Pi Kappa Phries - Theta Chapter Plan

- **Ingredients**
  - Potatoes
  - 5 gallons of vegetable oil (2 for each pot, 1 for refill)
  - Block of cheddar cheese (w/grater) (2-3)
  - Family sized ketchup (2)
  - Mustard (1)
  - Franks Red Hot hot sauce (1)
  - Sour cream family size (2)
  - Bacon bits 1lb
  - Salt 14oz refill with grinder (1)
  - Pepper (1)
  - Water bottles (1-2 24packs)
- **Materials**
  - Phrier pot (2)
  - Phri strainer (2)
  - Large burner (2)
  - Propane tank (2)
  - Potato cutter (1)
  - Water pot (1)
  - Transfer bowl (1)
  - Chafer (3)
  - Chafer strainer (2)
  - Kerosene candles(2)
  - Large bowl for mixing (1)
  - Cheese Grater
  - Large phri trays (100)
  - Small phri trays (100)
  - Plastic forks (200)
  - Plastic gloves (25)
  - Aprons (4)
  - Napkins (300)
  - Order receiving table (fits 2)
  - Main prep table (large table, fits 2-3)
  - Final prep/order receiving table (small, fits 1)

- **Set up**
  - Retrieve phri pots and burners
  - Fill pots with 2 gallons of oil each
    - Keep extra gallon of oil under main prep table to refill pots during operation
  - Light Burners
  - Place pots on burner and warm oil to proper temperature
    - Oil Warm up time (slight overestimate):
      - 30-35 minutes for 325° F
      - 35-40 minutes for 375° F
  - Set up main prep table
    - See Phries flowchart
  - Check temperature of pots
  - **Start building inventory when oil is at proper temperature**
  - Set up Final prep/shipping table
    - See Phries flowchart
  - Set up Pi kapp tent and letters
  - Set up chairs and tables
  - Set up order receiving table
- Running
  - One Order Flow (One Piece Flow)
    - Follow the model provided in the Phries FlowChart
    - Have no more than one order being processed at a station at a time
    - Always have two small orders and one large order prepared as inventory (based on previous sales records)
      - When one order is pulled from readied inventory, replace it
      - This is called a pull structure (opposed to pushed structure)
    - Always process orders small, small, large if the demand is available
      - Mixed model repetitive* is best for handling multiple products on one piece flow
    - You must build up inventory to anticipate the large demand at the beginning of the event
      - One piece flow* runs off the assumption of a steady demand so we must run inventory to anticipate the large demand spike

- Highest cycle times* can be used to tell customers wait times on orders (one order out every 120-150 seconds, easier to just use 150 and over estimate time needed)
  - Orders will come out as fast as the slowest cycle time
- Must "wet the line"* before people start coming
- Soak potatoes for at least one minute in water (not included in takt time*)
- 60% of our orders came in the first 45 minutes
  - About 20% per 15 minutes
- Small order - Two potatoes
  - Takt time*: 8.42 Minutes
- Large order - Three potatoes
  - Takt time*: 11.33 Minutes

Small Order	Two Potatoes	**Large Order**	Three Potatoes
Cut	30 seconds	Cut	40 seconds
Initial Fry	120 seconds (Stir at 60 seconds if possible)	Initial Fry	120 seconds (Stir at 60 seconds if possible)
First Removal	60 seconds	First Removal	90 seconds
Oil Draining Time	45 seconds	Oil Draining Time	45 seconds
Transfer Time	10 seconds	Transfer Time	10 seconds
Secondary Fry	90 seconds	Secondary Fry	135 seconds
Second Removal	60 seconds	Second Removal	90 seconds
Final Prep	60 seconds	Final Prep	150 seconds
Takt Time*	505 seconds (8.42 minutes)	Takt Time	680 seconds (11.33 minutes)

- **Clean up**
  (Note: When wiping down tables wipe dry towel, soapy towel, wet towel, dry towel)
    - Turn off burners
    - Remove all computers or order lists, and money (put away)
    - Throw away all paper serving trays and trash (put away)
    - Remove all chairs and tables (put away)
    - Remove tent (put away)
    - Remove all leftover fries to be donated to homeless
    - Remove all potatoes, cheese, and condiments (put away)
    - Remove chafers and lean them against each other in the yard to drain any oil
    - Remove Chafer stands and put away
    - Dump water from soaking pot, remove to wash
    - Remove bowl of transfer to wash
    - Remove potato cutters to wash
    - Remove mixing bowl to wash
    - Remove cheese grater to wash
    - Fill sink with hot water and soap mixture to soak bowls, cutters, and grater
    - Wipe down Order Receiving table and put away
    - Wipe down Final Prep/Order Shipping table and put away
    - Wipe down Main Prep table and put away
    - Take oil pots off burners and put away burners
        - Place lids on oil pots
    - Remove chafers from yard and bring inside to wash
    - Scrub items soaking, remove to dry, and put away
    - Wash water pot and chafers, put away
    - After oil pots have cooled, get funnel and pour oil back into containers

Misc.
- The longer the potatoes soak in water before, the less they taste like dirt
- Setting up seating areas minimizes feel of wait times and allows socializing
    - Tables and chairs
    - Chairs in a circle
    - Look up "the eight psychological factors of waiting" to learn more

Glossary:

- <u>Cycle Time</u>: How long it takes for a machine (or station in this case) to finish a single product (a small or large order). Example: It takes 60 seconds for the final prep to be finished.

- <u>Takt Time</u>: How long it takes for a product to make its way through the entire system or process. Example: It takes the small phries a total of 505 seconds to be completed.

- <u>Mixed Model Repetitive</u>: Having a specified changing order. Example: If I manufacture the colored widgets: blue, red, yellow; a mixed model repetitive strategy would seek to always make them in the order: red, yellow, blue (the order was arbitrarily picked in this case). A fixed order has improved operators speed in high demand/high stress times because they can know what order to expect and prepare accordingly, however if demand did not allow for a mixed model repetitive strategy (people were not ordering large orders) then it would be ditched.

- <u>"Wet the Line"</u>: All stations will be running products (phries). This means that the time before receiving another completed order will only be equal to the highest cycle time instead of the takt time (time of fully running an order). To repeat, when the line is wet all stations will be working on an order.