Levels of Production (continued)

Bread Case Study and Video

View the 'How It's Made: Bread' YouTube video at http://youtu.be/3UjUWfwWAC4, complete the questions below and then discuss what you learned with the class.

1. What invention improved the options for bread making in the Middle Ages?

   Ovens

2. Outline the process for making bread in a large scale production system.

   The protective grill prevents... **foreign matter from entering the batter.**

   Kneading troughs... **used to mix the batter and ferment the yeast**

   Fermenting yeast... **makes the dough rise considerably**

   When homogenous (all as one)... **the dough is emptied into a large tub**.

   Dough is loaded onto... **a slide that is situated above the dough divider**

   Small hole... **allows the dough to escape to mechanically operated arms**

   Mechanical arms... **cut the dough pieces into equal lengths**

   The dough then falls onto a... **conveyor**

   Dough pieces are rolled into balls, then... **are covered in flour to prevent them from sticking during their transport**

   The balls leave the divider and rest on their way to the moulder. **During transport the dough can rest, allowing the yeast to act.**

   The dough is then folded and rolled... **so the machine can handle three per second**

Bread Case Study and Video (continued)

Dough goes into the prover, to rise and prove at specific temperature and humidity conditions.

A vacuum system... **draws the loaves from their moulds, and then placed on a conveyor to cool.**

A guidance system... **takes care of carrying the breads to various sections of the Bakery.**

When cooled, the bread goes to the... **slicer, which cuts 65 loaves a minute**

Sliced loaves are... **automatically packed at 65 per minute, they're now ready for Shipping.**

Some statistics from the video: 600kg flour, 36 enormous containers, 3 hours for yeast to ferment, kneading for 8 minutes, dough weights 1000kg, 192 hot dog buns extruded per minute, 3 hot dog rolls folded and rolled per second, 65 loaves cut per minute, blades changed every two weeks, 65 sliced loaves packed per minute, 5 and a half hour process from preparation of the flour to packaging of the loaves

1. Consider the above statistics from the video and your notes on the entire process.

Compare the production of bread on a large scale to the production of bread on a small scale such as in the home.

Bread production in an industrial setting differs from the production of bread on a home kitchen scale, as they produce different quantities and qualities. Large scale productions of bread in industrial settings produce more bread than a home kitchen would, as a bakery is specialised to produce bread in mass production. Industrial bakeries can produce bread at a more rapid rate in stark comparison to domestic domestic kitchens. Industrial bakeries have the capacity to make 65 sliced loaves of bread per minute. This is a feat that domestic kitchens cannot achieve. Domestic kitchens are on a smaller scale, and hence cannot mass produce bread like an industrial factory can. This shows the difference between large scale bread production, in places like factories, in contrast to small scale production in a kitchen Setting.