Culinary Institute of America

Seafood Boot Camp

Chef Chris Muller

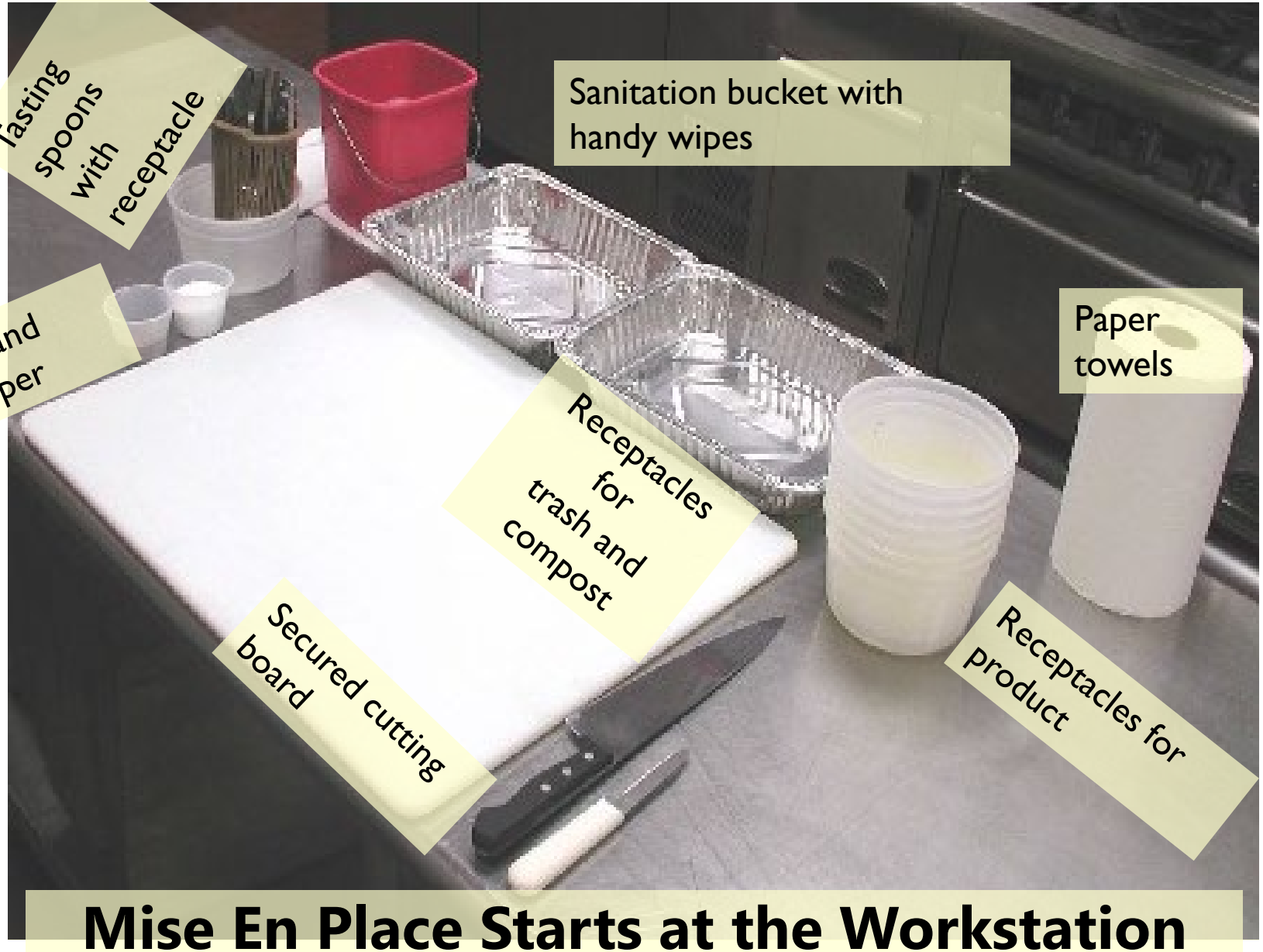
Day 1

Learning Objectives

- List and discuss the rationale and importance of sustainable seafood.
- Identify the different species of seafood and understand their habitats and lifecycles.
- Recognize the freshness of various types of seafood.
- Practice seafood butchering and portioning techniques.
- Produce the daily menu using a variety of dry-heat and moist-heat cooking methods.
- Understand common terminology used in the fishing industry.

Mise en Place

- French term for “everything in its place”
- A clean, organized workstation
- Recipe mise en place
- Reading through the **entire** recipe
- Prep time vs. service
- Physically ready to cook
- Mentally prepared to cook– proper state of mind!



Mise En Place Starts at the Workstation

Mise en Place

Organization and Workflow

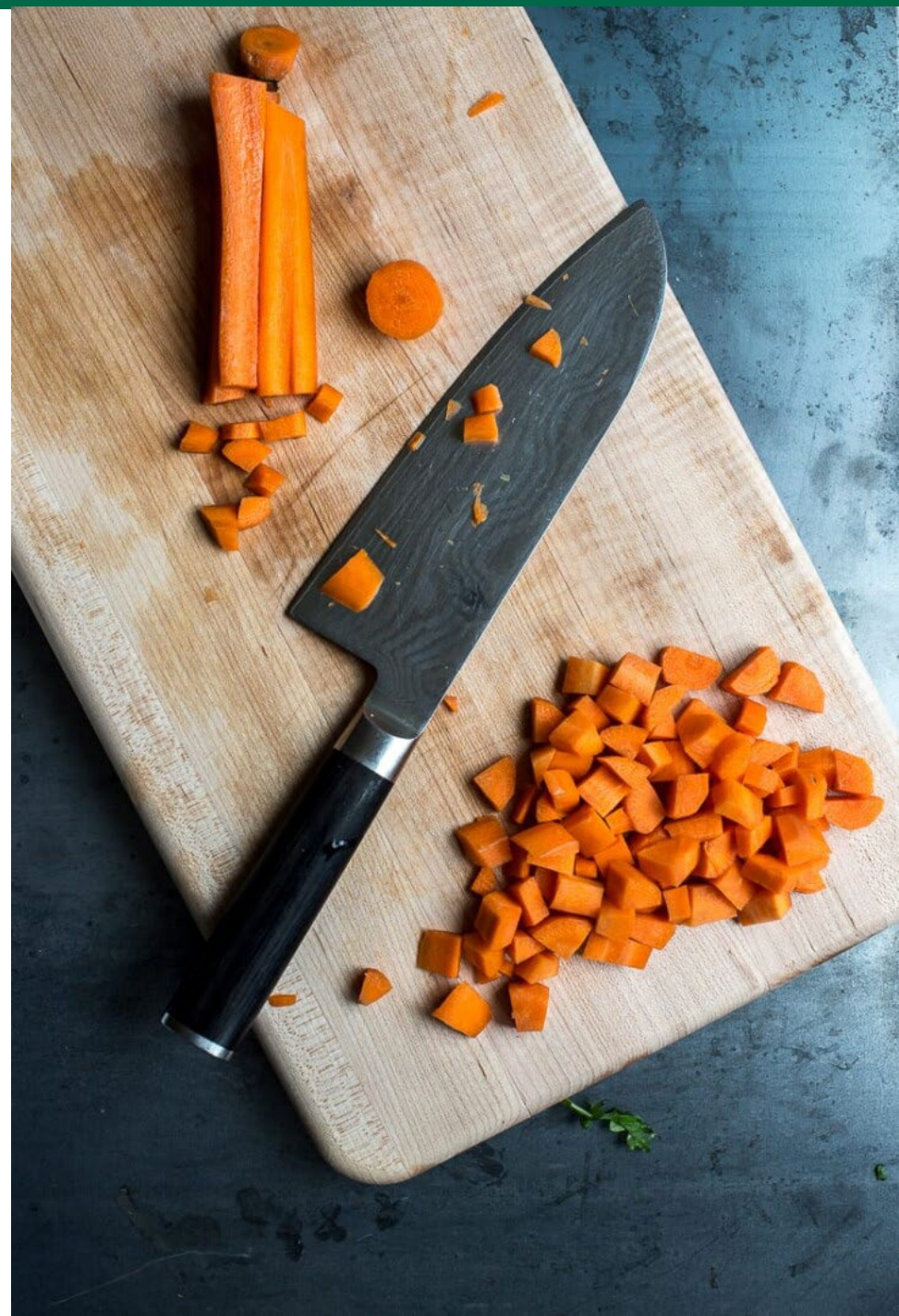
- Set workstation at correct height
- Use bain-maries with hot water for tools
- Set cutting board on sheet pan for messy jobs
- Have a written daily plan- start with the **end** in mind
- Use standardized recipes
- Consolidate tasks (have one person cut all the onions, garlic, etc.)
- Use timers and thermometers
- Use the right equipment for the job!

Recipe Mise en Place

- Read entire recipe before starting
- Understand all terms - ask questions!
- Check yield, temp, cooking times
- Gather ingredients needed
- Complete necessary pre-steps
- Measure/ weigh ingredients
- Follow steps in order
- Time cooking periods accurately
- Remember: recipes are only guidelines!

Knife Safety

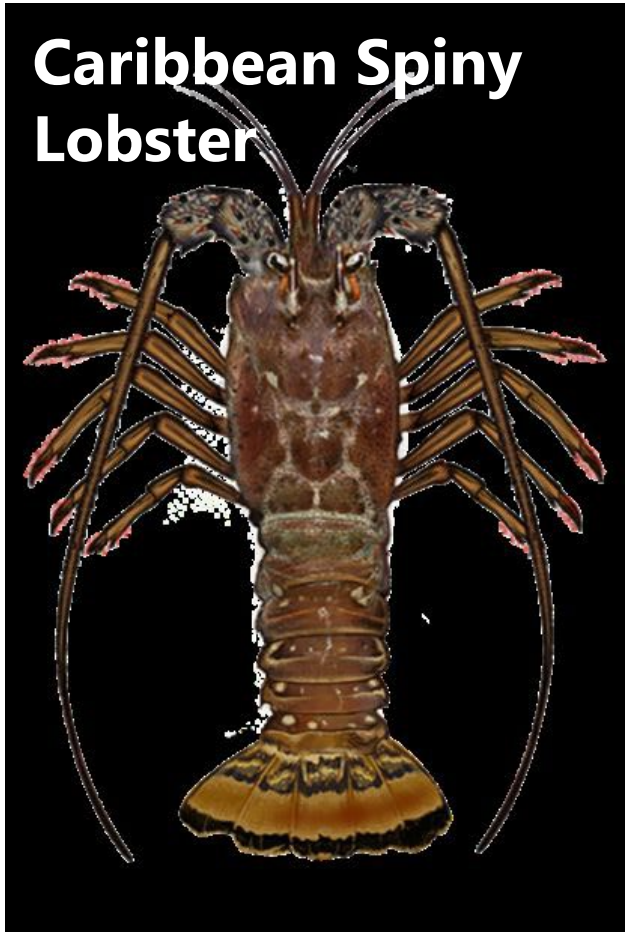
- Always use a sharp knife!
- Hold the knife firmly in your hand
- Cut away from your body
- Always use a cutting board
- Always place knives on flat surfaces away from the edge of the table with the blade facing away from you
- Keep knives in clear sight, never covered
- Do not grab blindly for a knife
- Pass knife using handle, never the blade
- Carry knifes with the point down



Crustaceans

segmented body covered with a hard shell or crust with several pairs of legs

Caribbean Spiny Lobster

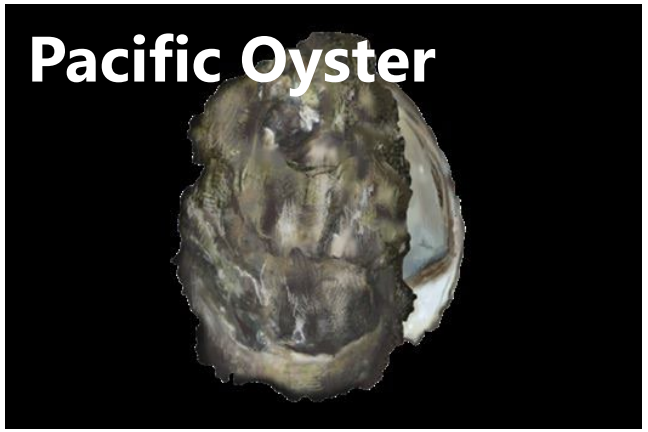


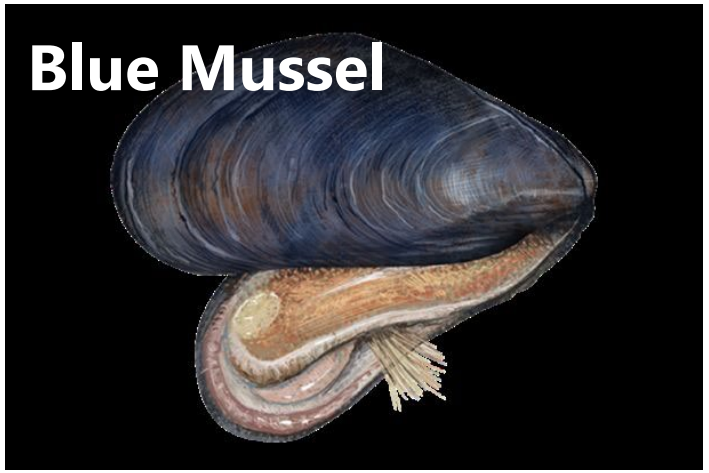
Atlantic Northern Shrimp

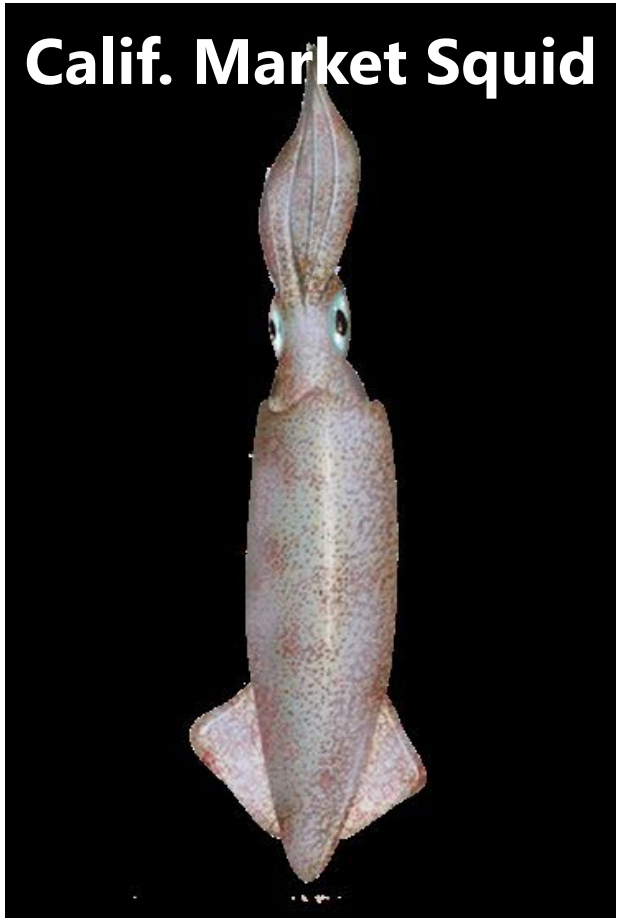
Blue Crab

Mollusks/ Cephalopods

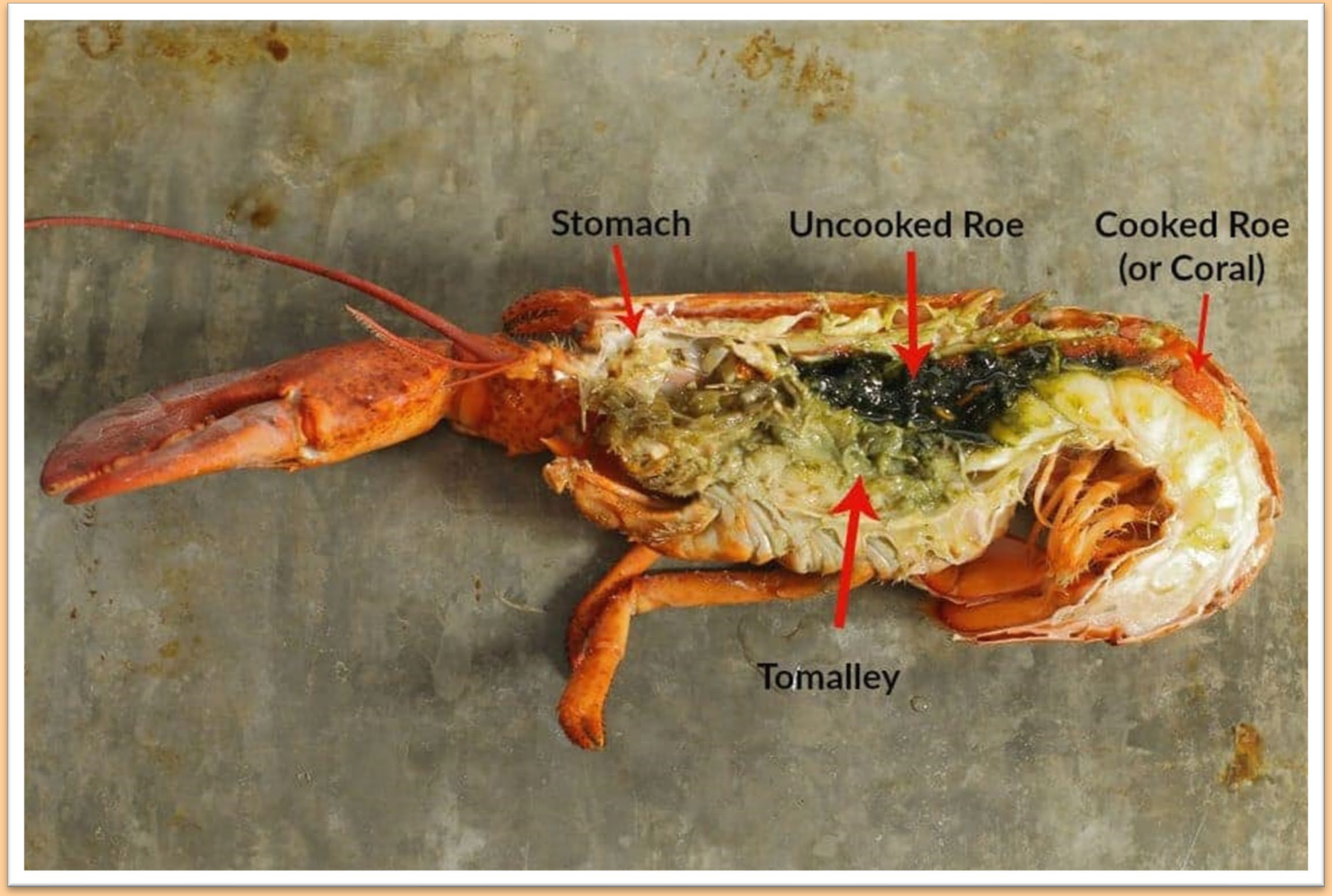
Soft, unsegmented body, no spine or bone, usually enclosed in a shell

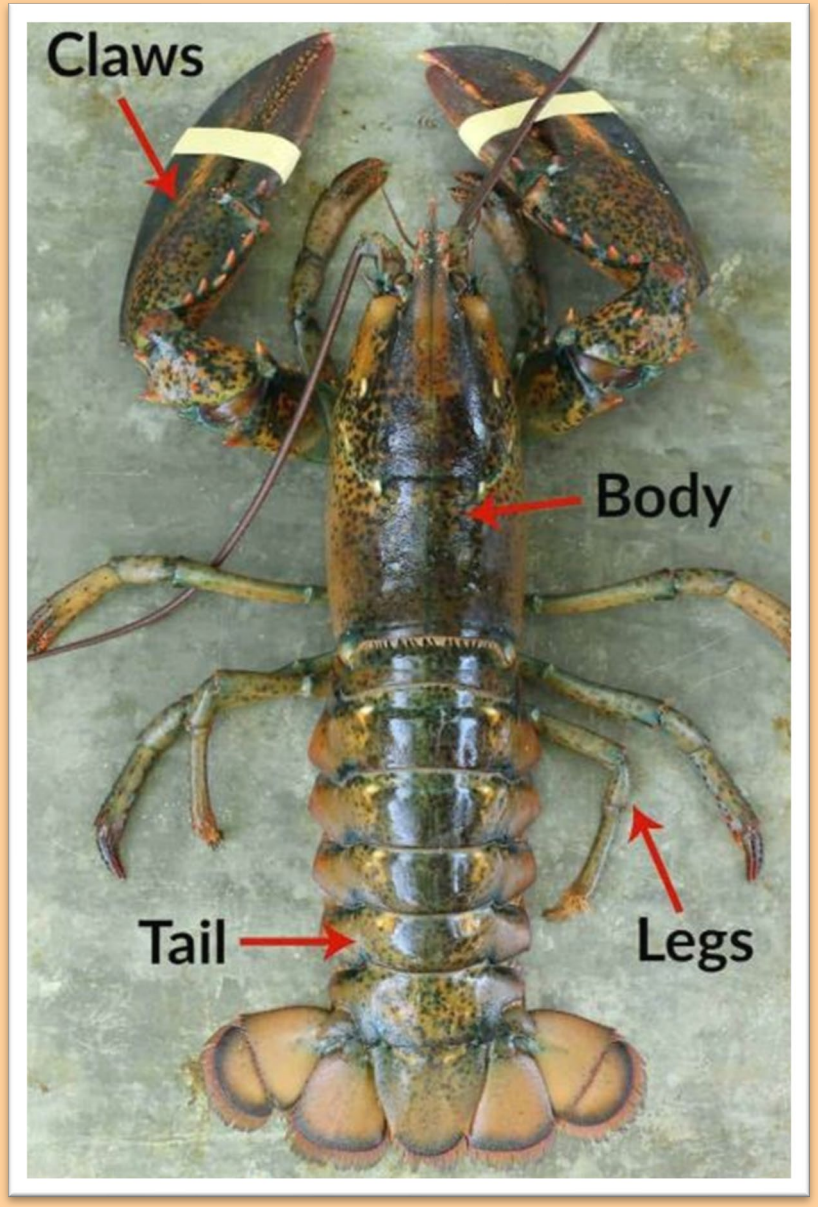






Lobster Anatomy





Lobster Anatomy

Mollusk Freshness

- Perished clams develop bacteria quickly
- Make sure you are working with living clams before you start cooking
- Hard shell clams, mussels, and oysters should be tightly closed
- Live mollusks will respond to tapping by closing shell/ retracting siphon
- Should smell clean and briny, like ocean air
- Look for a harvest tag with location/ date of harvest and "use by" information

Discard any that:

- are cracked/ broken
- are open but don't shut when tapped
- don't open during cooking

Shallow-Poaching Method

1. Butter sauteuse pan very lightly
2. Add aromatics, seasoned main item in even layer
3. Add poaching liquid ⅓ way up sides
4. Bring liquid to between 165°-175°F
5. Cover with buttered parchment paper or lid
6. Finish over direct heat or in oven
7. Remove main item, moisten, and keep warm
8. Reduce cuisson and prepare sauce
9. Serve main item with sauce, appropriate garnish

Deep-Poaching Method

1. Heat cooking liquid (court bouillon) to 165°F
2. Add main item, using a rack if necessary (item must be fully submerged)
3. Finish food over direct heat or in oven - do not let liquid boil
4. Remove main item, moisten, and keep warm while preparing sauce or cool in liquid, as appropriate
5. Cut or slice main item (if appropriate)
6. Serve with appropriate sauce and garnish

Steaming Method

1. Bring liquid to a boil or preheat steamer
2. Add main item to steamer and arrange on a rack in a single layer
3. Cover steamer
4. Steam food to desired degree of doneness
5. Serve food immediately with appropriate sauce and garnish

Sauté Method

1. Prepare items for sautéing; heat pan
2. Add small amount of oil; sear items - presentation side down first; turn once
3. Finish larger items on stovetop with lid or in an oven uncovered
   - Light meats - golden brown
   - Red meats - browned thoroughly
4. Remove items from the pan and reserve; keep warm

Pan Fry Method

1. Heat oil to appropriate temp
2. Add main item (usually breaded or batter-coated) in a single layer
3. Pan-fry on first side until browned
4. Turn, cook to desired doneness
5. Remove item, finish in oven, if necessary
6. Drain item on paper towels
7. Season, serve with appropriate sauce and garnish

Deep-Fry Method

1. Heat fat to proper temp (350°F)
2. Coat products with coating
3. Add main item (usually breaded or batter-coated) to hot fat using appropriate method
4. Turn items during frying
5. Remove main item and finish cooking in an oven, if necessary
6. Drain food on paper towels/ rack
7. Season, serve with appropriate sauce and garnish

Grilling Method

1. Thoroughly clean and preheat grill; oil grids
2. Season/ marinate main item; brush with oil if necessary to prevent sticking
3. Place main item on grill; use a hand grill for delicate foods such as fish
4. Rotate item 90º to produce crosshatch marks, if desired
5. Turn item over, continue cooking to desired doneness

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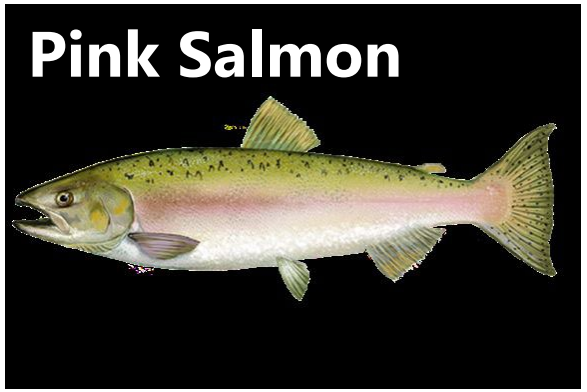
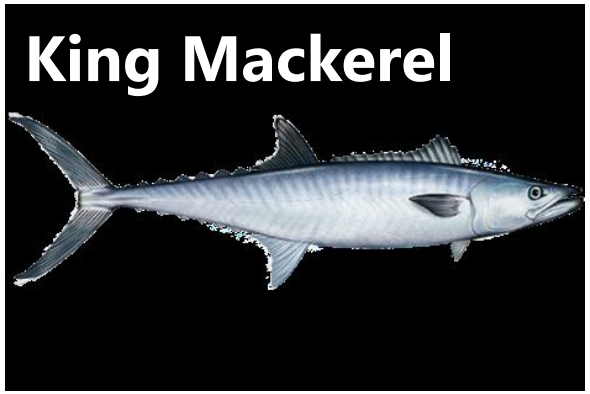
Day 2

Round Fish

fish with an oval or rounded rib cage, eyes on either side of the head, swim in a vertical position



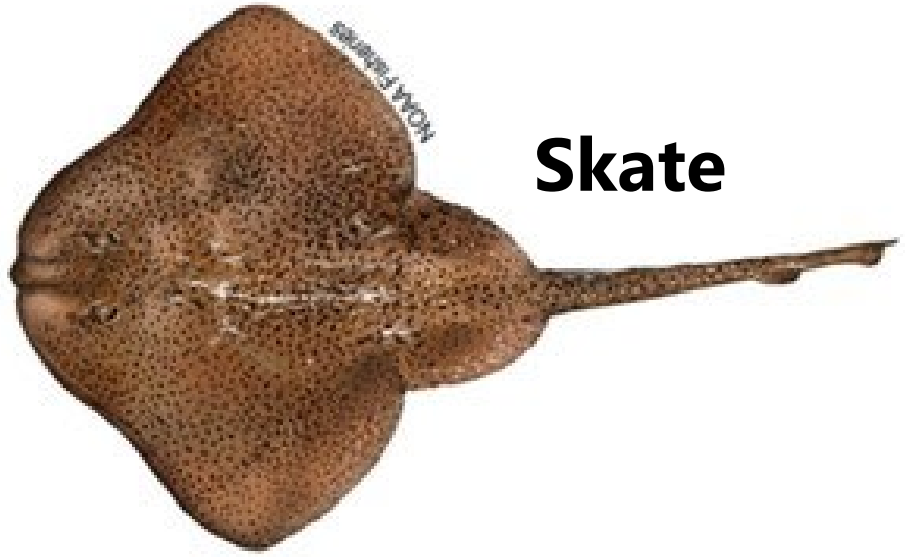


Flat Fish

swim on their side, both eyes on the upper side, live near bottom of seabed

Atlantic Halibut

Dover Sole



Skate

Fin Fish Freshness

- Received at 40°F or colder
- Good overall appearance: clear slime, no cuts or bruising, pliable fins
- Scales adhere tightly
- Flesh responds to light pressure, firm to touch
- Eyes clear, bright, bulging
- Gills bright pink/ maroon; clear mucous
- Clean, sweet, sea-like smell
- Bloodline bright red

Eyes

The Good

The Bad

GILLS

The Good

The Bad

Texture and Shine

The Good

The Bad

FRESH

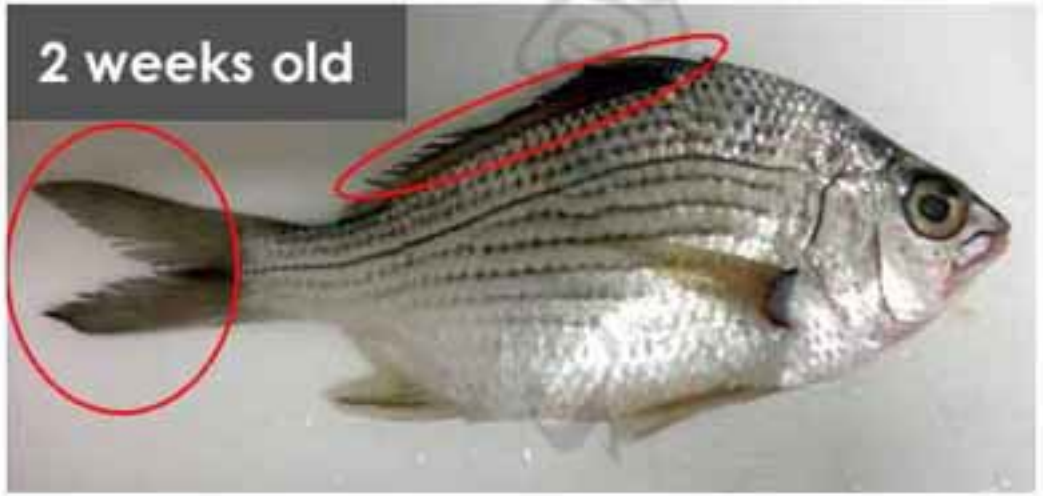
Rigid Body

DECAYED

Not Rigid Body

No Impression

Impression



Old Fin Fish

- "Belly burn" (viscera left in fish too long, resulting in bacteria/ enzymes breaking down flesh along rib cage)
- Dry, brittle, shriveled fins
- Fishy, sour, or ammonia smell
- Fillet looks dry around the edges
- Eyes sunken and cloudy
- Gills brown and torn
- Flesh soft to the touch
- Dull coloring

Buying Tips:

✓ When buying frozen fish, look for well-packaged items with tight seals, without ice or liquid around the product

✓ Check for dates

✓ Buy from a reputable producer

Market Forms of Fish

Fish may be purchased in the market forms below, as well as in frozen, smoked, pickled, or salted forms

Form	Description
Whole fish	fish as it is caught, completely intact
Drawn fish	viscera removed, head, fines, scales intact
Headed & gutted	head and viscera removed
Dressed fish	viscera, gills, scales, fins removed; head possibly removed
Steak	portion-sized cross section cut from a dressed fish
Fillet	boneless piece of fish, removed from either side of the backbone; skin possibly removed
Tranche	portion-sized slice of a fillet cut at 45° angle to expose greater surface area
Pavé	portion-sized square cut from a fillet

Seafood Terminology

- **Aquaculture:** farming of fish, plants, mollusks, or crustaceans
- **By Catch:** fish, birds and mammals that become trapped, entangled, or hooked in fishing gear that fisherman discard
- **Catch Shares:** management strategy that guarantees fishermen a specific number of fish to harvest
- **Day Boats:** fish or seafood caught and brought to shore on the same day
- **Estuary:** semi-enclosed coastal body of water with one or more streams flowing into it.
- **Fisheries:** fresh or saltwater area where fish are raised and caught for commercial and recreational purposes
- **Hatchery:** process of cultivating and breeding juveniles in an enclosed environment then released to mature

Seafood Terminology

- **IUU Fishing:** Illegal, unreported, unregulated fishing; activities that violate regulations and undermine responsible legal fishing
- **Longlines:** long fishing line with many short lines carrying hooks.
- **Magnuson-Stevens Act:** law that governs marine fisheries in U.S. Federal waters passed in 1976
- **Migration:** movement of fish or mammals from one area to another, often involving feeding and reproduction cycles
- **Purse Sein:** fishing technique using large nets to harvest large amounts of fish
- **Red Tide:** The discoloration of surface waters caused by large concentrations of micro-organisms often causing harm to an ecosystem
- **Trawling:** fishing with a large bag like net that is dragged behind the boat
- **Trolling:** Fishing method where lines are baited and slowly dragged through the water at a specific depth

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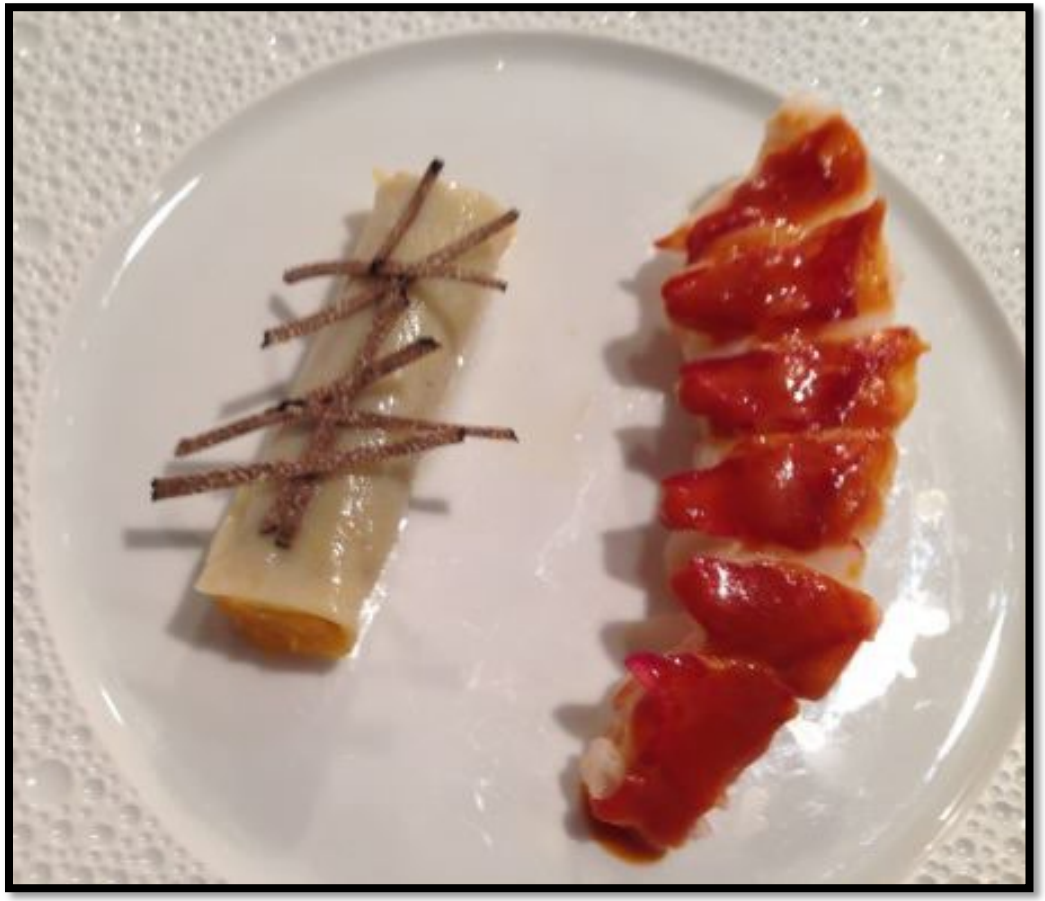
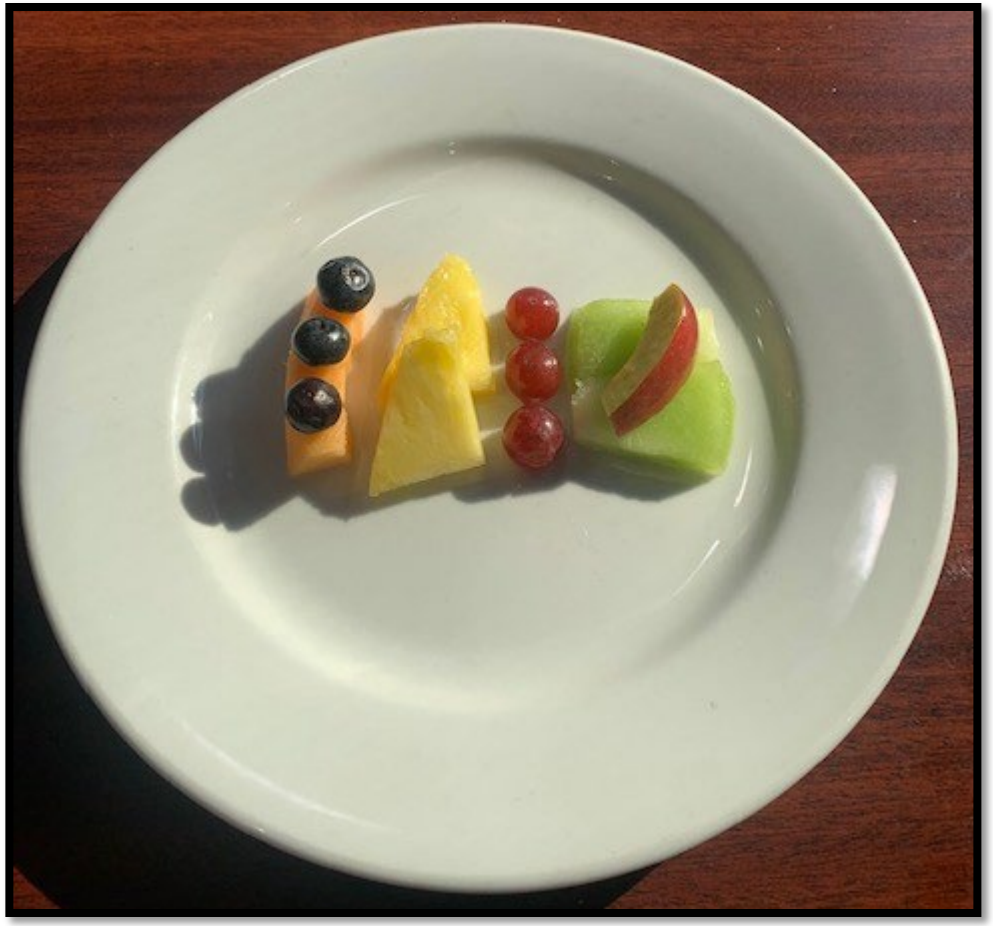
Plating Techniques





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Any Questions?