

Cooking Starches

Description

In this activity students will become familiar with the equipment used in cooking various starches (pasta, rice, potato) and will demonstrate different cooking methods used to prepare three different starches.

Lesson Objectives

Students will be able to:

- identify various types of pasta and their uses
- identify various types of rice and their uses
- identify various types of potatoes and their uses
- prepare rice using the boiling, pilaf, or risotto method
- prepare potatoes, and
- prepare pasta using the big pot boiling method.

Assumptions

- The teacher will become familiar with and utilize correct starch-making techniques using appropriate resources.
- The teacher will provide a variety of ingredients for the starch labs.

The following Activity Plans are to be completed prior to this activity:

- Introductory Knife Skills
- Workstation Station Set-up
- Recipe Comprehension

Safety Considerations

General

- Use proper PPE (personal protective equipment) at all times.
- All food safety procedures must always be reinforced. For example, keep hot foods hot and cold foods cold.
- Spills must be cleaned up immediately. Students are to notify the instructor of any broken glass or broken cooking tools



Lesson-specific

- Students should be made aware that pots full of water and a starch can be heavy and may require a modified carrying position (using two protected hands on either side of the pot rather than the handle).
- Students should be made aware of the potential for burns from hot/boiling liquids as well as steam (particularly during straining).
 - Prior to straining, a proper receptacle (e.g., sieve) must be secured in the sink.

Terminology

al dente: *Al dente* is a term used to describe the consistency of ideally cooked pasta (the expression literally means “tender to the tooth” in Italian).

gelatinization: Gelatinization is the absorption of water in starch, producing a gel.

gratin: A *gratin* (Fr.) is a type of potato dish similar to scalloped potatoes; creamy and brown on top.

gratinate: To gratinate is to brown on top.

pilaf: Rice pilaf refers to a rice sautéed lightly in oil before broth is added. It is then cooked to a soft consistency.

risotto: Risotto is dish in which a northern Italian rice is cooked in a broth to a creamy consistency.

Estimated Time

3–5 70-minute classes, depending on the amount of labs chosen for this lesson

Recommended Number of Students

Up to 24

Facilities

Home Economics teaching lab and/or Culinary Arts teaching kitchen

Tools

- container for storage
- pots and pans of appropriate size or shape for use in assigned recipe
- saucepans with tight-fitting lids
- spider
- spoon
- strainer (conical), sieve, or colander
- towel or oven mitts for heat protection

Materials

Standard kitchen equipment and ingredients as per recipes selected for labs

Resources

Draz, John, and Christopher Koetke. *The Culinary Professional*. 3rd ed. Goodheart-Willcox, 2017. Pages 473–483.

McGraw-Hill Education, 2017. *Food for Today*. Page 528.

- Staple Foods of the World (includes corn, wheat, potatoes, rice, millet, and sorghum)

Gisslen, Wayne. *Professional Cooking for Canadian Chefs*. 8th ed. John Wiley & Sons, Inc., 2014. Hoboken, New Jersey. Pages 376–377.

- See Chapter 12, “Potatoes”; Chapter 13, “Grains, Pasta and Rice”; and recipes. This resource is more for the instructor, as the information is detailed.

Activity Sheet:

Name that Pasta:

<http://www.jamieshomecookingskills.com/pdfs/activity/name%20that%20pasta.pdf>

Demonstrating Skills And Knowledge

Procedure

Teacher demonstrations (complete all)

- Rice: select a recipe that serves as an example of how to properly cook rice using a stovetop method.
- Pasta: select a recipe that serves as an example of how to properly cook pasta.
- Potato: select a recipe that serves as an example of how to properly cook potatoes.

Student labs (select 1 to 3)

- Rice: select a recipe for students to cook that serves as an example of how to properly cook rice using a stovetop method (not in a rice cooker).
- Pasta: select a recipe for students to cook that serves as an example of how to properly cook pasta.
- Potato: select a recipe for students to cook that serves as an example of how to properly cook potatoes.

Evaluation Guidelines

Evaluate the students using the Culinary Arts Rubric (Page 6) for lab work as they prepare, cook, and clean up.

Points of evaluation should include:

- Texture or doneness meets requirements.
- Seasoned appropriately.
- Colour is appropriate.
- Temperature is appropriate for the dish (e.g., may be used cold in a salad or served hot).
- Finished product is held according to food safety guidelines.
- Student worked cleanly and safely.
- Student was organized.
- Student followed procedure with proper ingredients.
- Student is enthusiastic and takes initiative, including tasting the product to understand it.

Extension Activities (Optional)

1. Create a display in the classroom, either as a poster with pictures or real samples. Display different types of rice, pasta, and potato and their descriptions. Descriptions may include where it is grown, nutritional benefit, methods, and cooking time.
2. Have a sushi chef come in and demonstrate with student participation.
3. Have a demonstration and lab on making pasta from scratch, including a sauce and/or filling.
4. Have students create a short PowerPoint assignment where they:
 - Select a starch (this can include corn, wheat, legumes, potato, rice, or pasta).
 - Research the history of the starch and where it is grown or produced.
 - Describe the cooking method, nutritional benefits, and how they help our bodies.
 - Attach a recipe using the starch.

Culinary Arts Rubric

	1	2	3	4	5	6
Personal Hygiene	Chose not to follow outlined personal hygiene guidelines.	Hair not restrained throughout the entire class. Prompting required to put on appropriate clothing. Hands washed with prompting. Required consistent direction.	Hair not restrained throughout the entire class. Prompting required to put on appropriate clothing. Hands washed but with multiple reminders.	Hair restrained. Closed-toe shoes, long pants, apron/jacket worn. Hands washed. Multiple reminders are required.	Hair restrained. Closed-toe shoes, long pants, apron/jacket worn. Hands washed. All with minimal direction or reminders.	Hair restrained. Closed-toe shoes, long pants, apron/jacket worn. Hands washed. All without any direction or reminders.
Work/Organization	Station is unorganized. Improper tools have been selected and safety procedures have not been followed despite assistance and direction.	Station is set up, appropriate tools and ingredients are selected with consistent direction. Outlined safety procedures are followed with monitored assistance.	Station is set up, appropriate tools and ingredients are selected with some direction. Outlined safety procedures are followed with some assistance.	Station is set up, appropriate tools and ingredients are selected for the assigned task. All outlined safety procedures are followed. Multiple reminders are required.	Station is set up, appropriate tools and ingredients are selected for the assigned task. All outlined safety procedures are followed. All with minimal direction or reminders.	Station is set up, appropriate tools and ingredients are selected for the assigned task. All outlined safety procedures are followed. Shows initiative. All without any direction or reminders.
Time Management	Unacceptable time management has resulted in the incompletion of the lab.	Poor use of time. Ingredients are not obtained in a timely manner. Does not stay in the station or on task. Tasks are not completed in a timely manner despite some assistance. Station is not adequately cleaned up on time.	Satisfactory use of time. Ingredients are obtained in a timely manner. Stays in the station and on task. Tasks are completed in a timely manner but with some assistance. Station is not adequately cleaned up on time.	Efficient use of time. Ingredients are obtained at once. Stays in the station and on task. Tasks are completed in a timely manner but with some assistance. Station is cleaned up on time.	Efficient use of time. Ingredients are obtained at once. Stays in the station and on task. Tasks are completed in a timely manner but with some prompting. Station is cleaned up on time.	Efficient use of time. Ingredients are obtained at once. Stays in the station and on task. Tasks are completed in a timely manner. Station is cleaned up on time.
Follow food safety procedures	Does not follows outlined food safety procedures despite direction and assistance.	Follows outlined food safety procedures with consistent direction and assistance.	Follows outlined food safety procedures with some direction and some assistance.	Follows all outlined food safety procedures with some direction or reminders.	Follows all outlined food safety procedures with minimal direction or reminders.	Follows all outlined food safety procedures without any direction or reminders.
Apply correct cooking procedures / techniques	Outlined procedures and techniques are not followed despite assistance and consistent direction. Does not demonstrate understanding of outlined procedures and techniques.	Outlined procedures and techniques are followed with assistance and consistent direction. Limited understanding of outlined procedures and techniques.	All outlined procedures and techniques are followed with some direction or reminders. Shows a satisfactory understanding of outlined procedures and techniques.	All outlined procedures and techniques are followed with some direction or reminders. Shows a good understanding of outlined procedures and techniques.	All outlined procedures and techniques are followed with minimal direction or reminders. Shows an excellent understanding of outlined procedures and techniques.	All outlined procedures and techniques are followed without any direction or reminders. Shows an excellent understanding of outlined procedures and techniques.
Final Product	Final product has not met the outlined criteria. Constant supervision is required.	Final product has met some of the outlined criteria. Requires consistent direction and assistance.	Final product has met most of the outlined criteria. Satisfactory presentation. All with some direction or assistance.	Final product has met the outlined criteria. Good presentation. All with minimal direction or assistance.	Final product has fully met the outlined criteria. Excellent presentation. All with minimal direction or assistance.	Final product has fully met the outlined criteria. Excellent presentation. All without any direction or assistance.