**Food Science Friday Fairs**

Beginning in February, students in the non-honors section of Food Technology II will be signing up for a Friday to bring in a dish to pass and to explain one food science principle the makes this dish work. In addition, students will further explore the farm to fork continuum of the dish and any historical or cultural information that is unique to the dish.

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| Name of Student | Mrs. Riedel |
| Name of Dish | Tofu Pumpkin Cheesecake |
| Date Selected to Present Dish | Friday, February 21, 2015 |
| Cultural Information about the Dish | Pumpkin has been a cultural staple in American diets since the settlers and the pilgrims first Thanksgiving. The first pumpkin pie was originally baked in a pumpkin with just spices and milk and sugar. There was no crust and it was more of a casserole. Since the invention of the American Pumpkin Pie it was upgraded by fusing cheesecake into the mix. Cheesecake was originally served to the Olympians in ancient Greece, as early as 776 BC. This was considered a dish only worthy of those closest to the Gods. |
| Describe the Farm to Fork Continuum | * Pumpkin is harvested all over the USA, but the pumpkin capital is in Normal, Illinois. These pumpkins are grown specifically for canning that will be used in cooking. Tofu starts as soybeans.
* Soybeans are grown all over the heartland of the USA, known as the Wheat Belt. These states include: Texas, Kansas, Iowa, Oklahoma and Nebraska to name a few. The tofu is processed in places like Hawaii, Vermont and Virginia. It is made in tofu by fermenting the soybeans and turning them into a curd.
* Sugar is often exported into the US from the islands south of Florida. The sugar cane is the stem of the plant and the sugar is extracted from solution and then dried to form sugar crystals.
* Cream cheese is made from fresh milk. Fresh milk comes from various cow breeds on dairy farms across the US. It is heated and the pH changes which ferments the milk and creates the cheese.
* Vanilla, cloves, cinnamon and nutmeg are strictly derived from plants. These plant parts include fruit, bark (from the stems), and seeds. The plants are harvested at their peak of ripeness and then dried in post harvest. Vanilla production (making vanilla extract) comes from macerating and percolating the beans. The vanillin is then mixed with alcohol.
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| Create a map that illustrates where the dish’s ingredients are from and attach.  | Map attached as a PPT. |
| What is the food science behind this dish? Describe the elements. | To make this dish egg free, I used tofu instead. Eggs usually:1. **For moisture and/or richness**

If you notice that there is little other liquid, then egg is used for additional moisture. In some cases, it would also be for adding richness along with providing moisture.1. **For leavening**

If there are no other leavening agents in the recipe (Ex. Baking Powder or Baking Soda) but you find that it has acidic ingredients in it (Ex. Buttermilk, vinegar, citrus juice like lemon/orange), then Egg in this particular recipe is used as an leavening agent.1. **As a Binder**

There is enough liquid and also leavening (if its needed/necessary depending upon the recipe) agent but no “glue” (Ex. Flour, Breadcrumbs, Nuts etc) then Egg is being used as a binder. Also keep in mind that some recipes tend to use flour and breadcrumbs along with eggs to provide the food like burgers, patties more texture. In such cases, you will find that eggs would be used to give it more moisture along with its binding properties. In that case you can use a another substitute for egg but add in more liquid to provide moisture – if needed.Since there were no eggs, the Silken tofu acted as the binder and added richness. Tofu is from soybeans and can act as an egg product in many dishes. |
| Was there enough for everyone to sample? |  |
| Grade for taste and appearance/staging of the dish? 1-10 (best) | I feel that I tried my best with this dish, however, the directions for baking were a little off. It gave directions for two, 9-inch pie plates but not for the 8” spring form pan. I should have cooked it longer initially. More like two hours than one. In hind site, I ended up having to rebake a little and that damaged the color of the top a little. I also saw that I could use a water bath and that may have helped the consistency and baking time for the dish. |
| Grade for presentation to the class? 1-10 (best) |  |