

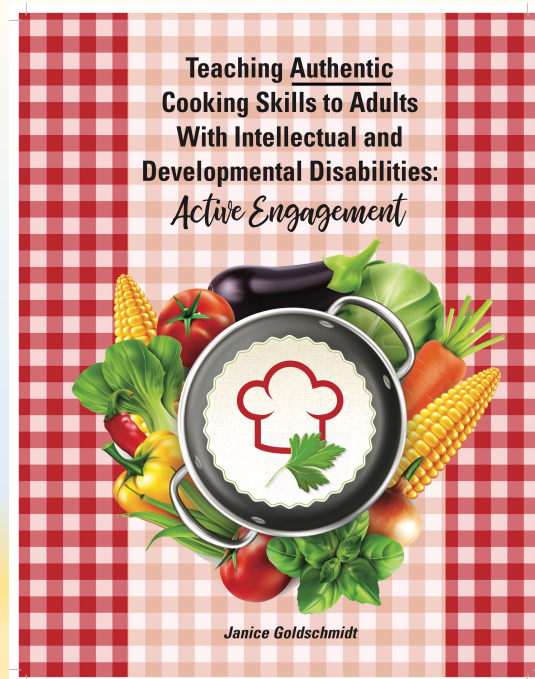
Active Engagement: Promoting independence in the Kitchen for Individuals with Autism

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Omaha, NE

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Overview of Presentation

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Active Engagement -- Chapter 1:

Traditional Approaches to Teaching Cooking to Individuals with ASD & IDD

- **Typically, very narrow in scope**
- **Often a snack with little choice or individualization involved:**

Baking a roll of biscuits (J. W. Schuster, et al., 1988)
 Scrambling eggs (Griffen, Wolery, & Schuster, 1992)
 Preparing juice (J. W. Schuster, & Griffen, A. K., 1993)
 Microwaving a cake (Hall, 1992)
 Preparing waffles with syrup (R. S. Fiscus et al., 2002;)
 Cooking a frozen pizza (Giere, 1989; Van Laarhoven, 2006)
 Microwaving popcorn (Jones & Collins, 1997)
 Assembling cheese and crackers (R. S. Fiscus et al., 2002)
 Creating a peanut butter & jelly sandwich (Rehfeldt, et al. 2003)
 Making a milkshake, chocolate milk (Fiscus et al., 2002; Griffen et al., 1992)

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Active Engagement -- Chapter 1:

What is the evidence for cooking as a form of nutritional intervention?

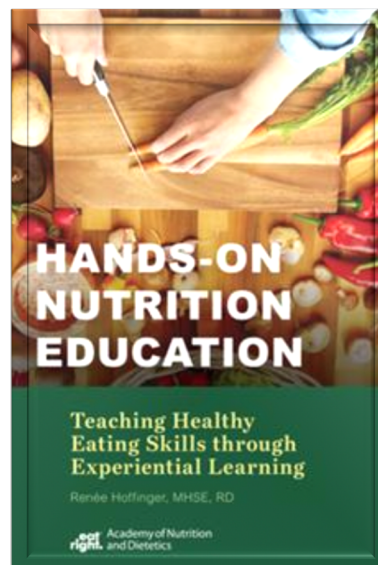
Significant lack of high-quality studies

Reicks, M., et al. (2018). "Impact of Cooking and Home Food Preparation Interventions Among Adults: A Systematic Review." Journal of Nutrition Education and Behavior **50**(2): 148-172.

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Hands-On Nutrition Education



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Hands-On Nutrition Education:

Any nutrition education or counseling encounter that actively engages the participant. In HONE, learning is experiential—arising from first-hand observation and actual hands-on completion of tasks.

- **Classic HONE Activities include:**

- Food demonstrations
- Grocery store tours
- Cooking classes

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Active Engagement -- Chapter 2:

Traditional Approaches to Teaching Cooking Skills



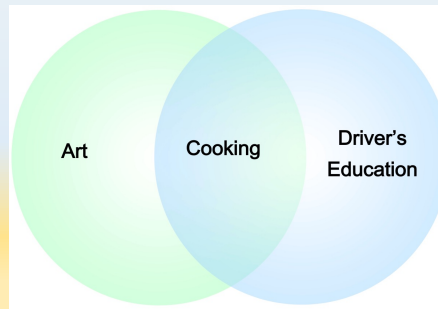
We don't learn cooking by watching; we learn by doing.

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Active Engagement -- Chapter 2:

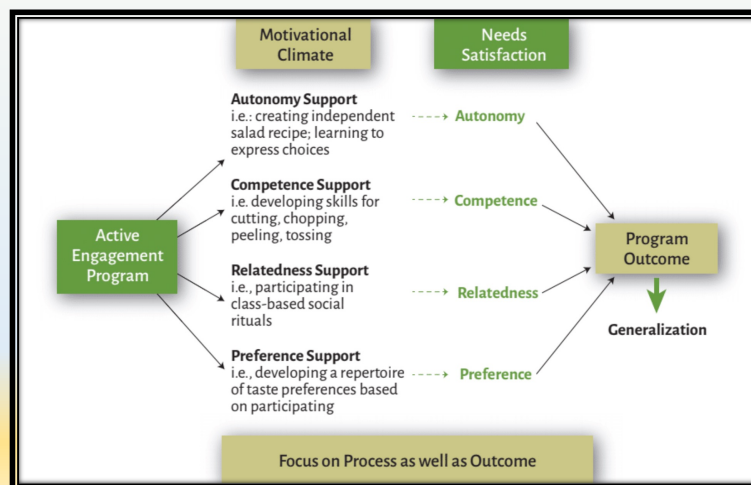
Active Engagement: Something Different

- New model is needed for those with Autism and Intellectual and Developmental Disabilities
- Part of the movement towards Hands-On Nutrition Education (HONE)



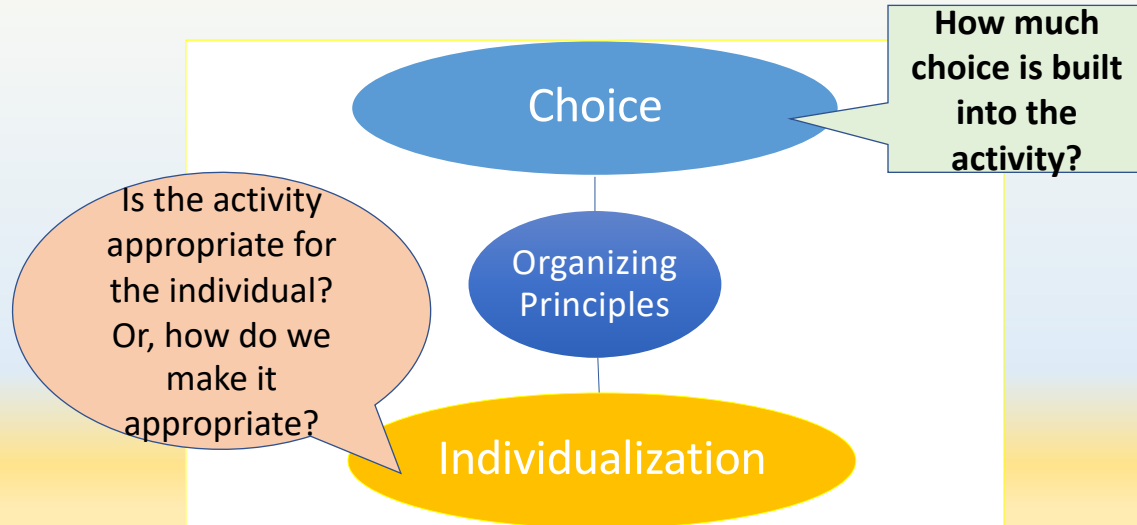
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Active Engagement: Conceptual Framework



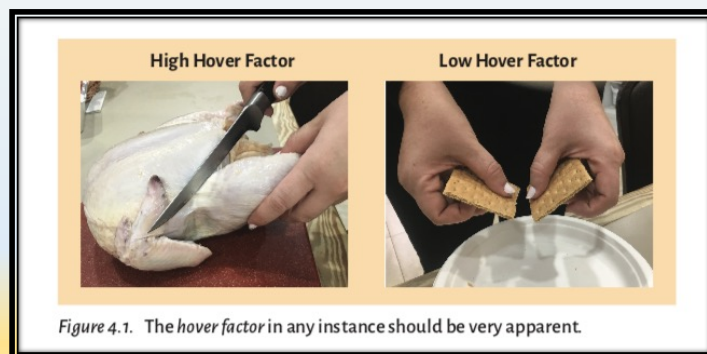
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Active Engagement: Organizing Principles



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Active Engagement: The Hover Factor



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Casserole Production



Slow Cooker Meal



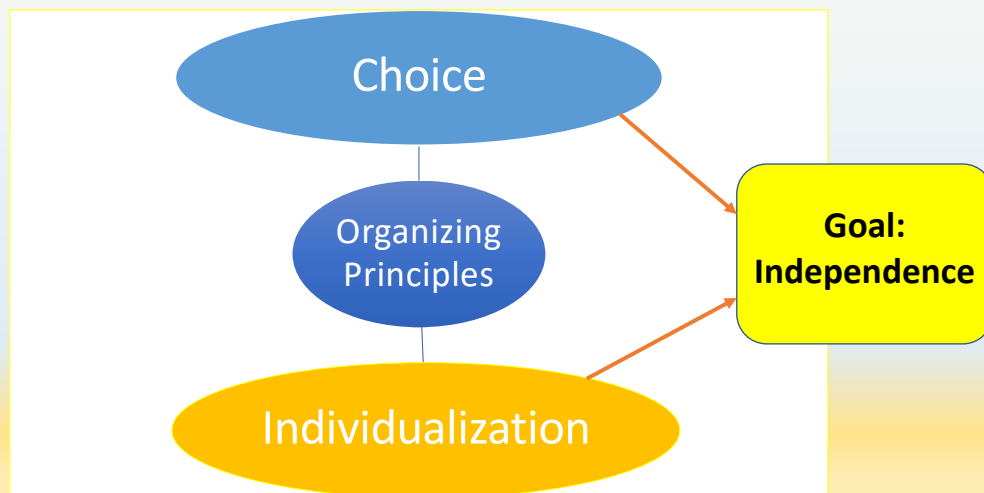
Cold Sandwich

3 Examples Of Low Hover Factor Activities

Active Engagement -- Chapter 3:

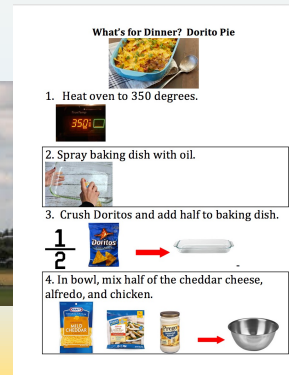
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Active Engagement: Organizing Principles



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Active Engagement: Adjusting to the Needs of Those With Autism



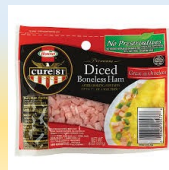
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Active Engagement

Bypass the
problem
completely



Minimally processed
foods



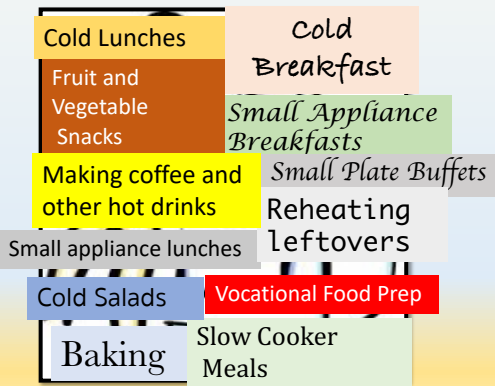
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Active Engagement: Contexts for Cooking

Food Preparation

Most food preparation doesn't happen at the stoves.

America is moving towards a snackified culture



Stovetops don't have any role in *Active Engagement*

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Active Engagement

Adaptive Tools



"Popper" Box



Nylon Adaptive Knives

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*Active Engagement***Options for Cutting/Chopping**

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*Active Engagement***Other Adaptive Tools**

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Active Engagement

Options for Cutting (cont.)

Active Engagement:
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Table 4-1. Options for Learning to Chop/Cut (continued)

<p>Food Cutter and Popper:</p> <ul style="list-style-type: none"> ■ This popper chops into small even pieces and pushes the uniform pieces through a sieve. ■ This tool requires little fine motor control but does need physical strength. ■ Not particularly useful for chunky vegetables. <p>Advantages: Makes uniform pieces; requires minimal power to be effective</p> <p>Disadvantages: People will not go back to the adaptive knife after exposure; some cleaning effort required</p>
<p>Cutting Knife with Cut-Resistant Glove:</p> <ul style="list-style-type: none"> ■ People who have mastered the adapted knife can proceed to cutlery; it is wise to use a safety glove with wire mesh to ensure that the transition is a safe one. ■ The glove protects the stabilizing hand only and safety remains a priority for other components. <p>Advantages: Allows people with sufficient motor ability to make the transition to true cutlery</p> <p>Disadvantages: Even with protective glove, likely to be high hover factor</p>
<p>Independent Knife Use:</p> <ul style="list-style-type: none"> ■ It is often best to begin with dull knives, or knives without blades (butter knives) before transitioning to authentic cutlery. <p>Advantages: Allows the individual to experience the full range of chopping and cutting activities; very effective on most foods</p> <p>Disadvantages: Highest hover factor even with glove or finger protector</p>

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Table 4-1. Options for Learning to Chop/Cut

<p>Rip or Tear:</p> <ul style="list-style-type: none"> ■ If the individual has low muscle tone or difficulty with coordination of right and left hands, it is often best to work without a knife. ■ Lettuce and peppers can be torn or ripped; emphasis can be placed on size of fragments. ■ As the course progresses, this technique can also be used with people who have already mastered adapted knives as a useful approach to introduce variety and change into the curriculum. ■ Scissors can also be used on lettuce. <p>Advantages: Technique usable by everyone</p> <p>Disadvantages: Limits the number of types of foods that can be used</p>
<p>Adapted Knife with Stabilizer:</p> <ul style="list-style-type: none"> ■ People who struggle with right/left hand coordination but have reasonable grip strength, might do well with an adaptive knife. ■ A fork is used to stabilize the object being cut while the knife cuts through the material. <p>Advantages: Allows people with insufficient strength to cut with an adaptive knife</p> <p>Disadvantages: Cumbersome; takes practice; requires grip strength</p>
<p>Adapted Knife with Sensory Input:</p> <ul style="list-style-type: none"> ■ People who have adequate right/left hand coordination but have issues with grip strength are well suited to use the adapted knife along with sensory input. ■ This can come in the form of mild pressure on the cutting hand or can involve the use of wrist weights. <p>Advantages: Allows people with poor grip strength to develop cutting skills</p> <p>Disadvantages: Less autonomous than other options, as physical input required</p>
<p>Adapted Knife:</p> <ul style="list-style-type: none"> ■ Using the adapted knife on its own works well for the majority of people. ■ This works well to teach how to position vegetables without "cutting" fingers. ■ It is also excellent for teaching the back/forth motion needed as the serrated edge of these plastic knives are not particularly efficient with only a downward motion. ■ The ergonomic handle is designed to be held by children ages 4 years and up and conformed to the safety requirements of Toy Safety Standard ASTM F963 for minimal risk. ■ Despite the fact that they are regulated as toys, such knives are utilizable as functional tools in a kitchen setting. <p>Advantages: Works well with the broadest range of abilities; inexpensive</p> <p>Disadvantages: Not particularly effective with tough or dense foods, such as raw meat</p>
<p>Roller Knife:</p> <ul style="list-style-type: none"> ■ This tool allows for continuous cutting and works well with lettuce, peppers, and celery. ■ Though the motion is easy to learn, the positioning hand is vulnerable to the blade. <p>Advantages: Allows power to be distributed through the motion of the wheel knife</p> <p>Disadvantages: The stabilizing hand is exposed to the blade; does not cut many food items</p>

(continued)

Active Engagement

Options for Cutting & Chopping

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Active Engagement

And even more
cutting/
chopping
options

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Table 4.2. Other Cutting Options





Item	Uses	Pros	Cons
Weighted Cutlery	Provides sensory input to ensure that the bladed has enough strength	Useful for those who have insufficient power	The blade carries the risks of all cutlery, so the uses will be very limited High <i>hover factor</i> likely
Lettuce Knife	Supposedly use of this knife in cutting leafy green vegetables will prevent browning; no substantial evidence of the veracity of this claim	Highly comparable to the children's version of the adaptive knife Low <i>hover factor</i>	More expensive than the adaptive knives
Cheese Slicers	Allows slicing through some foods	Downward motion transmits power through food to slice the product	Limited use and many foods are too dense to cut in this manner or are not useful in a sliced form
Right Angle Knife	Saw-like motion allowing for one handed cutting	Effective at cutting very dense foods including raw meat	Stabilizing hand is exposed to the knife High <i>hover factor</i> likely
Pivot knives on cutting boards	The knife is attached directly to the cutting board and held in place to limit the harm that can be done	People can effectively position food under the knife and cut almost any type of material	The positioning hand is vulnerable to the blade High <i>hover factor</i> likely
"Clever Cutter"	Resembles a complicated pair of scissors; intended to combine scissors and a cutting board for chopping fruits and vegetables	For certain types of foods these work well—e.g., green beans, asparagus	Requires scissor skills; blade is relatively sharp; not useful for dense or outside foods High <i>hover factor</i> likely
Hand powered vegetable choppers	Uses hand crank to chop and dice	Cuts into uniform sizes and shapes Low <i>hover factor</i>	Requires power for dense objects; some fruits and vegetables will need to be prepped to be put through the machine

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Recipe Adaptations





What's For Dinner?: Fish Tacos




1. Heat oven to 425 degrees.

2. Spray a baking pan or sheet with oil.

3. Lay 16 fish sticks on baking sheet leaving space between.

4. Bake for 15-17 minutes or until the coating is crunchy and brown.



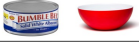


What's for Dinner?: Savory Ham and Egg Casserole



1. Heat oven to 350 degrees.

2. Spray baking dish with oil.

3. Break open 6 eggs into bowl

4. Add 2 boxes of milk to eggs and whisk until well blended


What's For Dinner: Tuna Casserole



1. Heat oven to 350 degrees. Spray baking pan.

2. Open large can of tuna and pour tuna into bowl.

3. Add 2 packages elbow macaroni to bowl.

4. Add can of soup and peas to bowl. Mix.


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Active Engagement: What Recipes Are Appropriate?

Adapt or “hack” existing recipe

INGREDIENTS

- 2 (12 oz) boneless skinless chicken breasts (1 1/4 to 1 1/2 lb)
- 1/2 cup Swiss cheese (2 oz)
- 1/2 cup finely chopped ham (2 oz)
- 3 tablespoons butter, melted
- 3/4 cup Progresso® Italian style porky crispy bread crumbs

PREPARATION

Preheat oven to 375°F. To form pocket in each chicken breast, cut 3-inch-long slit in thick side of each, cutting into breast about 2 inches and to within 1/2 inch of opposite side.

In small bowl, mix cheese and ham. Spoon evenly into pockets in chicken; secure openings with butter. Roll in bread crumbs to coat. Place in ungreased 13x9-inch (3-quart) glass baking dish. Sprinkle remaining bread crumbs over chicken.

Bake 28 to 32 minutes or until juice of chicken is clear when center of thickest part is cut (at least 16 minutes before serving).

Start with a recipe that is already appropriate

Stuffed Chicken Breasts Cordon Bleu

★★★★★

Prep	Total	Ingredients	Servings
15 min	45 min	5	4

Ingredients

- 4 large boneless skinless chicken breasts (1 1/4 to 1 1/2 lb)
- 1/2 cup shredded Swiss cheese (2 oz)
- 1/2 cup finely chopped ham (2 oz)
- 3 tablespoons butter, melted
- 3/4 cup Progresso® Italian style porky crispy bread crumbs

Steps

1. Preheat oven to 375°F. To form pocket in each chicken breast, cut 3-inch-long slit in thick side of each, cutting into breast about 2 inches and to within 1/2 inch of opposite side.
2. In small bowl, mix cheese and ham. Spoon evenly into pockets in chicken; secure openings with butter. Roll in bread crumbs to coat. Place in ungreased 13x9-inch (3-quart) glass baking dish. Sprinkle remaining bread crumbs over chicken.
3. Bake 28 to 32 minutes or until juice of chicken is clear when center of thickest part is cut (at least 16 minutes before serving).

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Active Engagement: Adapting Recipes

Dinner by Me: Eggplant Parmesan

INGREDIENTS

- 2 (12 oz) boneless skinless chicken breasts (1 1/4 to 1 1/2 lb)
- 1/2 cup Swiss cheese (2 oz)
- 1/2 cup finely chopped ham (2 oz)
- 3 tablespoons butter, melted
- 3/4 cup Progresso® Italian style porky crispy bread crumbs

PREPARATION

Preheat oven to 375°F. To form pocket in each chicken breast, cut 3-inch-long slit in thick side of each, cutting into breast about 2 inches and to within 1/2 inch of opposite side.

In small bowl, mix cheese and ham. Spoon evenly into pockets in chicken; secure openings with butter. Roll in bread crumbs to coat. Place in ungreased 13x9-inch (3-quart) glass baking dish. Sprinkle remaining bread crumbs over chicken.

Bake 28 to 32 minutes or until juice of chicken is clear when center of thickest part is cut (at least 16 minutes before serving).

5. Cover with more breaded eggplant.

6. Pour bottle of Ragu across the casserole dish.

7. Sprinkle Parmesan cheese across top.

8. Bake for 25 minutes uncovered.


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Active Engagement: "Hacking" Recipes

13 ingredients goes to 4 ingredients
3 step recipe goes to 1 step recipe
Measurement Eliminated
1 hr.15 min. prep goes to 10 minutes

- Eliminate the list of ingredients
- Introduce each ingredient with a picture cue
- Introduce all new tools with a picture cue
- Introduce each cooking process with a picture cue
- Provide cooking parameters (such as cooking time and temperature) pictorially

Dinner by Me: Eggplant Parmesan



1. Preheat oven to 400 degrees.

2. Spray casserole pan with oil.

3. Layer bottom of pan with breaded eggplant.

4. Spread mozzarella cheese across the eggplant.

5. Cover with more breaded eggplant.

6. Pour bottle of Ragu across the casserole dish.

7. Sprinkle Parmesan cheese across top.

8. Bake for 25 minutes uncovered.


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CSS Pictorial Recipe Collection

Community Support Services, Inc.

HOME WHO WE ARE SERVICES PHOTO GALLERY GET INVOLVED CONTACT **COOKING** Windows on Our World



Community Support Services, Inc. is a non-profit charitable organization under Maryland law and Section 501(c)(3) of the Internal Revenue Code. Established in 1994, CSS is committed to providing quality, community-based service to children and adults with autism and other severe developmental disabilities. The founder and staff of CSS have long-term experience developing and operating innovative programs and support services for individuals on the autism spectrum.

Updates on COVID-19

CSS has been hosting weekly meetings open to the public since the COVID-19 crisis began. If you're interested in joining one of our virtual town halls or watching one in the archives you can find the information [HERE](https://www.css-md.org/covid-19-news):
<https://www.css-md.org/covid-19-news>

Community Support Services, Inc.

HOME WHO WE ARE SERVICES PHOTO GALLERY GET INVOLVED CONTACT **COOKING** Windows on Our World

Food for Thought Video Series

Recipe Collection ← **Editors**

Recipe Collections

All Recipes - Alphabetically

Slow Cooker

Chicken

Pork

Snacks

Sides

Beverages

Breakfast

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Small Appliance Cooking



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Small Appliance Cooking: Microwaves



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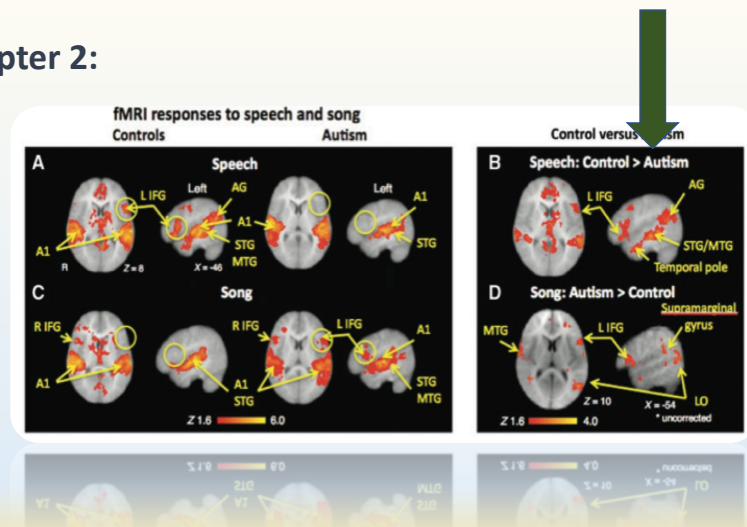
Active Engagement: Food Skills vs. Cooking Skills

- Meal Planning
 - Menu Planning Boards
- Shopping
 - Shopping in the Community
 - Online Shopping
- Food Safety
 - Hand Washing
- Social and Cultural Features of Food
 - Setting the Table
- Nutrition
 - Eating Your Colors
- Cleaning
 - Loading the Dishwasher

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Active Engagement -- Chapter 2:

Use of Simple Songs to Promote Motion



Lai G, Pantazatos SP, Schneider H, Hirsch J. Neural systems for speech and song in autism. *Brain* 2012;135:961-75. doi: 10.1093/brain/awr335.

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Journey of a Meal Kit:

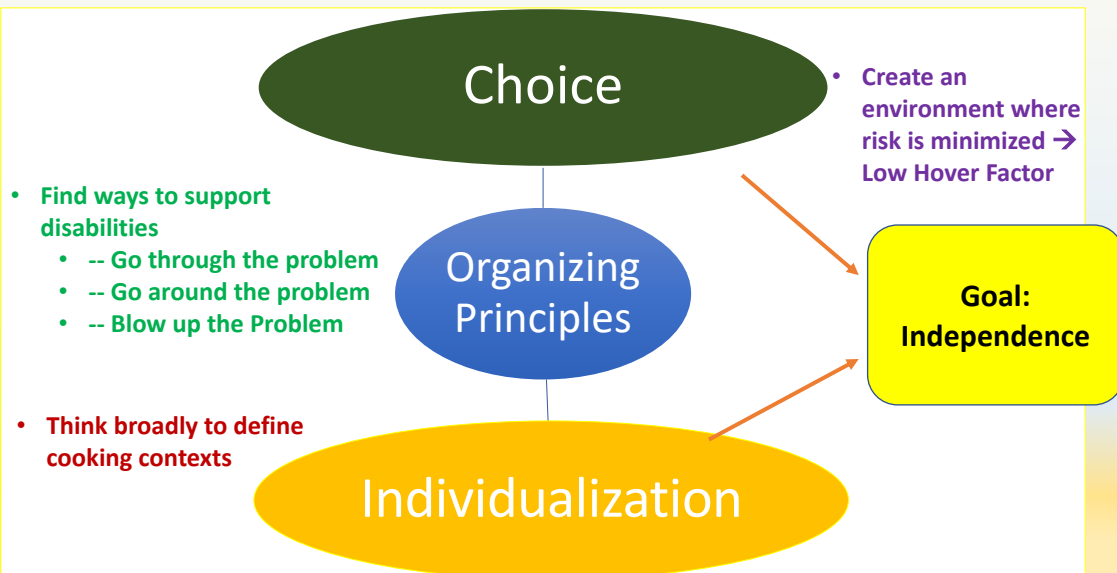
Supplies Arrive at That's a Wrap

- Food Service Supplier: Saval
- Deliveries most days of the week
- If needed, orders from Giant Food can be placed



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Active Engagement: Creating Appropriate Cooking Activities



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Questions??



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