Topic: **The History and Diversity of Bread Around the World**

Target Grade Level: 11

Subject Area: Home Economics: Foods & Nutrition

Planning Framework: Romantic

Unit Length: 2 -3 weeks

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Romantic Framework

1. Identifying “heroic” qualities:

Main heroic quality:

Diversity

There are thousands of different kinds of bread eaten by almost every culture around the world.

Adaptability

In each region of the world, bread has traditionally been made from the grains native to that area.

Alternative(s):

Life Giving

Bread and grain products provide our bodies with an important source of energy and carbohydrates. They comprise the largest part of most of the world's food source.

Ingenuity

The simple, yet complex process of making a loaf of bread

Images that capture the heroic qualities:

Bread is eaten all over the world by almost every culture. If we traveled to the other side of the planet we would probably find a culture very different from our own, yet with its own version of bread. The diversity of this staple food is endless and every culture prides itself in having its own unique kind of bread. If we went on an international culinary bread tour, we could eat baguettes from France, focaccia from Italy, soda bread in Ireland, naan and roti from India, dark rye bread in Russia, tortillas in Mexico, pandesal in the Philippines, bannock from North America, or mantou in China (“Bread”, 2010). Almost any variety of grain can be turned into bread, which makes it one of the most diverse foods in the human diet. Breads are formed into endless varieties, shapes, and sizes; with many different flavours and textures. The grains that we use in our bread products today have been grown on earth for thousands of years with some varieties having been adapted over time to successfully produce in various kinds of soil conditions. Bread products are considered a staple because they usually form the basis of a traditional diet and provide us with most of the calories and carbohydrates that we need to maintain good health. The process of bread making is ingenious and magical in that it combines very simple ingredients: flour and water (sometimes we add yeast, seasoning, or oil). The ingenuity of bread is evident in a process that is so simple yet contains complex scientific properties. Students can marvel at the simple ingenuity of human achievement in transforming the rudimentary process of baking a flour and water paste on a hot stone, to the mass production of factory produced bread that feeds millions of people around the world everyday.

2. Shaping the lesson or unit

2.1. Finding the story or narrative:

What's "the story" on the topic? How can the narrative illustrate the heroic qualities of the topic?

The narrative for this unit can start with something that is familiar to most students. Begin by having them consider a simple slice of bread. Perhaps they have a sandwich in their lunch or had a piece of toast for breakfast. This can now become the perfect vehicle for the students to embark on the journey of this slice of bread and how it came to be - its many relatives near and far as well as some of its humble ancestors. The narrative that encompasses this unit is meant to engage the students' sense of wonder about the subject matter. It functions as a pool of information that the teacher can draw from in order to teach the objectives of the unit. Rather than teaching this unit in a traditional manner where information is transmitted by the teacher, the students are attaching themselves to the subject matter through the topic's narrative.

As mentioned, you can begin this unit by having the students think about the humble slice of toast that popped out of the toaster this morning. It might have been hearty whole grain with flax seeds, robust rye with caraway, aromatic apple, cinnamon & raisin, or just plain old wonder white. Whatever flavour, colour, size, or shape, if they enjoyed a slice of bread for breakfast, then they aren't alone. Billions of people all over the world probably had some form of bread for breakfast this morning. The diversity of bread around the world is almost limitless with every culture claiming its own specialty. This means that almost every human being on the planet has or will have eaten bread in some form or another on a regular basis. Most likely their slice of toast was baked in a large factory with big, shiny stainless steel ovens, rolled down the assembly line into waiting plastic packaging, loaded onto large trucks, and eventually made its way to the local neighbourhood store and finally into their toaster. That is a very long journey for a slice of toast. The story of their toast doesn't really begin in a factory however. Most students have probably never thought this much about a humble piece of bread.

Some students may know that bread comes from some type of grain, but they may not know the history behind it. Before they think of the wheat that their slice of bread was made from, students can look at bread's very humble historical beginnings, which are as far away from modern technology as anyone can get. In fact, the technology at the time of the early bread bakers would have been nothing more than a stone and some very hot fire. Students can imagine what it would be like living 12,000 years ago and being in charge of making bread for the family meal. They would first have to go out and look for any wild grains that could be picked and brought back to the cave. Since nothing would be grown domestically yet, there would be no food stored up. This wouldn't happen for another few thousand years. For now their diet is limited to the animals they can hunt and the wild food growing in the vicinity of where they live. Whatever it is that is found, it's cooked and eaten right away because no one would have the capacity to store food for long periods of time. The stalks of grains that are picked would first have to be rubbed with a stone for the grain to separate from the rest of the stalk. But then in order for the hard, dry kernels to be eaten; they would need to be pounded into flour and mixed with water to form the dough. Bread could then finally be baked on a large flat rock on the fire (Jones, 2003). The finished bread would look nothing like the fluffy piece of toast that will magically jump out of a hot metal box a few thousand years into the future.

It is remarkable how much time has passed since our prehistoric friend would have baked his bread and how many billions of loaves have been baked and eaten since then. Even though so much time has lapsed, modern bread is made much the same

way, with a few minor changes here and there. Students can learn that bread was not leavened (left to rise) until much later in history. The discovery of anyone adding leavening to their bread, dates back to the Egyptians who finally discover a way to turn flat and dense bread into something light and ethereal (“History of Bread”, 2010).

There is much history transpiring from the Egyptians to the Industrial Revolution that can provide opportunities for all sorts of stories and research that students could participate in. As the narrative jumps to a few thousand years later, things get interesting with the invention of commercial machinery. Now people can buy commercially made bread whenever they want. In fact, baking bread during the Industrial Revolution was seen as something the lower classes did because they couldn’t afford to buy it from the large-scale bakeries that were now in operation. Even though much of the modern western world now relies on mass producing most of its bread products, there are still many cultures in the developing world that bake bread the same way it was baked thousands of years ago, hand grinding the grain and baking it on a hot stone. There are also still some rural villages that have large stone communal ovens where people bring their unbaked loaves to be baked in the village oven.

2.2. Finding extremes and limits:

What aspects of the topic expose extremes of experience or limits of reality? What is most exotic, bizarre or strange about the topic?

Exotic/extreme content that best embodies the heroic quality:

There are many strange and wonderful stories that embody the heroic within this narrative. Students can learn the story of Ötzi the Iceman who is a well-preserved natural mummy found in a glacier in the Alps. After his body was examined, x-rayed, and dated, it was determined that he lived about 5300 years ago. Ötzi is a particularly interesting mummy because of the way that his body is naturally preserved by the ice in which he was found. This means that much of the skin, hair, and internal organs are left intact. On analysis of his intestines, scientists discovered the contents of the dinner he had consumed before he died. They discovered meat, some roots, and fruits. Also discovered were some processed grains that would probably have been eaten as a type of bread (“Ötzi the Iceman”, 2010). These were the remains of partly digested prehistoric bread!

Students can also follow the bizarre story of the loaf of bread covered with volcanic ash discovered amidst the ruins of the ancient city of Pompeii. Students can imagine that this loaf of bread may have been bought in the market or baked by a wealthy family’s slave the day the volcano erupted. However it came to be, the bread was covered that day with ash and lava from Mount Vesuvius, which erupted and wiped out the entire city (“History of Bread”, 2010). How could the inhabitants know that they would eat their last piece of bread that day?

Something equally fascinating and bizarre would be an exploration into the largest sandwich ever made or finding out who holds the record for the fastest time in a sandwich-eating competition. They could also learn that today’s sandwich is actually named after John Montagu, 4th Earl of Sandwich, who was a cribbage playing English aristocrat, seemingly too busy for proper dining and asked his valet to regularly serve him the supper’s roast tucked between two slices of bread in order for his card game to continue uninterrupted (“Sandwich”, 2010). Have the students describe their perfect sandwich or some famous favourites of the past i.e. Elvis Presley’s deep-fried peanut butter and banana sandwich.

2.3. Finding connections to human hopes, fears, and passions:

To what human hopes, fears, and passions does the topic connect? What ideals and/or challenges to conventions are evident in the content? Through what human emotions can students access the topic?

What content can be best shown in terms of hopes, fears, intentions or other emotions?

The emotional connections to the topic are found throughout the narrative threaded into this unit. Students learn about bread and its history, its universal significance in almost every culture and the simple yet mysterious process involved in producing it. They can see for themselves what it's like to make their own bread. Mastering something like baking homemade bread is very satisfying and can give students a tremendous sense of accomplishment. The process is very emotionally satisfying as they mix ingredients, wait for the leavening to take affect, and then smell the loaf baking in the oven. As the students work the dough with their hands they will begin to appreciate the process that is involved in something they probably eat everyday. They can also begin to understand the magnitude of what it takes to feed the world's six billion people everyday. How much wheat would we need to bake bread for the earth's population for one day? How many grains of wheat does it take to make up the flour in a loaf of bread? These might be some of the questions that students can find the answers to. They can learn about the origins of the loaf of bread in the supermarket and track its path from the farm to their table. Students might want to study the bread from another culture by creating their own narrative that follows the day in the life of someone living in that culture and what they must do to bake their daily bread.

2.4. Employing additional cognitive tools of Romantic understanding: What kinds of activities might you design to deploy other tools in your students' cognitive toolkits?

Collections and hobbies:

What parts of the topic can students explore in exhaustive detail? What activity might engage students in learning everything they can about some aspect of the topic?

The unit is ideal for exploration and has many different possibilities for exhaustive investigation. The teacher can bring in different types of bread, including breads of other cultures. The class can then perform their own taste tests and record their findings in a descriptive log. Students can also search out the word bread in as many languages as they can and teach these new words to the class. During the baking part of the unit, students might be given the option of creating their own flavoured bread. They could come up with as many different flavours and ingredients that could be added to bread for an interesting variation to a basic recipe such as cheese, raisins, olives, seeds, chocolate, nuts, herbs, beans, etc. The possibilities for adding ingredients to a simple loaf of bread are endless. The students could also be asked to record what variations of bread products they eat during one week. They will be able to see how much we depend of grain products in our diet. How many times did they eat a bread product today?

Students can also work on a research project to discover how bread plays out in human history beyond simply feeding us. There are numerous accounts of bread in other contexts. They can find out how bread plays a role in many religions around the world as a spiritual symbol. Most Christians know the symbolic significance of Jesus' miracle when he fed 5000 people with only 5 loaves of bread and 2 fishes. To a Christian,

bread is a symbol of Christ's death and the believer's renewal. For the local baker, it is much the same. He knows that in order for his bread to have its final rise in the oven, the yeast must first give up its life and "die". When the yeast reaches this thermal death point of 140° Celsius it is no longer a living organism. That's why the word leaven means, "enliven" or "bring to life". (Reinhart, 2008). Bread symbolizes transformation. For Jews, who celebrate Passover, or the Feast of Unleavened Bread, eating bread without leavening is a reminder of their ancestors' quick exodus out of Egypt. The story tells us that the exiled Jews left in such haste that they could not even wait for their bread to rise. Whenever Buddhist monks hold bread in their hands, they believe they are holding on to the cosmos (Kumar, 2007). Bread is symbolic of life and sustenance the world over and is often used as a metaphor such as "the bread of life", "bring home the bread", or "our daily bread". Bread was historically used to signify someone's social status. The darker your bread was, the lower your social status was (Gifford, 2010). Students might be interested to find out why this was the case, and discover that white flour was considered more difficult to process than the darker, whole grain flours ("The history of bread", 2010). The teacher can discuss how this has now reversed and that white flour is now considered less desirable than its nutritional opposite. This might be a great way to start a lesson on the nutritional benefits of whole grain bread versus white. Bread has even been the cause of riots and during the French Revolution when the peasants had no bread for their tables; it was thought that this was the origin of Marie Antoinette's famous quote "let them eat cake". Apparently, we now know that it was actually spoken by someone else ("The history of bread", 2010). There are many facts and bits of trivia that students could explore in this portion of a bread unit.

Change of context:

What kinds of activities could change the context in the classroom? How might drama or role-play be employed or how might students engage the body's senses in learning?

The teacher could start this unit by bringing in different grains, some of which are raw and some that have been soaked to soften their texture. This could include a wide variety including some of the lesser-known ancient grains such as spelt, kamut, or emmer. Students would be encouraged to look, feel, and taste the grains. This would be an effective way of introducing the students to the rudimentary basics of bread. As the narrative describes the prehistoric beginnings of bread making, the students would be able to experience what it would have felt like to eat these grains so many thousands of years ago. A field trip to either a large-scale bakery or an artisan style bakery at some point in the unit would allow the students to see the process of bread making in a real and tangible way. As well, at the start of the unit the teacher could introduce the class to the wonderful smell of freshly, baked bread and invite the students to taste it and discuss what kind of memories it evokes. Some students may never have eaten freshly baked homemade bread.

The literate eye:

How could graphs, lists, flowcharts or other visual formats be employed in learning about the topic?

A part of this unit could focus on breads from other countries. Students can work in groups to research world grain crops and where the majority of the world's wheat is grown. They can create pictorial maps to indicate what kind of grain is grown in various countries and as a result, they can relate the country's major crop to a staple in that culture's diet. For example, Mexico primarily eats corn tortillas while Canada eats bread made mostly from wheat. They can find a recipe from a particular country and share it

with the class. The class can create a booklet of international bread recipes complete with flags and other artwork. The teacher can provide visuals and diagrams of a wheat kernel and discuss its nutritional make up. This can be followed by a look at The Canada Food Guide to explain the nutritional importance of bread and grain products in our diet. Students can also watch a video about how bread is made.

The sense of wonder:

What kind of activity might evoke students' sense of wonder? How could you use that sense of wonder to draw students forward in thinking about further dimensions of the topic?

The most effectual activity to evoke a sense of wonder in this unit is for the students to discover the scientific and magical properties that yeast contributes to baking bread. Students can learn firsthand what happens when they mix yeast, water, and sugar together. Flour and water are the main components of the dough, but it is the magical properties of yeast that leavens it and makes it rise into a typical light and airy loaf of bread. The story of yeast is full of wonder and students can learn about it through the people that first leavened their bread by exposing uncooked portions of dough to the air and harnessing the airborne microorganisms. The first person who leavened bread this way might have discovered this by accident as he or she mixed a batch of dough together, but was unexpectedly called away, only to come back a day later to find the dough overflowing from the mixing bowl. Or how about the story of the monks in early medieval Europe who would skim the foam from their beer, mix it into their dough to produce the lightest and fluffiest bread in the parish ("Yeast", 2010). The story might also follow the old gold prospector during the Yukon Gold rush who carried around the same piece of sourdough starter for years, and every time he would make bread, he would use a little of it, but keep it growing by feeding it with some new dough. The story can mention that this type of bread leavening has been traditionally handed down from generation to generation and that a strange looking blob of one hundred year old stiff dough can actually be the crucial component in baking the perfect loaf of fluffy bread. If the teacher can find a piece of starter, it would be very interesting to bring this in for the students to look at. The students can be taught that yeast is a living organism living in the air all around us. Part of the lesson could have the students producing their own bread "starter". They can keep a small piece of the dough from the loaf they bake in class, or if the teacher is really adventurous, she/he can teach the students how to make their own leavening by mixing water, apples, and flour together. The students will be amazed to witness the strange chemical reactions that take place. They are making their own yeast! Students can also learn about the amazing chemical reactions that happen to the dough as it bakes in the oven. They can learn that when the dough is put into the oven, it starts to heat up. As all of the gases trapped in the bread heat up, they expand. This is why the bread rises further in the oven. They will learn that the oven must be set at a certain temperature in order for this to happen. The oven also helps dry out the moisture that is in the dough. The beautiful browned bread that they eventually pull out of the oven is a result of the carbohydrates and the proteins in the wheat reacting with the hot temperature of the oven. The students will begin to understand that in order for all of these chemical reactions to take place, there are many variables that need to be just right (Solway, 2009).

Embryonic tools of philosophic understanding:

Consider how to frame the topic in terms of a general idea or theory. How can students begin to move from the particular aspects of what they have been learning to a more

general explanation? How can students' sense of agency be engaged?

Students can explore the principles of mass manufacturing and how these have changed the face of food production in most of the western world. They can use their slice of toast as an example and follow the route that a commercially produced loaf of bread must travel in order for us to pop it into the toaster. This might be an opportunity to discuss the differences between a commercially produced loaf of bread and a homemade one. Students should be made aware of the many preservatives that are found in most processed foods and can discuss why these preservatives are found in so many of the foods that we buy and eat everyday. They can begin to contemplate the cumulative effects that processed foods could have on their own bodies as well as the effects on the earth as a whole. This would be an ideal opportunity to compare the health costs of processed foods versus whole foods. An interesting activity would be to compare the shelf life of a commercially produced slice of bread with a homemade slice. (See the Resources). Students will be fascinated (and hopefully disgusted) to see that preservatives can lengthen the life of most processed foods. Class discussion could also range from growing genetically modified crops and how this plays into the security of global food sources. Students can learn that the world's dependency on oil is also related to food distribution. A broader extension to this unit could incorporate a look at the inequity in the world's food distribution system and how this has ultimately contributed to a great deal of the world's current hunger issues. Students could do a comparative research project and document the weekly food consumed by an average North American family compared to a family in an Asian or South American country. Alternatively and as an optimistic conclusion, they can use their newly acquired bread baking skills in a positive way by organizing a bread-making day and donating their homemade and nutritious bread to a homeless shelter or a food bank.

2.5. Drawing on tools of previous kinds of understanding:

Somatic understanding - How might students use some of the toolkit of Somatic Understanding in learning the topic? How might their senses, emotions, humor, musicality, and so on, be deployed?

Playing with food is in itself a very emotional and sensual activity. Mixing and kneading dough is much like working with play dough. This unit allows students to have the opportunity to get physical with their subject matter. They use their bodies as they knead the dough, they smell the bread baking, and they taste the finished loaf. They can also experience the taste of raw wheat kernels as they imagine the story of the early humans eating them.

Mythic understanding – How might students use some of the toolkit of Mythic Understanding in learning the topic? How might abstract and affective binary oppositions, metaphor, vivid mental imagery, puzzles and sense of mystery, and so on, be deployed?

Some of the binary opposites to explore within this unit can focus on survival and death as well as difficult and easy. Students can consider the realities for people from parts of the world who consider bread essential to their survival and that having bread is the difference between life and death. Because they are also learning about the history of bread through the narratives within the unit, they will realize that finding food 12,000 years ago was sometimes difficult not to mention dangerous and that putting a meal on the table today is a relatively easy task in comparison.

3. Resources

What resources can you use to learn more about the topic and to shape your story?

What resources are useful in creating activities?

List of resources:

There are many fantastic cookbooks that contain useful information on the topic along with many recipes that are simple enough for beginner bakers to use.

Aside from many Home Economics teacher resources available; the following 2 books contain a wealth of information that would be useful: "Home Baking: Sweet and Savory Traditions from Around the World", and "Flatbreads and Flavors: A Culinary Atlas", both written by Naomi Duguid & Jeffrey Alford.

Wikipedia contains tidbits of factual information useful for fleshing out parts of the narrative.

Many public libraries also contain a substantial children's non-fiction section with books related to this topic.

The Canada Food Guide is available on-line and provides many different versions including a First Nations Food Guide as well as Food Guides in other languages.

The television series called "How it's Made" has a video called "How it's Made: Bread" that is a short 6 minute video outlining factory production of bread.

Sally Davies is a photographer who has documented the life of a McDonald's Happy Meal. She visually records the burger and fries as it sits undisturbed on her kitchen table for a period of 180 days to find that everything, including the bun, looks virtually the same as the day she bought it. It can be viewed at sallydaviesphoto.com.

Taking a trip to the local bakery would also be a great resource as well as touring a large scale baking facility such as Canada Bread in Langley.

4. Conclusion

How does the narrative end? How can one best bring the topic to a satisfactory closure and how can students feel this satisfaction? Alternatively, what new questions can draw students to think more deeply about the topic? How can you extend students' sense of wonder?

Concluding activities:

An obvious way to bring this lesson to a close would be to have students bake their bread in class and share it with their fellow students. Perhaps they could plan a sandwich buffet to showcase their baking skills and enjoy a meal together as a class. They could also compile their collected recipes and create a bread book complete with recipes, bread trivia, artwork, jokes, etc. A copy could be given to each student in the class.

5. Evaluation

How can one know that the content has been learned and understood and has engaged and stimulated students' imaginations?

Forms of evaluation to be used:

Evaluation of students' learning throughout this unit can be evaluated by assessing students' enthusiasm, class participation and final work. There are a number of options as to the kinds of projects students can be engaged in. They can be observed for their work in compiling their international bread lists, their demographic grain maps, or their understanding of Canada's Food Guide. On a deeper level, teachers can ensure that students have been engaged by the wonder of the topic by assessing the students'

narratives written on bread of another culture or on the research they have compiled about the significance of bread throughout history. Students can be evaluated on how well they have learned the practical part of the unit and the techniques required to bake a loaf of bread. The teacher would ensure that students have understood the methods, procedures, and technical terms required to successfully carry out the baking portion of the unit. The students can do a peer assessment of their bread and evaluate it for colour, texture, height, and taste.

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Prescribed Learning Outcomes Covered within this Unit

Home Economics: Foods and Nutrition Grade 11

Food Preparation Foundations

- demonstrate the ability to accurately evaluate and follow recipes using a wide variety of food preparation techniques and equipment

-demonstrate organization and co-operation in partner and group work, including integration of planning skills (e.g., task sequencing, time management)

- vary ingredients and methods in recipes to affect nutrition, flavour, texture, taste, and quality of the product

Nutrition and Healthy Eating

- analyze individual eating practices as they relate to physical and mental well-being, food fads, and food myths (e.g., comfort foods, trendy diets, exaggerated claims about foods)

- identify ways to improve the nutritional value of recipes

- identify types of food additives and enrichments and their function in food products

Social, Economic, and Cultural Influences

- analyze the effect of food marketing practices on consumer behaviour

- compare the foods, preparation methods, eating practices, and table etiquette of various cultures in Canada and around the world

Career Opportunities

- investigate food-related occupations and careers