

Dear Students, Parents/Guardians,

This packet contains work for all OHS Family and Consumer Science classes (Culinary Fundamentals, Food Science, Principles of Food, and Textile Design) from May 4 thru the end of the school year. All work will be posted in Google Classroom each week; however this packet can be used to complete assignments if the internet is not available. If completing work via this packet, please complete the section(s) dependent upon which class(es) you may have with Mrs. Besancon. **If internet is available, please complete assignments via Google Classroom, not this packet.** Please, if possible, email Mrs. Besancon at orvl_sbesancon@tccsa.net if you have any questions/concerns.

Sincerely,

Mrs. Stephane Besancon
orvl_sbesancon@tccsa.net

Culinary Fundamentals

May 4-May 8

You Be The Dietician-Breakfast Foods

Overview: For this assignment, you will be playing the role of dietician. Your client is an adolescent around the age of 10-12 years old. The client had a Body Mass Index (BMI) that is approaching obese, and his parents recognize that their family as a whole has not been practicing a healthy diet. They are not able to fully teach their child about proper nutrition, so it is important that you are able to educate both the child and his parents so they have the information needed for him to develop a healthier diet and lifestyle.

Assignment: The next list is of breakfast foods the client commonly eats, which are options that are not so healthy. Provide specific reasons why these meals are ones to consume less of or try to avoid overall. Next, provide suggestions to improve the meal, or suggest a different meal which is similar. Note, it is not always easy, practical, or even necessary to cut out a certain food/meal completely. Oftentimes you can still enjoy the food/meal by choosing smaller portions and/or adding other foods to make it more nutrient dense.

Current Meal	Why Not So Healthy	Suggestions to Improve
Example: Frosted Flakes with Whole Milk	Frosted flakes is a cereal that has a lot of added sugars and poor quality grains. This won't leave you feeling full for very long. Whole milk is high in saturated fat and calories.	1.) Choose a cereal with whole grains/less sugar. 2.) Use 2% or skim milk instead. 3.) Add fruits, like strawberries or bananas, to your cereal.
Sausage and Cheese Egg McMuffin with a Hashbrown and Ketchup		
Two Poptarts/Toaster Strudels		
3 Buttermilk Pancakes with Whipped Cream		
Scrambled Eggs with a side of Bacon and Sausage with White Toast and Butter		
White Bagel or English Muffin with Nutella and Orange Juice		

Cook a healthy breakfast with what you have at home; take a picture and submit with the recipe used.

Culinary Fundamentals

May 11-May 15

- 1.) Look through your pantry and make a list of the herbs and spices you have at home.
- 2.) Find a recipe/think of a dish/food that compliments each herb or spice.
- 3.) Prepare a dish with what you have at home that uses at least one herb or spice. Take a picture of the dish and submit the recipe used.

Culinary Fundamentals

May 18-May 28

- I would like you to complete an assignment similar to the TV show "Chopped". If you are able, watch an episode of "Chopped."
- Please don't go out to the store to buy any ingredients, but use what you have at home.
- Have someone secretly choose 2 mystery ingredients from your home pantry, refrigerator, or freezer; basically 2 ingredients that you will have to cook with (but you do not know what they are).
- Pick a time when you can be in the kitchen and cook. Discover the 2 mystery ingredients and then cook something with those 2 items and whatever else you can find at home! Be creative! Take a picture of the finished dish, tell me the 2 mystery ingredients, and describe what you made/how it turned out!

Food Science

May 4-May 8

Organic Foods

Directions: Answer these questions using prior knowledge. Do not look any of them up!

1. What are organic foods?
2. How is organic food production different from conventional food production?
3. Are organically grown foods better in terms of nutritional value?
4. Are organically grown foods more expensive?
5. Do organically grown foods taste better?
6. What are "free-range" products and how do they differ from their counterparts? What are some "free-range" products sold in the grocery store?
7. Are "natural" and "organic" the same thing?
8. Is meat from "grass-fed" cows healthier?
9. What is rBST and which types of food products might you see it listed on?
10. Would you rather purchase a food product that is "antibiotic-free?"
11. What does GMO stand for? What do you know about GMO's?
12. Are GMO products harmful to our health?

If you are able, look up these questions and see if you can find the "correct" or "actual" answer.

Food Science

May 11-May 15

- Read this:

- In the culinary arts, an emulsion is a mixture of two liquids that would ordinarily not mix together, like oil and [vinegar](#). There are three kinds of emulsions: temporary, semi-permanent, and permanent. An example of a temporary emulsion is a [simple vinaigrette](#) while mayonnaise is a permanent emulsion.
- An emulsion can be hot or cold and take on any flavor from sweet to savory; it can be smooth or have a bit of texture. No matter the type of emulsion, these dressings and sauces enhance the taste of the dish, bringing another level of flavor to foods such as salads and eggs. But what is truly interesting about emulsions is how the liquids blend together and make a thick consistency.
- The Science Behind It
 - When you look at oil and vinegar separately, you wouldn't necessarily imagine they could become unified into a viscous liquid. But certain substances act as emulsifiers, which means they help the two liquids come together and stay together (either temporarily or permanently) when the mixture is agitated. In the case of mayonnaise and [hollandaise](#), it's the lecithin in the egg yolks that acts as the emulsifier. Lecithin, a fatty substance that is soluble in both fat and water, will readily combine with both the egg yolk and the oil or butter, essentially holding the two liquids together permanently.
 - In a stable emulsion, the droplets of one of the liquids become evenly dispersed within the other liquid. The resulting liquid is thicker than the two original liquids were. In the case of salad dressing, oil droplets are suspended within the vinegar. As this vinaigrette sits, however, the oil and vinegar will separate again, making this a temporary emulsion.
 - A fine powder can help to stabilize an emulsion and so can a starch. That's why a [roux](#) is useful in [thickening sauces](#); it's the starch in the flour that joins the butter to the liquid stock. A [cornstarch slurry](#) works the same way as does the technique known as *monter au beurre*, which is essentially a variation on *liaison finale* that involves stirring raw butter into a sauce right before serving it; the fat droplets form an emulsion with the liquid in the sauce.
- Temporary
 - A temporary emulsion is one that will separate in under an hour. It will emulsify again with some sort of agitation such as shaking or whisking. A salad dressing is a temporary emulsion—the oil and vinegar are poured into a jar and agitated until they come together as a unified liquid. The consistency will change, becoming thicker, and the color will be a melding of the two ingredients. Once the vinaigrette sits for a while, however, the oil and vinegar will start to separate. A simple shake or whisk will emulsify again.
- Semi-Permanent
 - If the emulsion is maintained for a few hours before separating, it is considered semi-permanent. Hollandaise sauce is a semi-permanent emulsion; it is made of egg yolks and [clarified butter](#). Clarified butter, which is pure fat, is best for forming the emulsion versus whole butter; whole butter contains around 15 percent water and this water can destabilize the emulsion. A hollandaise sauce will be stable longer than a vinaigrette, but it is recommended that you serve the sauce immediately.
- Permanent
 - A permanent emulsion is one that will remain unified in its thickened state for an extended period of time. Mayonnaise is an example of a permanent emulsion, consisting of egg yolks and oil. Egg yolks and oil would not naturally come together, but when the oil is slowly whisked into the egg yolks, the two liquids form a stable emulsion that won't separate. If the oil is added too quickly or if the mixture is not agitated properly, the egg and oil will not come together and will fail to emulsify.
<https://www.thespruceeats.com/what-is-an-emulsion-995655>

- What did you learn? List 5 things.

Food Science

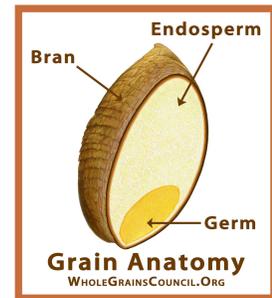
May 18-May 28

- I would like you to complete an assignment similar to the TV show "Chopped". If you are able, watch an episode of "Chopped."
- Please don't go out to the store to buy any ingredients, but use what you have at home.
- Have someone secretly choose 2 mystery ingredients from your home pantry, refrigerator, or freezer; basically 2 ingredients that you will have to cook with (but you do not know what they are).
- Pick a time when you can be in the kitchen and cook. Discover the 2 mystery ingredients and then cook something with those 2 items and whatever else you can find at home! Be creative! Take a picture of the finished dish, tell me the 2 mystery ingredients, and describe what you made/how it turned out!

Principles of Food

May 4-May 8

- Learn about the grain kernel:
- **THE BRAN**
 - The bran is the multi-layered outer skin of the edible kernel. It contains important antioxidants, B vitamins and fiber.
- **THE GERM**
 - The germ is the embryo which has the potential to sprout into a new plant. It contains many B vitamins, some protein, minerals, and healthy fats.
- **THE ENDOSPERM**
 - The endosperm is the germ's food supply, which provides essential energy to the young plant so it can send roots down for water and nutrients, and send sprouts up for sunlight's photosynthesizing power. The endosperm is by far the largest portion of the kernel. It contains starchy carbohydrates, proteins and small amounts of vitamins and minerals.
- **WHOLE GRAINS ARE HEALTHIER**
 - Whole grains contain all three parts of the kernel. Refining normally removes the bran and the germ, leaving only the endosperm. **Without the bran and germ, about 25% of a grain's protein is lost, and are greatly reduced in at least seventeen key nutrients.** Processors add back some vitamins and minerals to enrich refined grains, so refined products still contribute valuable nutrients. But **whole grains are healthier**, providing more protein, more fiber and many important vitamins and minerals.
- Make some sort of grain product dish: pasta, pancakes, muffins, etc. Take a picture to submit and include the recipe used.



Principles of Food

May 11-May 15

- Check out all of the functions of eggs:

<p>Adhesion </p> <p>The proteins in egg products, specifically in the egg white, assist with adhesion and ingredient binding.</p> <p>LEARN MORE ></p>	<p>Aeration/Foaming/Structure </p> <p>Aeration helps provide proper product structure. Egg whites in particular, aerate batters by creating a foam up to six or eight times greater than the original liquid.</p> <p>LEARN MORE ></p>	<p>Antimicrobial </p> <p>An antimicrobial either kills or stops the growth of microorganisms, and eggs can contribute to this process.</p> <p>LEARN MORE ></p>
<p>Binding </p> <p>The binding property of eggs is related to the properties of coagulation and gelation. In essence, binding holds other ingredients together.</p> <p>LEARN MORE ></p>	<p>Browning/Color </p> <p>Product color can contribute to its sales success. Eggs can contribute to the color of baked goods through browning or through the xanthophyll contained in the yolk.</p> <p>LEARN MORE ></p>	<p>Clarification </p> <p>Eggs, especially egg whites, can clarify or make various fluid products clear, such as consommé, broth and wine.</p> <p>LEARN MORE ></p>
<p>Coagulation/Thickening </p> <p>The coagulative property of egg enables them to bind foods together, thicken various applications or benefit the crumb and structure of baked goods.</p> <p>LEARN MORE ></p>	<p>Coating/Drying/Finishing/ Gloss/Insulation </p> <p>Formulators can use egg products for coatings, finishing or gloss, particularly in baked goods, to aid with appearance and finished product color.</p> <p>LEARN MORE ></p>	<p>Crystallization Control/Freezability </p> <p>Eggs help control crystallization, including sugar and ice crystals, in confections, prepared foods and frozen desserts, such as ice cream.</p> <p>LEARN MORE ></p>
<p>Edible Packaging </p> <p>Egg whites can be used to prepare edible packaging films, mainly due to their protein content.</p> <p>LEARN MORE ></p>	<p>Emulsification </p> <p>The egg, acting as an emulsifier, helps stabilize the mixture of two immiscible liquids in various applications, such as baking, salad dressings, condiments and ice cream.</p> <p>LEARN MORE ></p>	<p>Flavor </p> <p>Eggs themselves possess a mild, bland flavor, however egg yolks contain fats that can carry and assist with the flavor release of other ingredients in a formulation.</p> <p>LEARN MORE ></p>
<p>Fortification/Protein Enrichment </p> <p>One large egg contains varying amounts of 13 essential vitamins and minerals in addition to six grams of high-quality protein and all nine essential amino acids.</p> <p>LEARN MORE ></p>	<p>Humectancy/Moisturizing </p> <p>Eggs aid with product humectancy, or the delicate balance between moist eating quality and water activity control. This is particularly important in baked goods.</p> <p>LEARN MORE ></p>	<p>Leavening </p> <p>Leavening impacts product volume, shape and texture. Eggs aid with proper leavening in baking applications.</p> <p>LEARN MORE ></p>
<p>pH Stability </p> <p>The pH of egg products is generally stable, an asset in food formulating.</p> <p>LEARN MORE ></p>	<p>Richness </p> <p>Richness involves a complex blend of taste, mouthfeel and aroma. It's a property supplied by egg products, particularly the yolk, to multiple application formats.</p> <p>LEARN MORE ></p>	<p>Shelf Life Extension </p> <p>Basic components of both the egg yolk and egg white aid in maintaining shelf life, particularly in baked goods.</p> <p>LEARN MORE ></p>
<p>Tenderization/Texture </p> <p>Product texture contributes to the sensory eating experience. Eggs contribute to texture in a variety of ways, for example, helping create a tender crumb in baked goods.</p> <p>LEARN MORE ></p>	<p>Whipping </p> <p>Egg products' whippability plays a role in baking and frozen desserts, such as ice cream, in addition to certain confections.</p> <p>LEARN MORE ></p>	

- Prepare a dish with eggs; can be whatever you have at home/like. Take a picture of the finished dish to submit and include the recipe.

Principles of Food

May 18-May 28

- Learn about Meat and Poultry

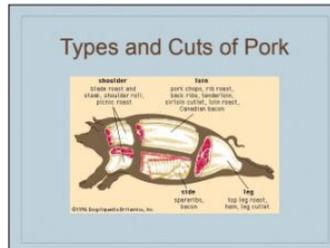
MEAT and POULTRY

Foods and You

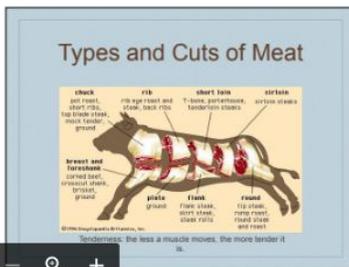
Types of Meats/Poultry

Meat: the edible muscle of animals.

Meat	Source
Beef	Cattle more than one year old
Veal	Calves, usually 1 to 3 months old
Lamb	Sheep less than a year old
Mutton	Sheep over two years old
Pork	Pigs less than a year old
Poultry	Chicken, Turkey, Duck, Goose, etc.



- ### Nutrients Found in Meats
- Protein
 - B-Vitamins
 - Iron
 - Zinc
 - Saturated Fat: meats are high in this; choose lean when possible



- ### Buying Meat
- What to consider:
 - Quality: tender cuts are more expensive (can tenderize on own)
 - Appearance: leanest meat
 - Storage Space: buy only what you need
 - Cost/How Many to Serve
 - Cooking Method

- ### Buying Meat Cont.
- The Federal Meat Inspection Act requires all meat shipped across state lines be inspected for healthfulness before and after the animals are slaughtered
 - Grading Meat (by USDA as to its quality)
 - Prime: highest and most expensive grade. Well marbled, tender, and flavorful.
 - Choice: less marbling than prime, but is still tender and flavorful.
 - Select: has the least amount of marbling and is the least expensive.



- ### Buying Meat Cont.
- Meat needs to be kept refrigerated or frozen.
 - Signs of spoilage:
 - Check expiration date
 - Check color; red is not the natural color of beef; can be purplish-brown.
 - Has an off-odor
 - Slimy texture
- "When in doubt, throw it out!"



- ### Cooking with Meats/Poultry
- Thaw properly!
 - Proper cooking of meats: meat becomes tender, juicy, and flavorful. Always use a thermometer!
 - Protein is sensitive to heat: must control cooking temperatures and times. Cooking meat for too long at high temperatures can cause it to shrink significantly. Overcooked meat is tough and dry and may be difficult to cut and digest.
 - Tender cuts: can be cooked quickly with dry-heat methods (roasting or broiling)
 - Less tender cuts: must be cooked for longer periods with moist-heat methods (braising or stewing)

- If possible, prepare a dish with meat or poultry. Take a picture and provide the recipe.

Textile Design

May 4-May 8

- Create an outfit using random items found at home (see below with some examples I found on the internet). Be creative! Take a picture of the finished work to submit.



Textile Design

May 11-May 15

- Complete one of the two projects-whichever one you did not complete last time:
 - No-Sew T-Shirt Pillow

<p>Step #1 Lay out a t-shirt and cut a square or rectangle this size you want the pillow to be. *Note: you will stuff the pillow with batting (if available) or just make this as a pillow case for a pillow you have at home.</p> 	<p>Step #2 Fold t-shirt into fours. Cut a 2" by 2" square out of the top right corner through all layers of the fabric.</p> 	<p>Step #3 Unfold the shirt and cut $\frac{3}{4}$" wide by 1" long strips through both layers of fabric.</p> 	<p>Step #4 Knot each pair of fringe all the way around. Make sure to leave roughly 5 tabs unknotted so you can stuff the pillow.</p> 
<p>Step #5 Stuff the pillow with batting or a small pillow you</p>			

<p>already have. Tie off remaining fringe.</p> 	<p>You're done! Enjoy!</p>		
--	--------------------------------	--	--

OR

o No-Sew T-Shirt Tote Bag

<p>Step #1 Cut the sleeves off.</p> 	<p>Step #2 Cut the neckline...this will be the top of the bag.</p> 	<p>Step #3 Determine how deep you want the bag to be.</p> 	<p>Step #4 Cut fringe along the bottom.</p> 
<p>Step #5 With the bag wrong side out; knot fringe.</p> 	<p>Step #6 Turn the bag right side out and you're done!</p>		

Textile Design

May 18-May 28

- Create a stain removal book to include 5 different types of stains and the methods of stain removal for those stains.