Welcome!

This is the On-line version of “Implementing HACCP in Kansas”

This is an important and interesting class that will help you implement HACCP in your school.
Let’s start with the answer to the most basic question. What is HACCP? It stands for Hazard Analysis and Critical Control Point. It might sound like something from outer space but actually it was for outer space. It was designed by the Pillsbury company in the early 1960s for the U.S. space program. They needed a system to help ensure that the food being prepared for U.S. astronauts was virtually 100% risk-free.

Prior to HACCP, before sending food into space, they’d test it for contamination and if it was contaminated, they’d start over and make more food. We don’t have expensive testing equipment in school food service so how do we know if our food is contaminated? You don’t know until after the food has been served and it’s too late to do anything about it! A HACCP system identifies points at which the food might become contaminated and then puts controls in place to prevent the food from becoming contaminated at those points. HACCP is different because it is preventative rather than reactive.

The term HACCP may sound technical and scary (and if you’ve ever taken a course on traditional HACCP, you probably feel that HACCP is very technical and a bit scary) but HACCP really is just a common-sense approach to food safety.
One of the first questions people ask when they’re told they have to implement HACCP is, “Why?”

Kansas health inspectors often say that they find fewer violations in schools than in restaurants and the other food service establishments they inspect (and their data proves this is true). So why do we have to implement a somewhat complicated food safety system like HACCP?

The simple answer is, it’s the law. Every five years the law called the National School Lunch Act is amended. This law basically states that the federal government will reimburse schools for the meals they serve if they meet certain requirements. The law contains a very long list of requirements and in 2004, among many other things, our lawmakers changed the section on food safety. If we want to continue to get federal money for our meals, we have to meet all of the requirements in this law.

Another good reason to implement and to continue to apply HACCP is because, as we said, it’s common sense. We all want to prepare and serve safe food and a HACCP system is an excellent way to be sure that we are all doing that.
What Are the Requirements?

1. A food safety system that complies with a HACCP system must be implemented.
   - Only in schools and residential centers that participate in the NSLP or SBP
   - By the end of the 2005-2006 school year
   - Traditional HACCP can be used but the newer, simpler Process Approach to HACCP is strongly recommended for all schools across the country.

2. The system must be described in detail in a written plan.
   - A plan, adapted to each site, is required for each production kitchen and serving site.
   - KSDE provided a fill-in-the-blank plan which may be used.

What exactly are the requirements related to food safety?

**First**, a food safety system that complies with a HACCP system as established by the secretary must be implemented (i.e. the Secretary of the United States Dept. of Agriculture.)

This, and all of the other food safety requirements, apply to schools and residential centers (RCCIs/residential child care institutions) that participate in the National School Lunch Program (NSLP) or School Breakfast Program (SBP). Our lawmakers are concerned about those of us who prepare a lot of food for a lot of kids.

The 2010 Reauthorization Legislation enhances the school food safety program. School food safety program based “Hazard Analysis and Critical Control Point” (HACCP) principles must be applied to any facility in which food is stored, prepared or served for the purposes of the National School Lunch Program, School Breakfast Program or other Food and Nutrition Service program.

Food safety programs must be reviewed to ensure that standard operating procedures for safe food handling are updated to include any facility or part of a facility where food is stored, prepared, or served, such as school buses, in hallways, school courtyards, kiosks, classrooms, or other locations outside the cafeteria. This requirement applies to school breakfast or lunch meals, and Special Milk, the Fresh Fruit and Vegetable Program and afterschool snack or supper programs.

The food safety (or HACCP) plans were all required to be implemented by the end of the 2005-2006 school year. If your plan is not fully implemented, you need to work with your manager and/or director and work quickly to get it implemented.

Although traditional HACCP can be used, the USDA provided guidance for all schools in the country and they recommended a newer, easier HACCP system called the Process Approach. That is therefore what KSDE recommended for Kansas schools and is what most or all Kansas schools are using.

**Second**, implementing HACCP isn’t enough. We must have a written HACCP plan, which describes our system in detail, at each site. Most schools in Kansas are using some form of the plan KSDE provided. It’s important to note though that we can’t just use their plan exactly as it is written. We have to insert information about each of our sites and we have to make sure that what they have written fits what each of us are doing. If you read the plan for your site and it doesn’t fit what you’re doing, either change what you’re doing or change the written plan (with permission from your manager or director of course!)
Third, KDA used to conduct one inspection at each serving site per year but beginning with the 2005-2006 school year, they have to conduct two inspections at each site per year. KDA inspectors are responsible for making sure that you are applying the rules in the Kansas Food Code and are following safe food safety procedures. Although, they have a right to see your HACCP plan or anything you use to implement HACCP, the only thing you can be sure they will all look at is your temperature logs. Those logs tell them a lot about your food safety procedures. They have been trained on the Process Approach to HACCP by the FDA and on how it is being implemented in Kansas by KSDE. They are not, however, responsible for enforcing HACCP requirements in schools. The federal law clearly states that that responsibility falls on the Dept. of Education (KSDE).

Fourth, the most recent inspection report from KDA must be posted in a publicly visible location. For schools, KSDE has defined this as right next to the nondiscrimination poster. RCCI staff should ask their area KSDE consultant where to put it and should only post the part of the report related to food service (even though in some cases this is very minimal). Don’t post your only copy because someone might take it. Also, consider placing it in a clear frame or in sheet protectors to keep it clean and to prevent students from editing it. **People must be able to see all of the report and not just one side.**

Fifth, even though KDA or the local health inspector (e.g. from the county health department) might look at parts of your HACCP system and plan, it is KSDE’s responsibility to be sure that all of the HACCP requirements are being met in Kansas schools. The law also states that the USDA must check up on KSDE to be sure that they are doing this. So, let’s all do what we need to do!
Because this is still new, new information continues to become available. KSDE has therefore distributed full-color newsletters called ‘HACCP Help’ as well as a 4-page Q&A to provide important updates and answers to common questions. More of these were produced when HACCP was new but they’ll continue to come out as needed so keep watching for them.

If you want the full color version or someone you know wants a copy, you can always find them on KSDE’s Child Nutrition & Wellness web site by following the path listed on the slide. Check the web site from time to time for new information. You can also find everything KSDE has on HACCP here.
Read slide.

Every HACCP plan based on the process approach must contain seven sections. The written plan must contain all seven of these sections and in the kitchen, you have to do something about each of these steps (some require more time and effort than others). We’re going to go through each step individually and talk about how you will implement the steps on a day-to-day basis.
1 – Standard Operating Procedures (SOPs)

- The “little things” you always do to keep food safe.
- You must have some in writing.
- KSDE provided 21 that may be...
  1) Used exactly as is.
  2) Modified for each school/district.
  3) Replaced.
  4) Ignored.
- The instructions are not all equal
  - Many instructions are strong recommendations.
  - Some instructions are straight from the Kansas Food Code and must be followed. Beware—these have changed!
  - Some are recommended but are less important than others.
  - Know the difference and work together to write SOPs appropriate for your site.

Read slide.

Step 1 is to have standard operating procedures which we’ll refer to as SOPs for short. These are all of the things we all do all of the time to keep food safe. For example, we wash our hands thoroughly and at appropriate times, we store raw meat below fresh fruits and vegetables and we practice good personal hygiene.

What’s new is that now all of these things we do have to be in writing. This helps to ensure that we all know what to do and that we’re all doing them the same way. We don’t have to have every single thing we do in writing but we have to have some of our SOPs in writing.

The National Food Service Management Institute (NFSMI) provided 20 for schools across the country to use. When HACCP was introduced, KSDE revised these specifically for Kansas schools based on the 1999 Kansas Food Code. Now that the new 2005 Kansas Food Code is out KSDE has revised the SOPs again and added one additional SOP so now 21 are available. Schools can choose to use them exactly as is, modify them, write their own on the same subjects or choose not to have any written procedures on some of the 20 subjects. If a site’s HACCP plan contains an SOP, however, it had better accurately reflect what is being done by the employees at that site so read the SOPs in your site’s plan and make sure you’re comfortable with them all. Now that the 2005 Kansas Food Code is out, you need to revise your SOPs.

Chances are very high that you will not want to use all 21 SOPs exactly as they were provided. School kitchens vary tremendously (based on size, experience of staff, person in charge, etc.) so you’ll probably want to modify some to fit your district or your site. You therefore need to know what you can and can’t change.

Find the 21 SOP’s on the Kn-eat.org website modify them as needed for each site and print to put in your HACCP book.
### 2 – Categorize Menu Items

All foods served that are potentially hazardous or commonly associated with foodborne illness must be designated as:

<table>
<thead>
<tr>
<th>Process</th>
<th>Definition</th>
<th>No. of Complete Trips Through t.d.z.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Foods that are not cooked by the facility</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Foods cooked and served same day</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Foods cooked and cooled (and reheated)</td>
<td>2 or more</td>
</tr>
</tbody>
</table>

Read Slide.

**Step 2- Categorize Menu Items:**

The key to the Process Approach is to categorize all of your menu items. Everything that is served, whether it’s made on site or you simply buy or receive it and then serve it, has to be put into a group. Menu items that are potentially hazardous or are commonly associated with foodborne illnesses must be designated as Process 1, 2 or 3 foods. Everything else we just call “other” foods. We’ll talk more about “other” foods in a little bit.

Process 1 foods are those that are not cooked by the facility. In the case of schools, this means ‘within the district’ and not just ‘at the site’. Process 1 foods do not make any complete trips through the temperature danger zone. They are cold foods that should be held below 41°F (or in the case of milk and shell eggs, below 45°F).

Process 2 foods are those that are cooked and served the same day. They make one complete trip through the temperature danger zone (that is, they start cold or cool, are heated up to temperatures above 135°F and are kept hot until they are eaten). They have more opportunity to grow bacteria and other harmful microorganisms than Process 1 foods.

Process 3 foods are those that are cooked and then cooled and maybe reheated too. They make two or more complete trips through the temperature danger zone. These are the most hazardous types of foods that we handle.

The more temperature ‘abuse’ a food receives, the higher the process number and the more carefully we need to handle it. That is, the more we have to do to keep it safe. That’s the whole basis of the Process Approach to HACCP.
It may be easier to think of this in visual terms (see slide). Keep in mind that the 2005 Kansas Food Code uses 41 to 135°F as the temperature danger zone.

The division of foods is based on complete, not partial, trips through the temperature danger zone. When you make spaghetti meat, you start with cold, raw meat. You cook it to 160°F. You drain it and rinse it and in that process it drops to a temperature below 135°F but it does not cool down below 41°F (to refrigeration temperatures) so it’s not a complete trip and it doesn’t count. Add the tomato sauce, heat it back up, hold it hot and serve it that day. Which process would that be? Process Two
“Other” foods can’t be completely ignored but they do not have to be held at certain temperatures and you do not need to record their temperatures. You simply handle “other” foods with SOPs to keep them safe.

Foods that do not need to be put into a process include… *read the examples from the slide.* Desserts that are ‘others’ include cakes, brownies, cookies, fruit crisps, cobblers and pies. Can you think of some other foods that are not potentially hazardous and are not commonly associated with foodborne illness that you think are “other” foods? *Possible answers: peanut butter, graham crackers, chips, tortillas, mustard, salad dressing, ketchup and jelly.*

**More Information:**

- Although eggs by themselves are potentially hazardous, when they are combined with other ingredients (e.g. in breads and desserts), the pH level of the product is altered and will not usually support rapid growth of harmful microorganisms.

- Fruit pies do not have the right pH level to be considered potentially hazardous. That is, they can safely be held at room temperature. Pumpkin pie is the exception to this rule (unless documentation is provided by the manufacturer or laboratory testing to show that a specific pie used by a school is not potentially hazardous).

- Not all refrigerated foods are potentially hazardous. Potentially hazardous foods are foods that support the rapid growth of harmful microorganisms. Some foods are refrigerated simply for quality reasons, some are refrigerated to extend the shelf life because without refrigeration they would support slow growth of bacteria and only some are refrigerated because they are potentially hazardous. Refrigerated items that are not potentially hazardous and are not commonly associated with foodborne illness are “other” foods and do not need to be put into a ‘process’ category.
Here are a few examples of foods listed by process as well as a few foods that don’t fit into a process category.

**Process 1.** Although fresh fruits and vegetables are not potentially hazardous when eaten raw, they can transfer foodborne illnesses so the USDA guidance for schools requires that they be considered a process 1 food. Commercially prepared salads such as pasta, potato and tuna are also process 1 foods. Deli meats, yogurt, milk are other cold, potentially hazardous foods that do not pass through the temperature danger zone so they are also process 1 foods.

**Process 2** foods include things such as chicken nuggets, fajita meat, cooked vegetables and chili even if it’s made with a pre-cooked meat product such as beef crumbs. Both the Kansas Department of Health and Environment and HACCP plan under USDA’s guidance only consider the product after it arrives at the facility so the fact that the beef crumbs have already been cooked does not matter. If the crumbs are heated and the chili is served that day, it is a process 2 food.

If, however, there are leftovers, the chili becomes a process 3. Pasta salad made from scratch is also a process 3 because the pasta is cooked and cooled (which is two trips through the danger zone). Many schools currently make menu items such as chili and lasagna over two days. They cook and cool the meat one day and reheat it, combining it with other ingredients, to serve it the next day. When they do this, it is a process 3 menu item. Why is chef salad a process 3 food? It has lettuce and ham and cheese which are all process 1s, right? What else does it have? *Hard boiled egg which is a process 3 and any one ingredient makes the whole menu item that process number.*

*Read the examples of “other” foods from the slide. French toast sticks listed refers to commercially prepared sticks.*
Supplies:
1. “Let’s Practice!” handout (provided in the Participant Booklet)
2. “Additional Information for “Let’s Practice! Activity” (provided on the next page)
3. KSDE’s “March HACCP Help” newsletter (provided in the Participant Booklet)

Procedure:
1. Locate the “Let’s Practice!” handout in the Participant Booklet.
2. Complete the worksheet in the Participant Booklet.
3. Review the correct answers.

Process 1 – Garden Salad, Sub Sandwich (if cold), Pasta Salad (if purchased), Salsa (if purchased or made with cold ingredients), Sliced Tomato & Lettuce, Canned Pears (if pre-chilled and/or there are ever leftovers which are chilled)
Process 2 – Grilled Ham & Cheese (even if time as a control is used), Sub Sandwich (if hot), Spaghetti, Hot Pocket, Burrito, Hamburger, Chili (if all ingredients cooked the day they are served)
Process 3 - Leftovers, Pasta Salad (if made from scratch), Chili (if any ingredients cooked ahead), salsa (if made from scratch by cooking ingredients)
Other – Garlic Breadsticks, Peach Cobbler, Tortilla Chips, Canned Pears if not pre-chilled and no leftovers are ever kept by the site

When you get to Grilled Ham & Cheese, review the rules for using ‘time as a control’ from KSDE’s March HACCP Help newsletter (provided in the Participant Booklet).

Estimated Time:
5-20 minutes
If you don’t know which process each menu item belongs to (or whether it’s an “other” and just needs to be handled with SOPs), it would be hard for you to know exactly how you have to handle that particular menu item and which records (for example temperature logs) you are required to keep on it.

So, there has to be some way to communicate the process number of all menu items to everyone at your site. You (or your manager or director) can decide on the best communication tool for your site. What works best for one will not be the best method for another. The only requirement is that you have some written way to communicate this information.

Some may choose to write it on the recipes. For many, this is the least practical method. First, it is time consuming to write it on every recipe. Secondly, as we’ll see shortly, the same menu item may be one process one day but a different process on another day depending on how it is prepared, whether or not there are leftovers, etc. Third, some cooks know the recipes so well that they don’t look at all of the recipes. It’s better to use a communication tool that will be seen on a daily basis.

To make things as easy as possible, we’re encouraged to use existing paperwork. One way to do that is to record the Process number or ‘O’ for other on our production records.

Posters are good tools. KSDE provided three templates, one poster for each process, that can be printed in color or in black and white. For each process, there is a flow chart that shows how the food flows through a facility and lists what needs to be done in order to keep the food safe. Then, underneath that, all of the foods that fit into that process can be listed. Schools that use a cycle menu can have a fairly permanent list and those that change their menu monthly can replace this list as often as needed (daily, weekly or monthly depending on the number of menu items they serve).

Another option is to simply write the process number off to the side of each menu item on the menu calendars. Then just post those calendars in the kitchen.

The fourth option being used in Kansas schools is to highlight or color code menu items (on the menu calendar) or recipes (e.g. with highlighter pens or colored post-it notes.)
3 – Identify Control Measures

<table>
<thead>
<tr>
<th>Standard Operating Procedures (SOPs)</th>
<th>Critical Control Points (CCPs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✤ The things done on a regular basis to ensure that all food is kept safe</td>
<td>✤ The specific points in the flow of food through the operation at which a hazard can be reduced, eliminated or prevented. Food may be consumed at this point so this is the last defense. It is the “kill” or “control” step.</td>
</tr>
</tbody>
</table>

**Critical Limit**
Time and/or temperature that must be achieved or maintained to control a food safety hazard.

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**Step 3-Identify Control Measures**

After you’ve mastered the SOPs and you know which process group each of your foods belongs in, you’re ready to identify control measures. At this point, you ask yourself…

1. when does this food have the opportunity to become contaminated and
2. what must I do to prevent it from being contaminated?

The control measures have two parts. You always have to apply the SOPs. They are standard practice; they are a part of everything we do. The other part is called ‘critical control points’ or CCPs for short. This is the term we use to refer to those crucial points when the food is most likely to become contaminated so we have to be extra careful when handling it.

To keep the food safe, we have to know what the critical limits are. What are the critical limits for hand washing? *Wash hands in water at 100 degrees F (required in the 2005 Kansas Food Code) for 20 seconds.* What are the critical limits for leftovers? *Heat to 165 degrees F for a minimum of 15 seconds within 2 hours or less.*

Kansas schools are required to cook food to the minimum internal temperatures established by the Kansas State Department of Education. *Refer to the temperature chart in the Participant Booklet.* Some of the temperatures required are slightly higher than those required by the Kansas Department of Agriculture(KDA) because in schools we cook for young children who are more at risk for foodborne illnesses. We use temperatures recommended by the USDA.
Ok, so control measures consist of both SOPs and CCPs. SOPs are general things we need to do and CCPs are the most important things we need to do. But what specifically do we need to do? Well, to answer that question, KSDE has provided three flow charts one for each process. These are the same ones that can be used as posters with a list of the foods you serve under each.

On each flow chart, the SOPs are listed in black and the CCPs are listed in red. After a while, you’ll get the hang of HACCP but there are so many things that you need to remember. Make it easy and don’t leave any room for error. Make room on the walls of your kitchen for these three little posters. If you have lots of room, talk to the art teacher at your school or some older students to see if they can make larger versions for you and/or laminate them for you.

If that’s not possible or you just prefer, write the CCPs (for example, cook ground beef to 160°F) on your recipes.
Here is the flow chart for Process 1 foods. What are some of the SOPs we need to follow when handling or preparing a Process 1 food. **Answers are anything in black font on the Process 1 Poster (anything except those in the COLD HOLD stage in red font.**)

How many CCPs are there for Process 1 foods? One. What is it? *Cold holding.* What do we need to do in order to keep the food safe? *Hold the food (e.g. deli meat) below 41°F and HACCP guidance requires that we check and record temperatures of these foods.*
### Control Measures for Process #2

#### Cook & Serve Same Day

<table>
<thead>
<tr>
<th>Control Measures</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALL</strong></td>
<td>Washing Hands, Using Suitable Chapsis When Handling Ready-to-Eat Foods, Personal Hygiene, Storing &amp; Using Poisonous or Toxic Chemicals, Using &amp; Calibrating a Food Thermometer</td>
</tr>
<tr>
<td><strong>RECEIVE</strong></td>
<td>Receiving Deliveries</td>
</tr>
<tr>
<td><strong>STORE</strong></td>
<td>Preventing Cross Contamination During Storage (and Preparation)</td>
</tr>
<tr>
<td><strong>PREPARE</strong></td>
<td>Preventing Cross-Contamination During (Storage and) Preparation, Cleaning &amp; Sanitizing Food Contact Surfaces, Washing Fresh Fruits &amp; Vegetables</td>
</tr>
<tr>
<td><strong>COOK</strong></td>
<td>CCP: Cook to Minimum Internal Temperatures for at Least 15 Seconds, Check &amp; Record Temperatures</td>
</tr>
<tr>
<td><strong>HOT HOLD</strong></td>
<td>CCP: Hold At or Above 135 Degrees F, Check &amp; Record Temperatures</td>
</tr>
<tr>
<td><strong>SERVE</strong></td>
<td>Serving Food, Preventing Cross-Contamination at Food Bars</td>
</tr>
</tbody>
</table>

The critical control points for Process 2 foods are cooking and hot holding (red font).
The critical control points for Process 3 foods are cooking, cooling, reheating (if applicable) and hot holding (if applicable). For something like pasta salad, that is simply cooked and cooled, the CCPs would of course be cooking, cooling and then cold holding. Rather than have two different posters for Process 3 foods, you can easily look at this one and modify it for the food you are working with.
Step 4-Monitoring Procedures

Step 4 in the Process Approach to HACCP is to establish monitoring procedures. Specifically the requirement for this step is to complete a checklist (which is a visual observation and evaluation)…

1. At each site (that is, at each serving site or production kitchen that prepares or serves meals as part of the National School Lunch Program or School Breakfast Program).
2. At least once a month unless problems are found in which case the checklist should be conducted more often until the problems are corrected.
3. By any responsible employee. It is up to the person in charge to determine who this is. It may be the director or manager every time *(as recommended by USDA)*, the job may be assigned to a specific person or it may be rotated among all employees at a site.
4. The checklist should be completed by summarizing your observations and noting only unusual observations. For example, are hairnets being worn properly? If there are 10 people at your site and 2 have their bangs hanging out, you can check YES and then maybe write ‘2 bangs out’.
5. The checklist is one of the required records and must be kept for at least two years and until your sponsor (school, district or RCCI) is given permission to discard it. Your local health inspector will look at these twice a year to determine whether or not you are following good food safety practices and your area KSDE consultant will look at them to be sure you are correctly implementing HACCP. If they see there was a problem, they will want to see what you did about it. What corrective action did you take? Did the problem reoccur? Did you complete the checklist more often to make sure the problem was taken care of? Be honest on them and then take care of the problem. If you mark YES on everything on every checklist, you’re probably not looking carefully enough.

This checklist can be found on the KSDE website [www.kn-eat.org](http://www.kn-eat.org)
Step 5 - Establish Corrective Actions

Read Slide

Even when you implement a food safety system as detailed as HACCP, things won't always go as planned. That's why the fifth step is to establish corrective actions.

Corrective actions have four goals. Some are more obvious than others. Let's use an example to go through these. If your recipe for meatloaf says to cook for an hour and fifteen minutes at 350°F but after that amount of time you find that it's only 150°F (instead of the required 160°F), what would you do? Keep cooking it until it reaches 160°F is the obvious answer. Which of the goals does that accomplish? The second one. It brings the CCP within critical limits. If you take the temperature again and find that it is 160°F, which of the goals have you accomplished? The last one. You have made sure the food is safe to eat. We're all used to doing that. Good corrective actions require more than that though. We need to determine why the meatloaf hadn't reached 160°F after an hour and fifteen minutes, fix the problem and then take steps to prevent it from happening again. What are some possible reasons? (1) The recipe is wrong. (2) The thermometer isn’t calibrated. (3) The oven isn’t working properly. How would we correct these problems? (1) Extend the cooking time on the recipe. (2) Calibrate the thermometer in ice water. (3) Use an oven thermometer to check the oven’s internal temperature and turn in a maintenance request if needed. What can you do to prevent the same type of problem from happening again? (1) Review all of your recipes on a regular basis to make sure that they are accurate. For example, look at one or two recipes at each staff meeting. (2) Make sure you calibrate all of your thermometers at least every two weeks as required and more often if needed. (3) Try to keep your equipment in good condition, have it checked regularly and be nice to your maintenance staff so that when you need help, you can get it.

Our meatloaf was a nice, easy example. There are a lot of things that can happen though. You have to know what to do and whether you have the authority to do it or whether you need approval from your manager or director. You obviously have authority to continue cooking food to the required temperature. You may or may not have authority to throw out contaminated food without telling your manager first. You probably need a manager’s approval to refuse a delivery, especially if the temperature of the item is question is only a few degrees above the requirement.

HACCP guidance requires that you keep a record of the corrective actions that you take. Don’t write down every single little thing (like continuing to cook food for an extra 15 minutes). Just note the bigger things.
Corrective Action Case Studies

1. Temperature of Milk
2. Frozen Meat Products
3. Temperature of Milk Cooler
4. Pork Roasts Cooling
5. Fajita Chicken Meat
6. Dish Machine Rinse Temperature

Supplies:
1. “Corrective Action Case Studies” handout (provided in the Participant Booklet)
2. “Minimum Internal Temperatures Required by KSDE” handout (provided in the Participant Booklet)
3. “Corrective Action Case Studies – Suggested Answers” (provided at the end of the Participant Booklet)

Procedure:
1. Locate the “Corrective Action Case Studies” handout.
2. Read the case studies and answer the questions.
3. Suggested answers can be found at the end of the Participant Booklet.

Estimated Time:
15 minutes
Step 6 - Keep records

The sixth step is to keep records. Records are required and will be checked by both health inspectors and KSDE consultants. In order to give them all a chance to see them and to reveal patterns, all HACCP records must be kept for at least two years and until given permission by KSDE (not the health inspector) to discard them.

Each sponsor (district, private school or RCCI) can choose whether to keep them at each site for that entire time or to collect and store them in one central location (e.g. a district office) after a certain time period (e.g. monthly).
There are several different records that you need to keep and there are some that are optional.

You have to take and record temperatures of foods when they are received. You have to take the temperature of a sample of items – enough to determine that the shipment is safe. Food received refers to deliveries of purchased foods as well as prepared foods being delivered from a production kitchen to a serving site. KSDE recognizes the fact that in some parts of the state, deliveries (for example, of milk) are made before food service employees arrive at work. If delivery times cannot be changed and the food is kept safe (for example, the driver puts the food in your cold storage unit), this is ok. If an employee is present when deliveries are made, however, a sample of temperatures must be taken and recorded.

You have to take temperatures of cold storage units. Refrigerators must keep food at 41°F or below. Freezers must be cold enough to keep food ‘in a frozen state.’ Temperatures of both must be recorded at least once a day.

KSDE does not require us to take and record temperatures of dry storage areas. The ideal temperature range is 50-70°F but higher temperatures only shorten the shelf life. Since we use our food within a short time frame anyway, the temperature is not a concern.

KSDE also does not require temperatures of the dish machine to be taken. However, HACCP experts recommend that temperatures be taken daily. KSDE therefore recommends, but does not require, that we get in the habit of looking at temperature gauges on the dish machine and that we test the temperature with an independent device weekly or monthly.

Every thermometer must be calibrated at least every two weeks and we have to keep records to prove that we’ve done this. If you have a thermometer, that can’t be calibrated (that is, adjusted to 32°F, freezing point, when in an ice bath), you need to check it every two weeks by placing it in an ice bath. If it doesn’t read 32°F, it doesn’t work anymore and you need to replace it.

Records are required any time food is thrown out because it is damaged in some way. For example, if it is contaminated. You do not have to record all of the leftovers that you throw away.

We’ve already talked about the Food Safety Checklist. It’s required for step 4, monitoring.

Once a year we have to review and revise our HACCP plan and the checklist or form that we use for that process must be kept with our other records.

Any food safety training that we attend has to be recorded and kept on file. We’ve been doing this for years for KSDE so this is nothing new but we need to keep a copy of it with our HACCP records.

There has been a change, if you choose to use time rather than temperature to control bacteria growth in your foods, you no longer need to request a variance (that is, permission to break the Food Code’s rule to maintain safe temperatures during holding and service) from KDA. During a Health Inspection or a KSDE Review we will continue to confirm that written Time as a Control plans are in place, that the plans meet the code requirements, and that the plans are being implemented correctly. So, keep a list available that shows which foods you are using Time as a Control.
We also have to have a record of the food temperatures that we’ve taken. We can have all kinds of temperature logs; one for foods that are cooked, another for reheated foods, another for foods on the serving line, etc. but all we are required to record is…

1. The temperature of hot food when it is done cooking (or reheating) or as it is put into a holding unit/cart. You do not have to take the temperature of every single pan, just a sample. Take the temperature in the coldest part (e.g. the center of a pan or the cold spot in an oven). If that’s ok, the rest will be ok. For cold potentially hazardous foods, this first one won’t apply.

2. The temperature of the food as it comes out of the hot or cold holding unit or as it is put on the serving line, whatever is easier for you. If the food goes straight from the cooking unit (for example, an oven or a steam jacketed kettle) to the serving line, record one temperature for both one and two.

3. The temperature of the food at the end of each serving period (only if required for the site by the area consultant). If you haven’t specifically been told by your area KSDE consultant or manager that you need to record temperatures at the end of each serving period, then you do not need to.

4. The temperature of the food at the end of the last serving period. If you don’t have any food leftover and therefore can’t take any temperatures, record “no leftovers” on the temperature log so that it’s clear you didn’t just forget to take the temperature.

The last log we are required to keep is one to show the temperatures of food as it cools. The good news is that we don’t have to take and record temperatures every single time we have leftovers. The bad news is that we have to do it at least three times in order to show that our cooling procedures work.
Knowing whether or not food was cooled properly is one of the most challenging things in schools. Here are the critical limits for cooling food. Review the information on the slide. Do you know why this presents such a challenge for school staff? They typically work from 6 a.m. to 1 p.m. or 2 p.m. and are not there 2, 4 and 6 hours later to check temperatures.

The thought of having to stay around every time you have leftovers is enough to make most of you quit or retire early so we came up with a solution that most of you can live quite happily with. We all know that it is essential to cool food safely and the only way to know if their methods are safe is to test it in their kitchen. We are therefore requiring that someone in their kitchen stay late at least three times, once for each type of food; 1. thick foods such as chili, spaghetti pie or anything else like that, 2. thin foods such as clear soups, 3. small, separated foods such as vegetables (corn, green beans, carrots, etc.). The first time they have a leftover of each of these types of foods, they stay late, check the temperatures and if the temperatures are ok, they write a Standard Operating Procedure for the cooling method they used. From that point on, they don’t have to stay late when they have leftovers from that group of foods. All they have to do is follow that SOP. If the temperatures are not ok, they’ll have to adjust their method and try again until they get a cooling method that works.

### Critical Limits & Corrective Actions for Cooling

<table>
<thead>
<tr>
<th>Two-stage Method (6 Hours)</th>
<th>One-stage Method (4 Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70°F within 2 hours</td>
<td>41°F within 4 hours</td>
</tr>
<tr>
<td>41°F within 4 more hours</td>
<td></td>
</tr>
<tr>
<td>Take temperatures at 2 and 6 hour intervals to make sure that temperatures were reached.</td>
<td>Take temperature after 4 hours to make sure that temperature was reached.</td>
</tr>
<tr>
<td>Reheat above 165°F if food has not cooled to 70°F in 2 hours or 41°F in 6 hours.</td>
<td>Reheat above 165°F if food has not cooled to 41°F in 4 hours.</td>
</tr>
<tr>
<td>Discard if more than 70°F after 2 hours or more than 41°F after 6 hours.</td>
<td></td>
</tr>
</tbody>
</table>
We all know that it is essential to cool food safely and the only way to know if that is being done is to test your cooling methods in your kitchen. You therefore are required to have someone in your kitchen stay late at least three times, once for each type of food; 1. thick foods such as chili, spaghetti pie or anything else like that, 2. thin foods such as clear soups, 3. small, separated foods such as vegetables (corn, green beans, carrots, etc.).

The first time you have a leftover of each of these types of foods (thick, thin and separated), someone stays late (or comes back a few times), checks and records the temperatures and if the temperatures are ok, you write a Standard Operating Procedure for the cooling method you use for that type of food.

From that point on, you don’t have to stay late when you have leftovers from that group of foods. That is, after you’ve established and have written an SOP for cooling thick foods in your kitchen, any time you have a thick type of food leftover, you don’t have to stay around to take and record temperatures of it as it cools, you simply have to follow your own SOP for cooling thick foods.

If you don’t take the time to write an SOP, then every time you have leftovers, you have to stay late to take and record the temperatures to prove that it cooled safely.

Other alternatives are to throw away all leftovers or to batch cook (which means to cook in small batches directly to the line) in order to avoid having leftovers.
“Time As a Control”

- Use when efforts will not be made to hold food out of the temperature danger zone.
- All of the following rules must be applied:
  - Have written procedures (SOPs) and a list of foods on site.
  - Identify on a log and/or mark the pan (or tray, bowl, etc.) of food with the time that is 4 hours past the point in time when the food was removed from temperature control.
  - Serve or discard all of the food within 4 hours.
  - Discard unmarked food and food which exceeds the 4 hour limit.

The full term is ‘time as a public health control’ and what it means is that you are choosing to use time, rather than temperature, as your primary way of controlling bacteria growth.

How long does it take for bacteria to grow to harmful levels? *Four hours.* So, when you use ‘time as a control’ the food may not be left out for more than four hours. Here are the rules.

1. You must have written procedures (an SOP) on file, at each site, explaining exactly what your procedures are for using “time as a control” and for cooling hot food.
   - KSDE sent out an SOP (#14) when HACCP was introduced and a revised one in January 2008 when the new (2005) Food Code came out. I strongly recommend that you make sure you have the newer version.
   - Your SOP must include a list of every food you might use time as a control procedures for. This is to prevent you from saying, “Oops our chili isn’t hot enough. Instead of doing the safe thing and heating it up, we’ll just use time as a control today.”
   - That list of foods must be available at each site for inspectors to see and be aware that some health inspectors want it posted on the wall for all employees to see.
   - You cannot use time as a control for all of your menu items. Remember, bacteria is growing while the food is in the temperature danger zone. Temperature control is safer and in most cases is much better when it comes to a quality product. Only use time in place of temperature when you have no way to maintain the temperature or when high temperatures damage the quality of the product.
Step 7 - Review & Revise the System & Plan

The seventh and last step is to review and revise the system and plan. The management team (the people in charge at each site) need to use a checklist or form of some kind to evaluate the HACCP system. That checklist or form has to be kept with all of the other records for KSDE and KDA to see and the findings should be used within the school or district to improve the HACCP plan(s).

Although, the managers and/or directors are ultimately responsible for this step of the plan, it affects everyone so you should all provide input. Know when (i.e. which month) your managers plan to do this review and keep notes throughout the year on things you would like to have changed. It is essential that the written plan accurately reflect what is being done in the kitchens so know what your plan says and if you don’t agree with it, talk to your manager about it. Either find out why you have to do it that way and get on board with the plan or, if it’s an optional item, explain why you think the plan should be changed. In order for a HACCP system to work, everyone has to do their part.
For More Information on HACCP

❖ Go to KSDE’s Child Nutrition & Wellness web site: www.kn-eat.org
   – School Nutrition Programs, Guidance, Food Safety, HACCP Guidance & Resources
❖ Contact KSDE Child Nutrition & Wellness
   – (785) 296-2276
   – Area consultants
❖ Watch for HACCP Help newsletters and Q&As from KSDE

Read slide.
Please remember…read the text box from the slide.