Culinary Institute of America

Rialto USD 2.0 Training Day 3

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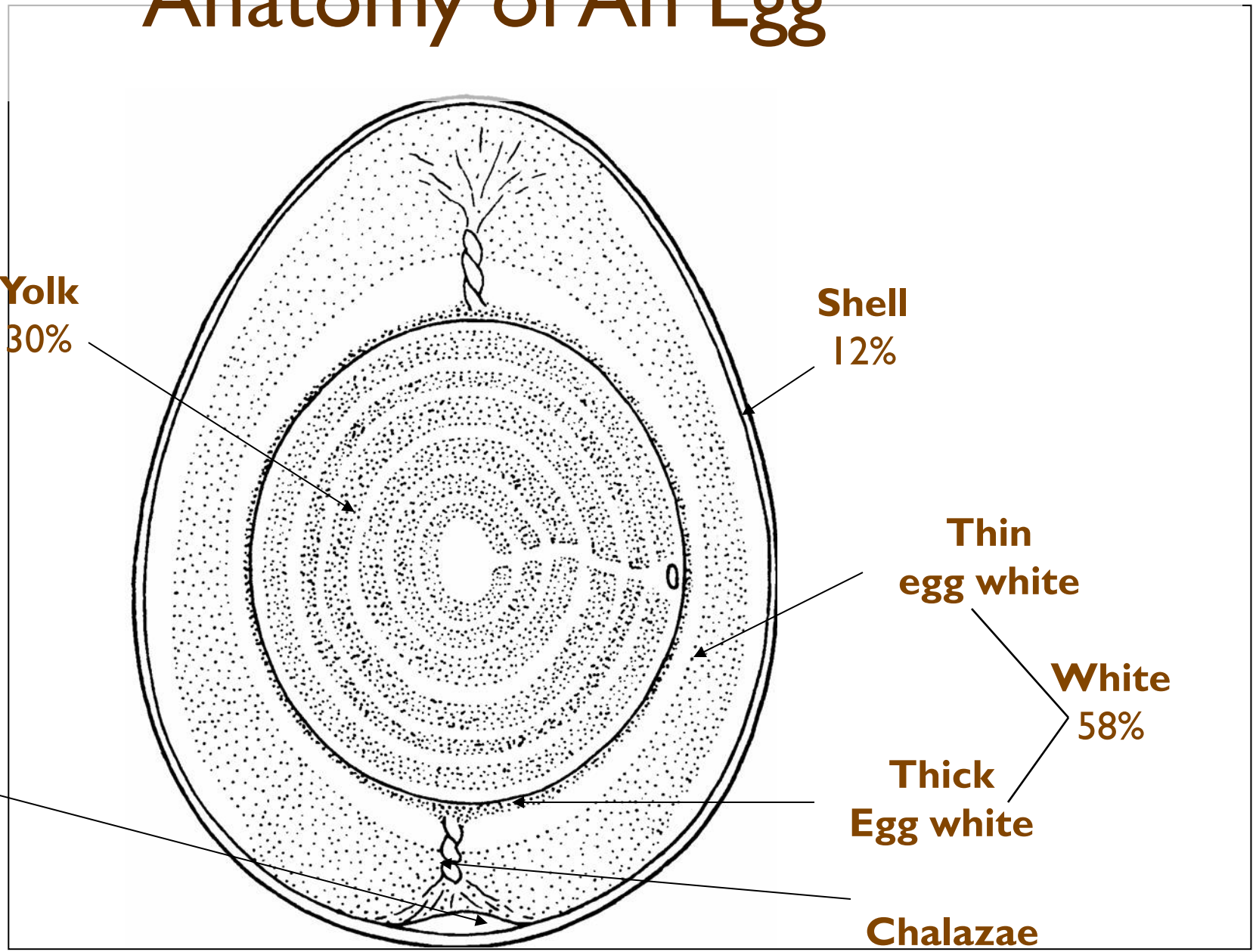
Learning Objectives

- Describe the components and quality characteristics of an egg
- List various specialty egg preparations
- State characteristics of quick breads
- Identify bakeshop equipment
- Describe the basic mixing methods
- Discuss and prepare classic and contemporary breakfast dishes that appeal to K12

Egg Cookery

Anatomy of An Egg



Egg Uses

- Binding
- Coating
- Leavening
- Emulsification
- Clarifying
- General enjoyment!

Egg Quality Factors

- Exterior Factors
  - Soundness
  - Texture of shell
  - Shape of shell
  - Cleanliness of shell
- Interior Factors
  - Size of air pocket
  - Proportion and density of white
  - Firmness of yolk
  - Blood vessels on yolk

Egg Grades – AA, A, B, and C

Egg Size/Weight Classifications

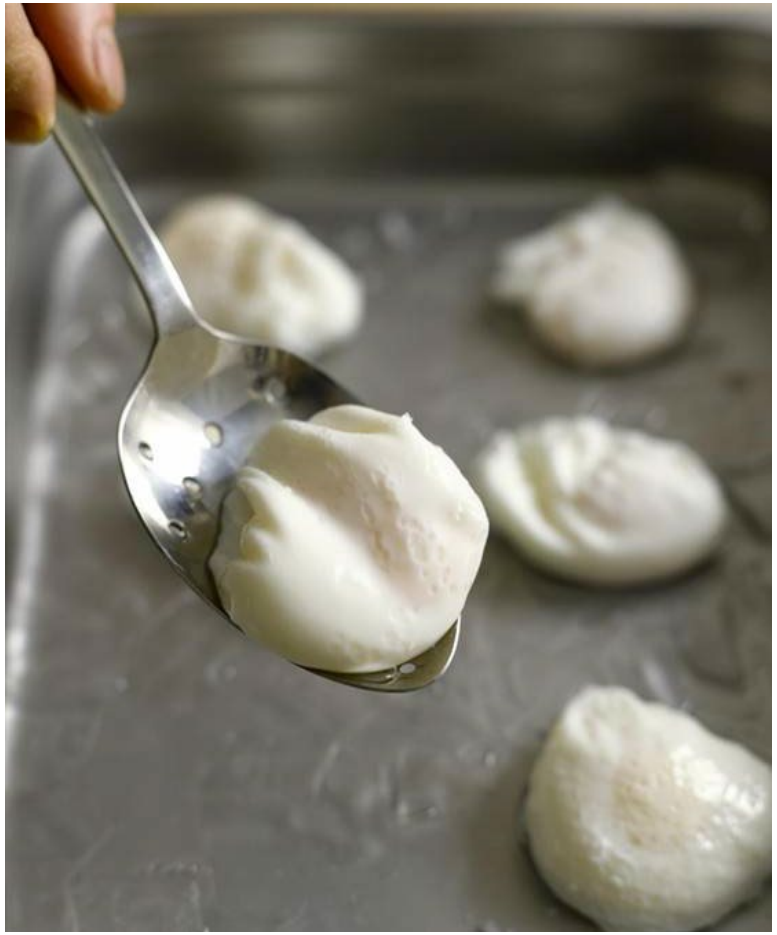
Jumbo:	28 - 30 oz. per 12 eggs
Extra Large:	25 - 27 oz. per 12 eggs
Large:	22 - 24 oz. per 12 eggs
Medium:	19 - 21 oz. per 12 eggs
Small:	16 - 18 oz. per 12 eggs
Peewee:	< 15 oz. per 12 eggs

Egg Cookery

- Eggs cooked in the shell
- Fried eggs
- Poached eggs
- Scrambled eggs
- Omelets
- Specialty egg dishes

Quality Criteria: Poached Eggs

- Tender, fully cooked white
- Runny, yet warm yolk
- Delicately set
- Compact, oval shape
- Neat, uniform appearance
- Served hot



Method for Preparing Omelets

1. Blend eggs with liquid, if using
2. Heat pan, then add oil or butter over high heat or in a hot oven; add any appropriate fillings or garnishes at this time
3. Add eggs and cook until properly set; add any additional fillings or garnishes, if desired
    - Stir eggs constantly in beginning for even cooking
    - Shake pan to spread eggs uniformly for best presentation
4. Season omelet, if desired
5. Evaluate quality of the finished omelet

Rolling a French-Style Omelet

1. Start by gently spreading or flattening the omelet in the pan to even it out for best-looking rolled and folded omelets
2. Roll edge of omelet nearest handle toward the center and loosen the omelet
3. Roll omelet out of the pan, completely encasing any filling (make sure the edges are caught neatly underneath the omelet), directly onto a heated plate
4. Shape omelet with a clean towel, if necessary

Specialty Egg Dishes

- Scotch Egg
- Frittata
- Tortilla Española
- Eggs Benedict
- Quiche
- Soufflé

Eggs Benedict

- Toasted English muffin halves
- Traditionally topped with ham or Canadian bacon, poached egg, hollandaise sauce, and truffle shavings
- Many variations exist

Quick Breads and Cakes

Bakeshop Equipment

- Mixers
- Thermometers
- Scales
- Measuring cups
- Spatulas
- Rolling pins
- Hand tools

The Fabulous Five

Which components are liquefiers?

Which components are stabilizers?

Do solid fats and oils produce different result?

Ingredients and Functions: Fats and Oils

- Moisturize
  - Traps moisture and extends shelf life
- Flavor
  - Butter
- Tenderizer
  - Inhibit gluten development
- Nutritional concerns
  - Vegetable fats vs. Animal fats vs. Trans fats
- Plays a role in physical leavening process

Ingredients and Functions: Sugar

- Sweetener
- Color
  - Caramelization
- Attracts moisture
  - Hygroscopic
- Role in leavening
  - Moisture creates steam
    - Supports leavening in creaming and foaming methods
- Flavor
  - Brown sugar vs. Honey vs. Corn syrup

Ingredients and Functions: Eggs

- Emulsifier
  - In creamed doughs and batters
- Leavener
  - Air expands (pâte a choux, sponge cake)
  - Moisture turns to steam
    - White = 90% water
    - Yolk = 50% water
- Color
  - Maillard browning
- Structure
  - Protein
- Tenderizer (yolks)
  - High fat content
- Flavor

Ingredients and Functions: Flour

- Structure
  - Starch and protein
  - Gluten development
  - Color
- Caramelization
  - Flavor
- Nutritional impact
  - Whole vs. processed grains
  - Carbohydrates, etc

Ingredients and Functions: Leaveners

- Biological/Organic
  - CO_2-emitting organisms
- Chemical
  - Baking powder
  - Baking soda
- Physical/Mechanical
  - Mixing methods used to create structure

How is Puff Pastry leavened?

Mixing Methods

- Straight
- Creaming
- Foaming
- Rubbing/Cut In
- Others?

- If you change the method used in a recipe, will it change the final product?

Dough vs. Batter

Dough

- Main ingredient is flour (wheat)
- Ingredients are kneaded
- Usually malleable
- Generally yeast-leavened

Batter

- Main Ingredients are eggs with high amount of sugar and fat
- Usually whipped, creamed, or blended
- Pourable/spreadable
- Leavened by physical or chemical leavening

Straight Method

- Straight method
  - Most often used in recipes relying on direct fermentation
  - i.e. - bread dough
- Well method
  - Variation of straight method
  - Often used for quick breads and muffins

Straight Method – Bread Dough

- All ingredients combined at once
- Features biological leavening
  - Yeast
- Well method variation
  - Add wet ingredients to sifted dry ingredients
    - Chemical leavener
  - Finish with melted fat

Straight Method

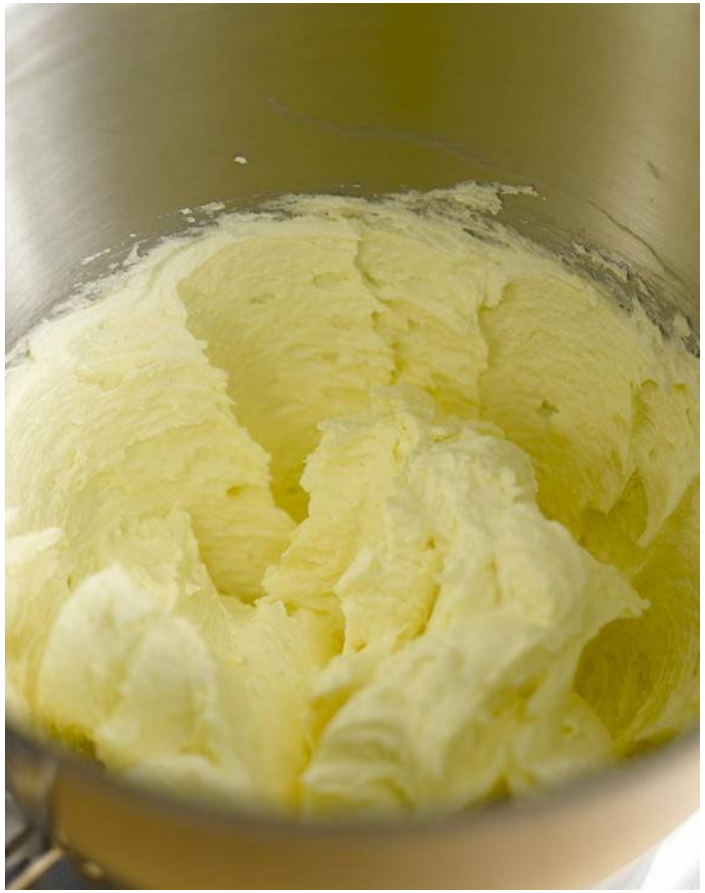
1. Sift dry ingredients together
2. Combine all liquid ingredients in a bowl
3. Add wet to the dry
4. Scale batter into/onto appropriate pan
5. Bake or cook as indicated

Creaming Method / Cakes, Cookies, Muffins, Quick Breads

- Fat and sugar are creamed
- Eggs slowly added
- Dry and liquid ingredients are added alternately
- Features mechanical leavening
  - Chemical leavening may also be used
- All ingredients must be at room temperature
- Potential for over mixing
  - Development of too much gluten

Creaming Method

1. Cream fat and sugar together
2. Add flavorings, mix well
3. Gradually add eggs (eggs should be at room temperature)
4. Add liquid ingredients alternating with dry; scrape bowl often
5. Mix until smooth (do not overmix)
6. Scale batter into pans
7. Bake or cook the batter



Rubbing Method

- Primarily used for:
  - Pie and Tart Doughs
  - Scones

Rubbing Method

1. Sift dry ingredients
2. Toss cold fat with flour mixture
3. Cut in fat
4. Add just enough ice-cold water to moisten dough so it holds together
5. Knead two or three times to pull into a ball
6. Refrigerate for 20 minutes
7. Scale and roll as appropriate

Quick Breads

- Tender and delicate texture
- Pourable batter or a soft dough
- Leaveners
  - Most often chemical
    - Baking powder, baking soda
  - Less often physical
    - Steam from butter or whipped egg whites
- Mixing methods
  - Straight
  - Creaming
  - Rubbing
- Examples
  - Muffins and loaves
  - Pancakes, waffles, and crêpes
  - Scones and biscuits

Muffins and Loaves

- Spoonable/pourable batter
- Mixing method
  - Straight or Creaming
- Chemical leaveners
- Tender, soft texture
- Muffins baked individually
- Loaves baked and sliced

Scones and Biscuits

- Tender and flaky texture
- Mixing method
  - Rubbing
- Leaveners
  - Chemical
  - Physical (steam from butter)
- Baked individually
- Scones – sweet or savory / Biscuits – generally savory

Baking, Breakfast and Eggs:

Team One: Pourable Pizza Crust
Pepperoni and Sausage Pizza

Team Two: Orange Almond Breakfast Cake
Zucchini and Roasted Red Pepper Frittata

Team Three: Korean Street Toast with Egg
Potato Frittata

Team Four: Breakfast Lentil Quesadilla
Peanut Butter Vanilla Yogurt Dip with Fresh Fruit

Orange Almond Breakfast Cake

Korean Street Toast

Any questions?