

**Melinda J. Hill, M Ed, CFCS, CFLE**

Ohio State University Extension, Wayne County

428 W. Liberty Street, Wooster Ohio 44691

330-264-8722

[Hill.14@osu.edu](mailto:Hill.14@osu.edu)

**Work History:**

- The Ohio State University Extension
  - Family and Consumer Science Educator, Level IV, Wayne County, 2016 to present (.5 FTE)
  - Family and Consumer Science Educator, Level III, Wayne County 2006 to 2015
  - Wayne County Extension Director, 2010 to 2018
  - Ohio State University Extension Area Leader, Area 9, 2018-present (.5 FTE)

**Program Accomplishments:**

- Healthy People-State Food Preservation Team Member-2010 to present
  - Assisted with development of the *Save, Simple Easy to Learn, Home Food Preservation* curriculum currently serving as foundational training material for Ohio Educators (NEAFCS National Curriculum Package 2011, Ohio JCEP Team Teaching 2013). New curriculum added on Apples, (2020). Co-taught virtually in 2020 with 129 participants in one of the 6 classes and an additional 938 views later. Ohio JCEP Team Teaching Award, Honorable Mention (2020)
  - Co-authored 9 fact sheets directly related to Food Preservation and 6 more with Food Safety. Canning Soup (co-authored 2018); Canning and Freezing Venison (co-authored 2020)
  - Inspected more than 1,376 pressure canners for preserving food at home over the course of 10 years. Taught approximately 76 Food Preservation classes reaching about 2323 individuals.
  - Demonstrated proper canning methods for Lehman's in a series of 5 professional videos featured on their website (co-taught with Kate Shumaker) with more than 132,000 views (2017). Recorded five 30 minute TV programs, 15 radio programs, and authored approximately 40 newspaper articles on Home Food Preservation during the last 5 years.
  - Participated with the Food Preservation Team in answering Food Preservation questions from around the state during peak food preservation season.
- Healthy Finances- State team member- 2014 to present
  - Co-author of *Smart Start with Money*- Teaching preschoolers about money curriculum (HM Ohio JCEP Team Teaching 2014, NEAFCS Early Childhood Child Care Training Award 2016). More than 145 teachers were trained to implement curriculum in their local classrooms. Accepted through Ohio Child Care Resource and Referral Agency as a statewide training for Ohio's Step up to Quality ratings and shared with almost 100 peers requesting the curriculum nationwide.
  - *Money 101, Keys to Financial Stability*- Co-author. Dean Don Felker Financial Management Award, 2<sup>nd</sup> place Central Region (2018). Four one-hour classes on basic financial literacy. \$50,000 grant with local United Way to implement curriculum with individuals delinquent in child support. Their data indicated a 36% increase in child

support payments following class participation. Additionally, 434 participants attended over 5 years with 93% behavior change in four key areas of fiscal management.

- *Steps to Home Ownership*, author of pre- and post-purchase curriculums. Series of 4 classes, 10 hours total education, more than 923 participants, in 5 years. Approximately \$24,000 received as sponsorship from a local lender for class support over 10 years.
- Co-author of *Home Buyers Guide*, *Counting Your Money Calendar* and *Home Account Book* as Ohio publications.
- Ohio Housing Finance Association, Home Buyer Counselor Education, 1 hour home owner education. 87 participants during 2.5 years, achieving \$5,655 in Cost recovery to Wayne Co. Extension. NEAFCS Poster Presentation, *Experience Life-Buy a Home* poster (2020), 1<sup>st</sup> place, NEAFCS Extension Housing Outreach team award (2020)
- Approximately 120 classes were held for financial management reaching more than 1,439 individuals with educational messages. Financial evaluation summaries indicate that most 97.2% received new information, 98% plan to use the information they gained, 65.7% had confidence in making changes that were recommended and 66.9% were planning to make the changes within 6 months. Specifically identified were: Writing financial goals (79.8%), establishing an emergency fund (78.1%) and setting aside money for occasional expenses (78.3%). Other notable gains were discussing money matters with co-spenders (77.4%) and improving my record keeping system (63.6%)
- Healthy Relationships- Mindful Wellness State team member, 2016 to present
  - Participate with the team for training of the *Mindful Wellness* Curriculum Package (NEAFCS Curriculum, 2<sup>nd</sup> place 2019). Presented at two NEAFCS conferences (2018, evaluation at 2019) More than 25 classes taught in 3 years with 653 participants. More than 98% indicated gaining new skills to improve stress management and 93.6% shared they implemented techniques within the 4 week series to increase mindfulness in daily life.

In the past ten years, the Educator has conducted a total of 828 classes reaching 9,702 participants within the scope of my programming. Individual instruction was offered to additional 5,104, totaling 14,806. Numbers reflect decrease to .5 FTE since July of 2018 when the Educator accepted additional leadership responsibilities as an Area Leader (see below).

Throughout the Educators 33-year career, there are 39 publications on record including 33 fact sheets and contributions to 8 peer reviewed published curriculums. On a local level through the last 10 years more than 72 TV programs, 80 radio programs (recently became available as podcasts), and a variety of blogs and featured articles. Additionally, 451 columns have been published in the local newspaper on a variety of topics.

#### Professional Improvement and leadership

- Demonstrated Professional Leadership
  - County Extension Director for Wayne County, 2010-2017, overseeing budget of more than \$276,000, responsible for performance reviews, hiring and management of 9-15 staff in 3 program areas.
  - Extension Area Leader, Area 9 (Ashland, Wayne Holmes and Coshocton Counties) approximately 20 staff to support and supervise. Responsible for fiscal and operational

management since July 2018. Currently mentoring 3 newer staff members, hiring 5 additional staff and conducting annual performance reviews. This is currently .5 FTE of the Educators responsibilities on a regular basis.

- Serving with Ohio's Learning and Operational Development team to co-write and present two sessions of On Boarding for new staff members in Extension. Curriculum and Program Development and the 3 R's of Mentoring have been presented 6 times during the last two years to almost 100 new extension employees.
- Member of the State Mentoring Task Force- Because of the importance of the mentoring piece, it has been removed from the onboarding schedule to become a program of its own. In 2021 the educator will co-teach one part of the new mentor training. Currently serving as mentor for 2 newer FCS Educators throughout the state, have served as mentor for the last 6 years for 7 new FCS staff.
- Currently serving as one of 6 team leaders for Ohio FCS program review discussions (2021)
- Professional Development
  - Requirements met for professional development to maintain Certification in Family and Consumer Sciences (CFCS) American Association of Family and Consumer Sciences
  - Requirements met for professional development to maintain Certification as a Family Life Educator (CFLE) through National Council of Family Relations
  - Ohio State University, Family and Consumer Sciences Healthy Team Award for Professional Development Award received award in 2018 attended National Council of Family Relations Conference, 2019.
  - Ohio State University Extension Promotion to Educator IV (2016)
  - Yearly attendance to Ohio Extension Family and Consumer Science Conference- accepted presentations at 5 of the last 10
  - Yearly attendance to Ohio JCEP Annual Conference; accepted presentations at the last 6
  - NeighborWorks Training Institute Certification for Post Purchase Home Buyer Education (2013)
  - Healthy Finances Professional Development Award, Ohio State University Extension, FCS (2012)
  - NeighborWorks Training Institute Certification for Homebuyer Education Methods (2012)
- Awards
  - Distinguished Service Award, Family and Consumer Sciences, (over 20 years of service) Ohio Joint Council of Extension Professionals/Epsilon Sigma Phi Alpha Eta Chapter (2018)
  - Marilyn R Spiegel, Excellence in Extension Family and Consumer Sciences Award, The Ohio State University Extension FCS, (2013)
  - State Achievement Award (over 10 years of service) Ohio Association of Extension Professionals (2011)
  - NEAFCS Continued Excellence Award (2009)
  - NEAFCS Distinguished Service Award (2006)
  - OAFCS Professional of the Year, (2003)
- Volunteer & Community Leadership has consisted of active membership and participation in the following:
  - Family and Children First Council; Program committee

- Community Action Policy Council
- Wayne County Housing Coalition
- Wayne County Health Community Improvement Plan
- Volunteer for Mohican Church of the Brethren, Sunday school teacher, Kitchen Support and Meal Volunteer.
- Wayne County Jr. Fair Sale Committee
- Superintendent for Family Life Day at the Ohio State Fair (2008 to present)

#### Professional Association Participation

- NEAFCS
  - Participation in NEAFCS conference for 9 of the last 10 years, presentations or posters accepted at 7 conferences.
  - NEAFCS National Exhibits Committee 2012-2016 (Co-chair 2012)
  - NEAFCS Annual Session Proposal reviewer 3 years
  - 2012 NEAFCS Annual Session Ohio Host Committee
  - Ohio NEAFCS Affiliate President 2013, President-Elect 2012
- Other Professional Associations
  - Epsilon Sigma Phi, National Professional Development Committee Central region representative (2019-2021).
  - National Joint Council of Extension Professionals (JCEP) Conference (2018) Texas, serving as Ohio Epsilon Sigma Phi state President
  - National Joint Council of Extension Professionals Public Issues Leadership Development Conference (2016)
  - Ohio Epsilon Sigma Phi President Elect, President and Past President (2017-2019). Attended conference in Manhattan, Kansas (2017), Colorado (2018), New York (2020)
  - Ohio JCEP, FCS president elect, president and past president 2012-2014
  - National Association for the Education of Young Children, Ohio Association, and Wayne Association for the Education of Young Children (Two terms as President, Week of the Young Child Event planner) 1990-2015
  - American Association for Family and Consumer Sciences, Ohio Association, District B President (1999) and Wayne Association of Family and Consumer Sciences; President, Planning Committee Chair (2005)

#### Melinda Hill Supplemental Materials

- Money 101 Week 1 Full Lesson
- Curriculum and Teaching Tools Onboarding Lesson
- Canning Soup Fact Sheet
- Safe, Simple, Easy to Learn – Preserving Apples Lesson
- Being Present for the Holidays PowerPoint



This program is made possible by a grant from the FINRA Investor Education Foundation  
through a partnership with United Way Worldwide

OHIO STATE UNIVERSITY EXTENSION

# Money 101

## Keys to Financial Stability



### Session One: Goal Setting

**Melinda J. Hill, CFCS, CFLE**  
**Extension Educator, Family & Consumer Sciences**

**[hill.14@osu.edu](mailto:hill.14@osu.edu)**

**Darcy Becker, Program Assistant**

**[becker.340@osu.edu](mailto:becker.340@osu.edu)**

**330-264-8722**



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b:

**Even millionaires need to know how to  
manage money**



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# Why are we having this conversation?



- Past financial challenges
- Improve present financial plan
- Positive financial future



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# USDA's Cost of Raising a Child



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The United States Department of Agriculture

## THE COST OF RAISING A CHILD

THE INFORMATION PROVIDED  
COVERS THE COST FROM  
BIRTH TO AGE 18.

What is the total  
cost for raising a  
child?

WHERE DOES THE MONEY GO?

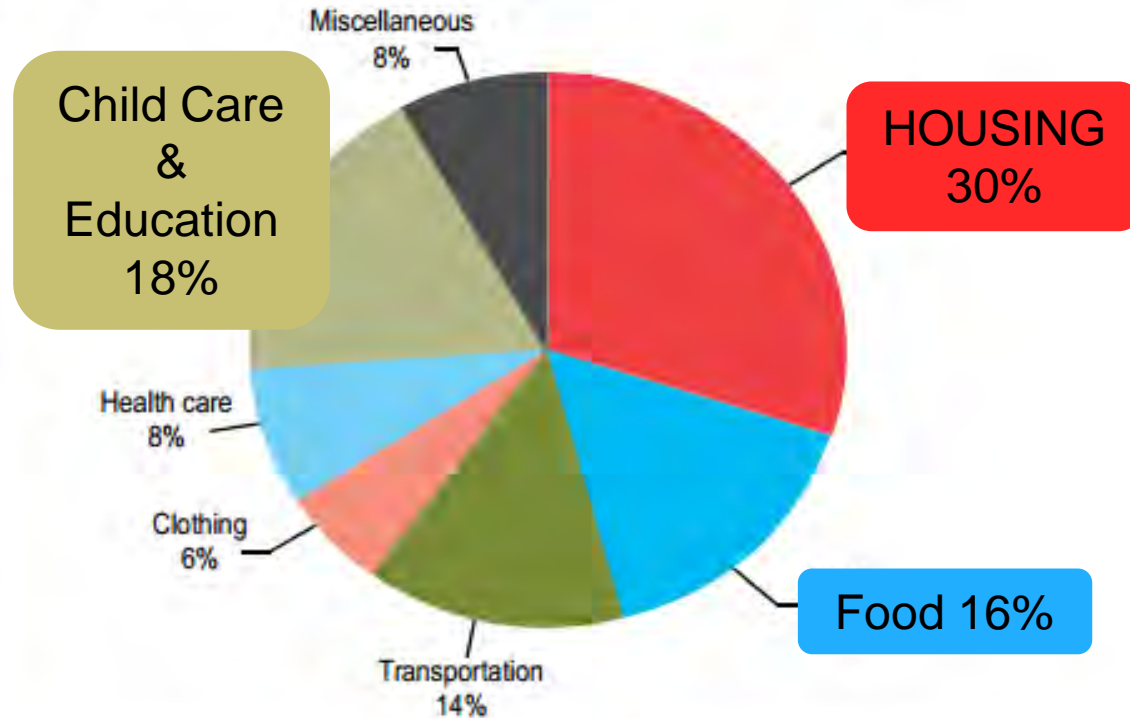
The cost of raising  
a child has  
increased by ? %  
from 1960

How much does it  
cost to educate a  
child? (not  
college)



# \$241,080 for middle income

Figure 2. Expenditure shares on a child from birth through age 17 as a percentage of total child-rearing expenditures,<sup>1</sup> 2012



<sup>1</sup>U.S. average for the younger child in middle-income, husband-wife families with two children. Child care and education expenses only for families with expense.



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# USDA's Cost of raising a child calculator

<http://www.cnpp.usda.gov/calculatorintro.htm>



What are your money  
values?



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# What is your Money Color?

Source: University of Wisconsin-Extension and the Alabama Cooperative Extension system.



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## YELLOW STATEMENTS

- ☐ There's no need to budget-either you have enough money or you don't.
- ☐ Worrying about money never helps.
- ☐ If there are financial problems, someone will help.
- ☐ Live from paycheck to paycheck and don't worry.
- ☐ Keeping track of everything you spend can drive you crazy.
- ☐ It's not that important to save a lot of money.
- ☐ Why make plans about money?
- ☐ Just wait and money problems either go away or take care of themselves.
- ☐ You can get by without health insurance if you don't have a lot of money.
- ☐ Live with confidence in the future and the help of charging items now.



## GREEN STATEMENTS

- ☐ Children should have the best education money can buy.
- ☐ Success is a fancy car and good-looking house.
- ☐ Buying brand names is important.
- ☐ It's nice to buy friends meals or gifts.
- ☐ People shouldn't know if you have to pinch pennies.
- ☐ I'd like to have nothing but the best.
- ☐ It's important to look successful.
- ☐ You should spend a little more than you can afford to get ahead in life.
- ☐ A big income means you are successful.
- ☐ Cheap stuff isn't worth much.



## ORANGE STATEMENTS

- ☐ We spend our money on what we care most about.
- ☐ There are a lot of things more important than money.
- ☐ Children should learn not to put a dollar amount on everything.
- ☐ It's nice to make gifts, even if you can afford to buy them.
- ☐ It's silly to try to keep up with what other people have.
- ☐ Money doesn't buy happiness.
- ☐ A lot of money would be nice, but not necessary.
- ☐ It's easy to have fun with simple things not connected to money.
- ☐ It doesn't make sense to want the best just because it is the best.
- ☐ I'd choose a job with less pay and short hours over long hours and high pay.



## BLUE STATEMENTS

- ☐ Happiness is buying something new.
- ☐ A person is entitled to some of the nice things from life.
- ☐ It's hard to wait for something you really want.
- ☐ It would be easy to spend \$5000 in a few days.
- ☐ The more money you make the more you want to spend.
- ☐ Credit is great.
- ☐ Walking through stores can be depressing-there's so much you want.
- ☐ It would be wonderful to be a millionaire and spend all I want.
- ☐ No matter how much I have, I want more.
- ☐ If I want something, I should have it now.



## PINK STATEMENTS

- ☐ Every debt should be cleared up as you go along.
- ☐ It's a good feeling to have money to spend.
- ☐ Don't buy until you really need something.
- ☐ You should budget your money and stick to the plan.
- ☐ There should always be enough in the bank for emergencies.
- ☐ It's important to keep a record of everything you spend.
- ☐ Shop around until you find the best price.
- ☐ A person needs a lot of insurance.
- ☐ Paying cash is the best way.
- ☐ Thrifty people manage best.



# Yellow:



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# Green:



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# Orange:



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# Blue:



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# Pink:



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# What is your Money Color?

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OHIO  
AMERICA  
**Saves\$**  
*START SMALL. THINK BIG.*



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# Choices matter!



- Vehicle
- Speed limit
- Passengers
- Food breaks
- Restroom breaks



- Values
- Needs & Wants
- Co-spenders
- Emotions



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## Short term goals:

- Done soon.
- A week or a few months.



## Intermediate goals:

- One to Five years

## Long term goals:

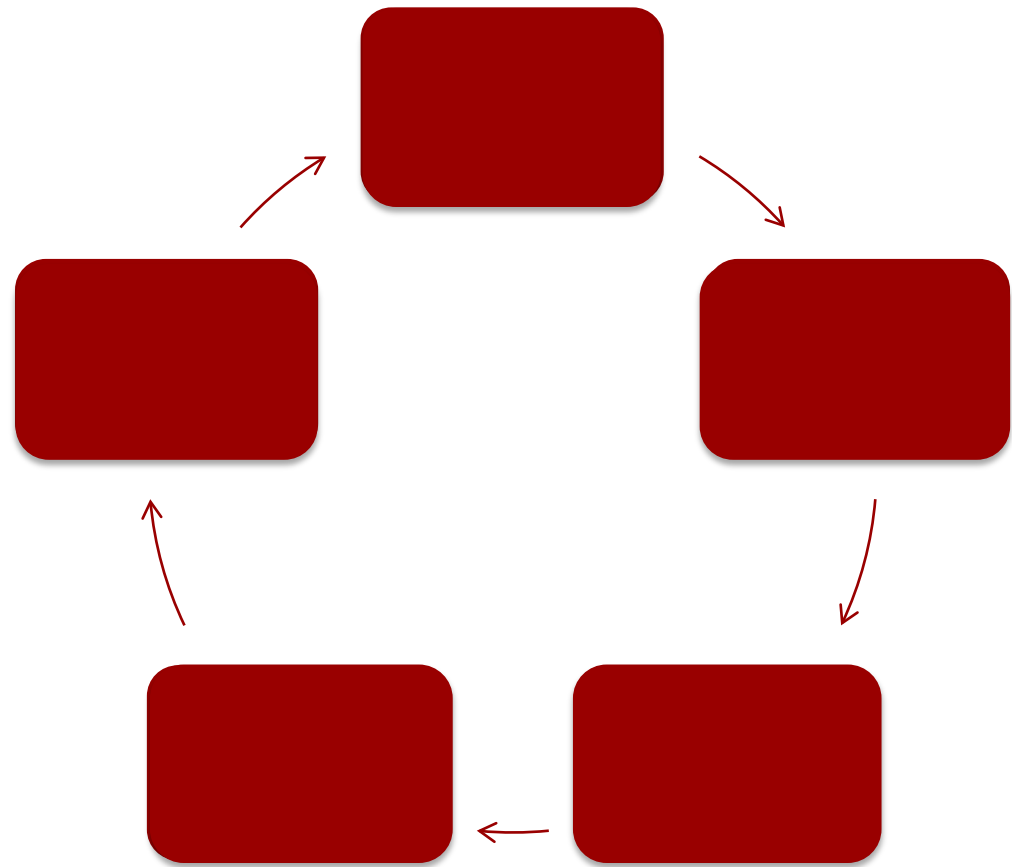
- Look ahead
- Five to Ten Years



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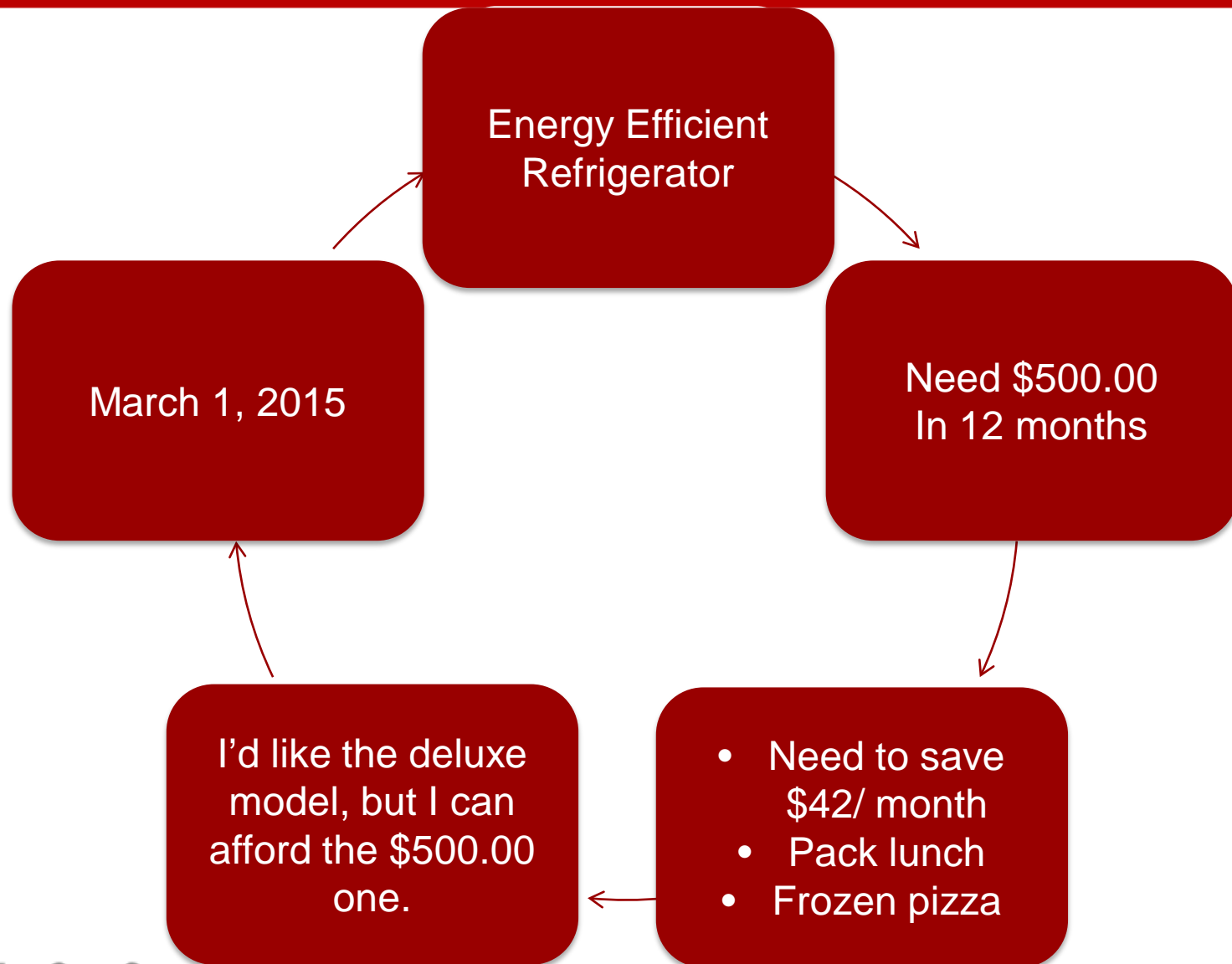
# SMART GOALS



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# “Now it’s your turn.”

- What goal is most important to you?
  - Paying off a high interest debt?
  - Saving for a car?
- What other financial goals do you have?



# Remember:

- Individual **VALUES** influence goals.
- **CHOICES** can determine success
- Work your **PLAN**

“What questions do  
you have?”



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# Next Weeks Agenda:

- Creating your personal budget.
- Are you slicing a piece of tomorrow's pie?



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Check out our website at:

[www.wayne.osu.edu](http://www.wayne.osu.edu)

And like us on Facebook.

## References:

High School Financial Planning Program Student Guide. (2001). National Foundation for Financial Education.

Hudson, N., Seiling, S. & OSU Family & Consumer Sciences Healthy Finances Master Teachers. (2005). Steps to Home Ownership: Budgeting & Credit Management

Bard, E., Hudson, N. Johnson, D., and McKinney, C. (2003). Manage Your Money Self-Study Course. OSU Extension.

<http://ohioline.osu.edu>.

National Endowment for Financial Education. (2006). NEFE High School Financial Planning Program p. 1.

National Endowment for Financial Education. (2012). *Module 01: Money Management: Control Your Cash Flow*. p.15.

retrieved from: [www.hsfpp.org](http://www.hsfpp.org)

Personal Financial Choices: Setting a New Course (1999) Visa USA at:

[www.pueblo.gsa.gov/cic\\_text/money/personalfin/choices.htm](http://www.pueblo.gsa.gov/cic_text/money/personalfin/choices.htm)

Stovall, C. (Original version developed Wise, D. ) 2006 UT Extension, University of Wisconsin-Extension and the Alabama Cooperative Extension system.

USDA. (2012). Center for Nutrition Policy and Promotion. *Expenditures on Children by Families*. Retrieved from:

<http://www.cnpp.usda.gov/ExpendituresonChildrenbyFamilies.htm>



# Money 101

## Keys to Financial Stability

Session One: Goal Setting

Presented by Melinda Hill

MEd, CFCS, CFLE

In collaboration with:

United Way of Wayne And  
Holmes Counties

Wayne County Child Support  
Enforcement Agency



This program is made possible by a grant from the FINRA Investor Education Foundation  
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# Money 101

## Keys to Financial Stability

Session One: Goal Setting

Kate Shumaker  
Extension Educator, Family & Consumer Sciences  
[shumaker.66@osu.edu](mailto:shumaker.66@osu.edu)  
330-674-3015

Program developed by Melinda Hill, Extension Educator, Wayne County

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# b:

## Even millionaires need to know how to manage money

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# Why are we having this conversation?



- Past financial challenges
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b :

USDA's Cost of Raising a Child


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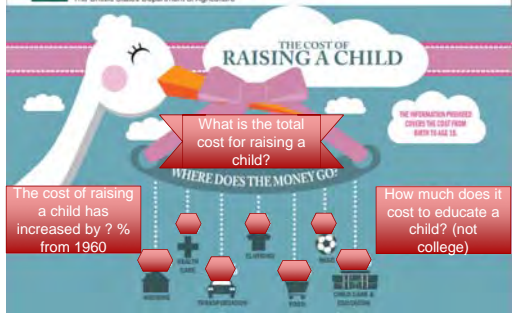
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 The United States Department of Agriculture



**THE COST OF RAISING A CHILD**

What is the total cost for raising a child?

THE INFORMATION PROVIDED COVERS THE COST FROM BIRTH TO AGE 18.

The cost of raising a child has increased by ? % from 1960

WHERE DOES THE MONEY GO?

How much does it cost to educate a child? (not college)

Housing, Health Care, Transportation, Food, Child Care & Education

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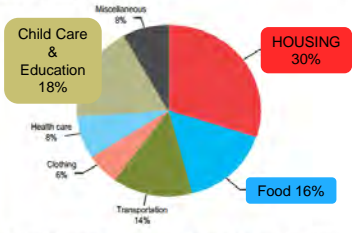
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\$241,080 for middle income

Figure 2. Expenditure shares on a child from birth through age 17 as a percentage of total child-rearing expenditures,\* 2012



Category	Percentage
Housing	30%
Food	16%
Transportation	14%
Child Care & Education	18%
Health care	8%
Miscellaneous	6%

\*1/3 S. average for the younger child in middle-income, husband-wife families with two children. Child care and education expenses only for families with expense.


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Expenditures on Children by Families, 2012 USDA

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## USDA's Cost of raising a child calculator

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What are your money  
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What is your Money Color?

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Source: University of Wisconsin-  
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**PINK STATEMENTS**

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**Yellow:**


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# Green:



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OHIO STATE UNIVERSITY EXTENSION

# Orange:



**The Ohio State University**  
COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

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# Blue:



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# Pink:



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## What is your Money Color?



Source: University of Wisconsin-  
Extension and the Alabama  
Cooperative Extension system.

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## Choices matter!



- Vehicle
- Speed limit
- Passengers
- Food breaks
- Restroom breaks



- Values
- Needs & Wants
- Co-spenders
- Emotions



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Short term goals:

- Done soon.
- A week or a few months.




Intermediate goals:

- One to Five years

Long term goals:

- Look ahead
- Five to Ten Years



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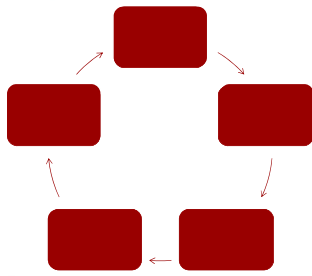
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# SMART GOALS





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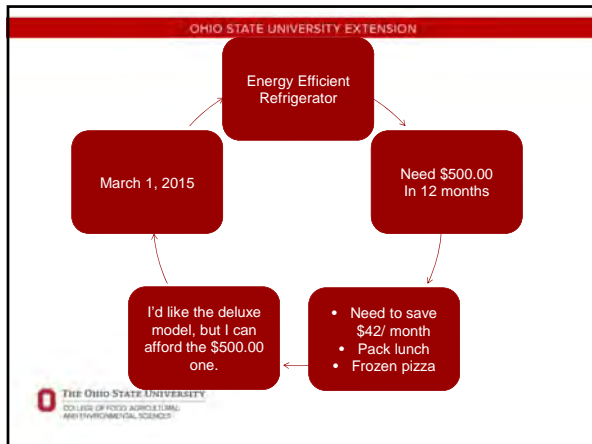
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## “Now it’s your turn.”

- What goal is most important to you?
  - Paying off a high interest debt?
  - Saving for a car?
- What other financial goals do you have?

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## Remember:

- Individual **VALUES** influence goals.
- **CHOICES** can determine success
- Work your **PLAN**

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# “What questions do you have?”

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# Next Weeks Agenda:

- Creating your personal budget.
- Are you slicing a piece of tomorrow's pie?

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[www.wayne.osu.edu](http://www.wayne.osu.edu)  
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**References:**

High School Financial Planning Program Student Guide. (2001). National Foundation for Financial Education.

Hudson, N., Seiling, S. & OSU Family & Consumer Sciences Healthy Finances Master Teachers. (2005). Steps to Home Ownership: Budgeting & Credit Management

Bard, E., Hudson, N., Johnson, D., and McKinney, C. (2003). Manage Your Money Self-Study Course. OSU Extension. <http://ohioline.osu.edu>.

National Endowment for Financial Education. (2006). NEFE High School Financial Planning Program p. 1.

National Endowment for Financial Education. (2012). *Module 01: Money Management: Control Your Cash Flow*. p.15. retrieved from: [www.hsfp.org](http://www.hsfp.org)

Personal Financial Choices: Setting a New Course (1999) Visa USA at: [www.pueblo.esa.gov/cic\\_text/money/personalfin/choices.htm](http://www.pueblo.esa.gov/cic_text/money/personalfin/choices.htm)

Stovall, C. (Original version developed Wise, D.) 2006 UT Extension, University of Wisconsin-Extension and the Alabama Cooperative Extension system.

USDA. (2012). Center for Nutrition Policy and Promotion. *Expenditures on Children by Families*. Retrieved from: <http://www.cnpp.usda.gov/ExpendituresonChildrenbyFamilies.htm>

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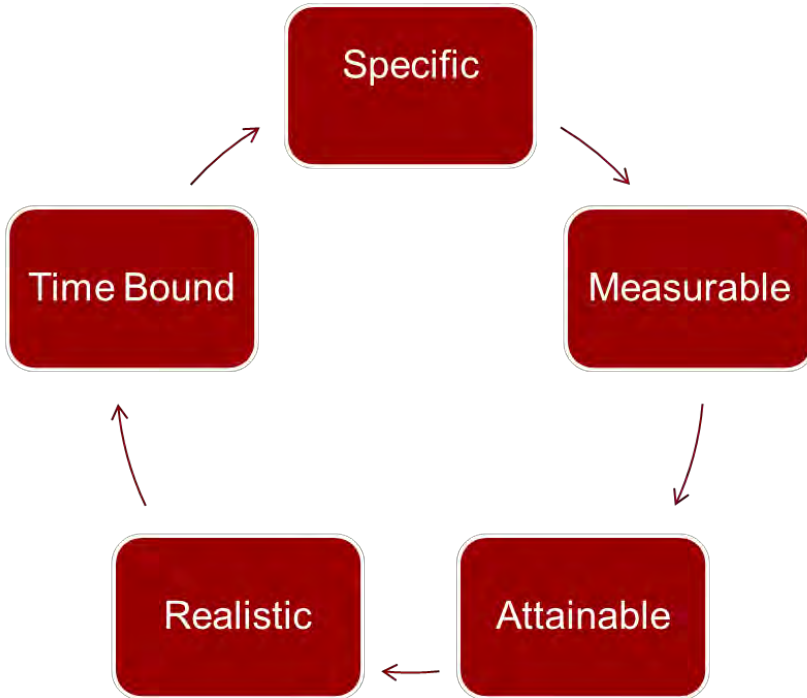
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# Are You Setting “SMART” Goals?



**Specific** – Set goals you can clearly name.

**Measurable**–by the amount of time and money it will take to reach them.

**Attainable/Achievable** – given your financial situation, the amount to set aside needs to fit within your overall budget.

**Relevant** – make sure your goals fit your needs. Maybe it is impossible to save \$100 a month right now; try for \$50.

**Time bound**–Set a specific target date (e.g. NOT “spring of 2007” BUT: April 16, 2007).

Goal \_\_\_\_\_ Today's Date \_\_\_\_\_

Target Date	Total Cost	Amount Already Saved	Amount to Save Each Month
Obstacles to overcome:			
Step 1:			
Step 2:			
Step 3:			
Step 4:			

Adapted from Manage Your Money, Ohio State University

This program is made possible by a grant from the FINRA Investor Education Foundation through a partnership with United Way Worldwide



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# The Color of Money Quiz

Check each statement below that you agree with in each color category.

Do not check statements you disagree with or about which you are undecided. Go with your FIRST instinct!

## YELLOW STATEMENTS:

- ☐ There's no need to budget-either you have money or you don't
- ☐ Worrying about money never helps
- ☐ If there are financial problems, someone will help
- ☐ Live from paycheck to paycheck and don't worry
- ☐ Keeping track of everything you spend can drive you crazy
- ☐ It's not that important to save a lot of money

- ☐ Why make plans about money?
- ☐ just wait and money problems go away or take care of themselves.
- ☐ You can get by without health insurance if you don't have a lot of money.
- ☐ Live with confidence in the future and the help of changing things now.

Total YELLOW Checks \_\_\_\_\_

## GREEN STATEMENTS:

- ☐ Children should have the best education money can buy.
- ☐ Success is a fancy car and a good looking house.
- ☐ Buying brand names is important.
- ☐ It's nice to buy friends meals or gifts.
- ☐ People shouldn't know if you have to pinch pennies.
- ☐ I'd like to have nothing but the best.

- ☐ It's important to look successful.
- ☐ You should spend a little more than you can afford to get ahead in life.
- ☐ A big income means you are successful.
- ☐ Cheap stuff isn't worth much.

Total GREEN Checks \_\_\_\_\_

## ORANGE STATEMENTS:

- ☐ We spend our money on what we care most about.
- ☐ There are a lot of things more important than money.
- ☐ Children should learn not to put a dollar amount on everything.
- ☐ It's nice to make gifts, even if you can afford to buy them.
- ☐ It's silly to try to keep up with what other people have.

- ☐ Money doesn't buy happiness.
- ☐ A lot of money would be nice, but not necessary.
- ☐ It's easy to have fun with simple things not connected to money.
- ☐ I'd choose a job with less pay and short hours over long hours and high pay.

Total ORANGE Checks \_\_\_\_\_

## BLUE STATEMENTS:

- ☐ Happiness is buying something new.
- ☐ A person is entitled to some of the nice things from life.
- ☐ It's hard to wait for something you really want.
- ☐ It would be easy to spend \$5000 in a few days.
- ☐ The more money you make the more you want to spend.
- ☐ Credit is great.

- ☐ Walking through stores can be depressing—There's so much you want.
- ☐ It would be wonderful to be a millionaire and spend all I want.
- ☐ If I want something I should have it now.

Total BLUE Checks \_\_\_\_\_

## PINK STATEMENTS:

- ☐ Every debt should be cleaned up as you go along.
- ☐ It's a good feeling to have money to spend
- ☐ Don't buy until you really need something.
- ☐ You should budget your money and stick to the plan.
- ☐ There should always be enough in the bank for emergencies.

- ☐ It's important to keep a record of everything you spend.
- ☐ Shop around until you find the best price.
- ☐ A person needs a lot of insurance.
- ☐ Paying cash is the best way.
- ☐ Thrifty people manage best.

Total PINK Checks \_\_\_\_\_

Total all your checks in each color category separately. Look at the color where you have put the most checks and compare it to the explanation of What Money Means to You.

YELLOW \_\_\_\_\_ GREEN \_\_\_\_\_ ORANGE \_\_\_\_\_ BLUE \_\_\_\_\_ PINK \_\_\_\_\_

# What Does Money Mean To You?

Knowing your money color will help you better understand your money values. Most people will check at least one item under each color. Some may respond to an equal number of questions in each color. If you do, you may have competing money values. Your money is a resource to assist you in reaching goals and getting the things you need and want. If your values or how you use money prevents you from reaching financial goals, consider changing your money habits.

Remember, you can change habits once you become aware of them. Look carefully to determine what your money colors say about you and what risks you are likely to face if you fall into a specific money color.

**Yellow** Money is not very important to you and you seldom worry about it at all.

You are **LESS** likely to:

- Use a spending plan/budget
- Save for emergencies
- Have options if financial situations occur in the family

You are **MORE** likely to:

- Expect others to come to your rescue when faced with a financial problem
- Think problems will work themselves out.
- Not see the value in planning ahead.

**Green** Money is valued for the status it provides.

You are **LESS** Likely to:

- Shop sales, compare prices or look for bargains.
- Consider the cost of an item as long as it's the right name brand
- Be concerned about the price, especially if it is an investment and will appreciate in value.

**Orange** Money itself is not important. It is how one uses money to enhance their life or to improve the quality of their life that makes it important. Oranges are pretty balanced when it come to managing money.

You are **MORE** Likely to:

- Have financial goals.
- Have good insurance
- Save and invest
- Plan spending
- Compare prices and shop for the best deals

You are **LESS** likely to:

- Check and update financial plans and goals as needed.
- Know how much has accumulated in investments & savings.
- Know values of life insurances and etc.

**Blue** Money is valued for pampering or treating yourself.

You are **LESS** likely to:

- Say no to treating yourself, especially when sad or depressed.
- Have limits on spending when there is a strong desire to have something
- Have a reason for spending.
- Have a spending plan and savings you can stick to.

You are **MORE** likely to:

- Shop when stressed or unhappy.
- Justify when it's ok to go shopping instead of paying bills, or spend savings on what is wanted over what is needed.

**Pink** Money is valued for security

You are **LESS** Likely to:

- Make any purchase before shopping for the best deal
- Impulse shop.
- Shop just for the fun of it.

You are **MORE** likely to:

- Have family members and friends come to you for loans
- Have money hidden in your wallet or checkbook for emergencies
- Get frustrated with others that appear to be careless spenders

How did you do? This quiz is only designed to identify what money means to you.

Remember, we can change our actions and develop skills to make our money colors work for us.



## Home and Away Series

# Getting to Know You, Your Co-spender, and Money

**Nancy W. Hudson**

Extension Educator

Family and Consumer Sciences, Medina County

**F**amilies who effectively discuss money matters can avoid many financial problems. Good communication about money begins with understanding each other's values. This exercise helps you compare values about money. Complete it individually, then compare responses. For each pair of statements, choose the one you feel is more important. There are no right or wrong answers.

1. a. Paying off the credit card debts at the end of each month.  
b. Keeping the minimum monthly payment within a reasonable limit.
2. a. Maintaining individual checking accounts.  
b. Having only a joint checking account.
3. a. Having one major wage earner.  
b. Having both partners contributing to family income.
4. a. Giving children an allowance because they need to have their own spending money.  
b. Giving children an allowance because they have earned it doing their household jobs.
5. a. Purchasing a house as soon as possible.  
b. Renting until you can afford to buy.
6. a. Working only at jobs you get paid for.  
b. Volunteering as much as you can.
7. a. Making large purchases only when they have been planned.  
b. Making a spontaneous purchase if the sale price is good and working out the budget later.
8. a. Having the bills paid on time or before the due date (including rent or mortgage, utilities, credit cards).  
b. Paying the bills a little late if no major action will be taken.
9. a. Working at a job I really enjoy even if the pay is low.  
b. Working at a job where I can make the most money even though I do not enjoy it as much.
10. a. Sacrificing quality for cost.  
b. Sacrificing cost for quality.
11. a. Having a savings account and continually tapping into it.  
b. Having a savings account that cannot get below a certain level unless it is a real emergency.
12. a. Spending money on both of us.  
b. Spending money on my partner.
13. a. Keeping the checkbook balanced to the penny.  
b. Knowing about how much money is in the checking account.
14. a. Having some money that can be freely spent and not exactly accounted for.  
b. Knowing where every penny has been spent.
15. a. Saving money first.  
b. Saving money that is left at the end of the week or month.
16. a. Planning activities and discussions ahead of time such as: something fun, financial discussions, household tasks.  
b. Waiting to see what happens.

17. a. Getting a college degree and postponing a career.  
b. Getting into the work force as soon as possible.
18. a. Being in control of the budget.  
b. Having my partner in control of the budget.
19. a. Keeping the thermostat turned down and wearing a sweater.  
b. Keeping the thermostat at a comfortable, warm temperature.
20. a. Experimenting and trying new things that might save money.  
b. Keeping your present way of spending since it seems to work.
21. a. Placing your children in day care so each spouse can have a paid job.  
b. Keeping your children at home and one parent without a job.
22. a. Borrowing money from your family so you won't have an interest charge.  
b. Borrowing money from a bank because you do not want your family to think you are in trouble.
23. a. Discussing any purchases over \$100 before they are made.  
b. Assuming you know whether your partner would approve.
24. a. Using the higher wage earner's income for family budget needs, and the lower wage earner keeps the money earned for spending.  
b. Combining both incomes for the household budget.
25. a. Putting your money in a high-risk high-return investment.  
b. Putting your money in a low-risk moderate-return investment.

### Now test your knowledge about your basic expenses

Write the dollar amounts of:

Monthly family take-home pay	_____
Rent or mortgage	_____
Monthly food bill	_____
Monthly car payment(s)	_____
Monthly telephone bill	_____
Monthly electric bill	_____
Outstanding credit (cards)	_____
Your last "night on the town"	_____
Last month's away-from-home expenses or cash advances	_____

### Now compare

Take time together for a face-to-face discussion about reasons for any disagreements. Remember, answers are neither right nor wrong, just different. The goal is understanding so compromises come easier. Count how many you agreed on and use this guide to help you decide how often to schedule money talks.

#### Number of times you agreed

**0–10** A great need for communication to keep the scale balanced. Make it a priority. If compromises can be reached, your value differences can be worked through.

**11–18** You have some similar values. Discuss all possibilities and listen to each other. Work on compromises you can both live with.

**19–25** You have very similar values and will not often find yourself in conflict. Discuss any problems that arise.

If your knowledge of spending amounts varies, it may be time to keep written records of your expenses for a while. It is best if both people know where the money is going and plan together to reach mutual goals.

#### Source

Turner, J. and Johnson, M. Alabama Cooperative Extension Service.

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HYG-5208-96-R10

# Don't Clash Over Cash

**Nancy W. Hudson, CFCS**

Family and Consumer Sciences Specialist, Family Finances

**W**hen asked how much money is enough, a wealthy individual replied, "Just a little bit more."

Most families find there is never enough money, so sooner or later they squabble about how to spend the limited dollars. Meshing different styles of handling money doesn't just happen because people love each other. It takes effective communication, time, and effort.

Couples often have a harder time resolving money issues than other conflicts. Money issues tend to be raised repeatedly and are more likely to be mishandled.

If your money discussions escalate to shouting matches or tearful sessions, changes are needed. Realize each of you will have different attitudes and values. To one, money may represent power. To another, it may mean security or status. One may be a spender, the other a saver. The concern is not that you always agree about money, but how you disagree and that you come to a suitable compromise.

## What Is an Argument Worth?

Save arguments for important issues and major expenditures. Decide amounts each

person can spend without reporting to anyone. It might be \$5, \$20, \$50, or whatever fits your budget. These regular allowances provide a sense of spending freedom and eliminate discussions over personal items and incidentals.

## A Time and a Place

Talking about money "later" or promising to discuss it "some other time" may never happen. Schedule regular meetings to discuss financial matters. This keeps you and your co-spender informed and can prevent minor concerns from becoming major problems.

The particular time you decide to meet will depend on family schedules. Try to avoid meeting between 5:00 p.m. and 7:00 p.m. when people are usually tired and hungry. Meeting just before pay day or when bills are due is often a good choice.

For your meeting, choose a place with minimum distractions. Do not let the television, radio, and phone interfere with your communications.

Include all family members when appropriate. Children can learn from this process. Allow everyone a chance to express feelings,

***The following responses hurt effective communication:***

- **Ordering, Directing, Commanding.**

These messages tell people that their feelings, values, or needs are not important.

*("You need to stop going to the mall.")*

- **Warning, Threatening.**

Telling what will happen if something is or isn't done can make a person feel fearful and submissive.

*("If you don't control your charging, I'll cut up your charge cards.")*

- **Moralizing, Preaching.**

Telling what should or ought to be done often results in resistance and defending a position even more strongly.

*("You really should stop smoking.")*

- **Advising, Giving Solutions.**

Being told how to solve a problem may make a person feel unable to make wise decisions.

*("Next time, tell your co-workers you can't go out for lunch.")*

- **Judging, Criticizing, Disagreeing, Blaming.**

These messages, more than any other, make a person feel inadequate, inferior, or worthless.

*("It's your fault we don't have any money.")*

- **Name Calling, Shaming, Ridiculing.**

This can hurt a person's self-image or cause discouragement and anger.

*("Well, Mr. Big-Spender, what stupid thing did you buy with the last \$100 I gave you?")*

wants, and needs without interruption or criticism. Family members are more likely to support a decision if they are included in the decision.

## **Listening Habits**

Effective communication requires good listening. What kind of listener are you? During a disagreement, do you find yourself planning your defense? Does your mind wander? Do you stop listening if a subject is difficult to understand?

Listen for key points. Ask questions if you don't understand something. Be careful not to criticize, argue, or give feedback that keeps someone from expressing feelings.

## **Use "I ..." Messages**

The words you choose and your tone of voice can fuel or diffuse an argument. Another is more likely to hear you if you use "I-Messages" instead of "You-Messages." "You-Messages" tend to be verbal attacks of blame and criticism. "I-Messages" focus on you and your feelings.

### ***The Three Parts of an I-Message:***

1. **"I feel ..."** Make a clear statement of how you feel.
2. **"When you ..."** Name the specific behavior that caused you to feel that way.
3. **"Because ..."** Say why the behavior or event is upsetting.

Instead of this: *"You never record the amounts of checks you write."*

Try this: *"I feel frustrated when you don't record check amounts because I don't want to pay fees for a bounced check."*



Remember: “I-Messages” have three specific parts. Just starting a sentence with “I” doesn’t make it an “I-message.”

### Solving Money Problems

If a problem is worth arguing about, it is worth solving. Combine good communication skills with the following steps:

1. Acknowledge that there is a problem. Get feelings out in the open.
2. Identify the real problem. Money issues are often emotionally charged. Organized, written records give objective information rather than guesses. Be sure the issue is really money.
3. Discuss only the identified problem. Keep personalities, past complaints, or other problems out of it.
4. Brainstorm alternatives. List all possible actions/solutions no matter how ridiculous. No one should comment on suggestions until the list is complete.
5. Discuss each alternative and agree on a possible solution. Write it down. A compromise

may be the best solution. Everyone should feel his or her wishes were considered.

6. Make every effort to support the solution. Identify and avoid obstacles. Recognize necessary sacrifices. Perfect solutions are rare.
7. Keep communications open while working out the solution. Each person needs to feel understood, appreciated, and loved.

### References

- Hill, M., N. Hudson, B. Lantz, and G. Griffin. 1997. *Commercial Vehicle Driver Associate Family Issues Assessment*. Upper Great Plains Transportation Institute, Publication Number 115.
- Hudson, N. 1996. *Don't Clash Over Cash*. HYG-5208-96. OSU Extension. <http://ohioline.osu.edu>.
- Papp, L. M., E. M. Cummings, and M. C. Coeke-Morey. 2009. For richer, for poorer: Money as a topic of marital conflict in the home. *Family Relations* 58 (1): 91–103.

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# Curriculum and Teaching Tools

Eric Barrett, ANR Educator, Mahoning Co  
Area 10 Leader  
Melinda Hill, FCS Educator, Wayne Co  
Area 9 Leader



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-Melinda starts here and goes through slide 7...

Welcome to week #7 of onboarding I hope that it's been an enriching experience for each of you. I'm sure there have been things to learn and many items to review during this time.

My Name is Melinda Hill, I've been with Extension for more than 30 years and I've found it to be a rewarding career. I'm the FCS educator in Wayne County in the NE part of the state and I also serve as area leader for Ashland, Wayne, Holmes and Coshocton counties.

Eric I'll let you introduce yourself

-Melinda starts here and goes through slide 7...

We are here today to share the concepts of curriculum, programming and other teaching tools and methods that will be an integral part of your tenure with this organization. You've learned through the weeks that teaching, research and service are three strong components of the P&T process as well as the foundation for you as a professional. We'd like to ask that you remain unmuted to engage in discussion as we go along.

Next slide

## **Objectives:**

**Define curriculum in the context of programs for Extension**

**Differentiate between educational materials and curriculum development**

**Review and apply methods for selecting curriculum and developing new curriculum**

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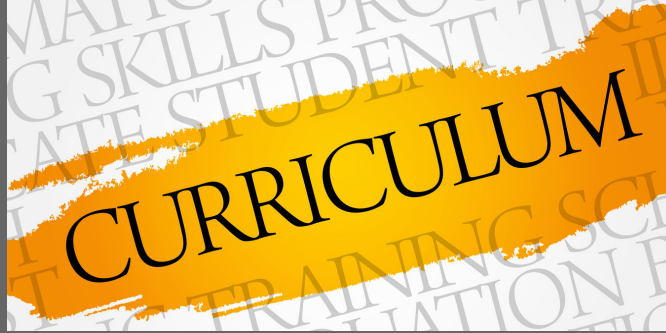
Our roadmap for today is to look at the definition of curriculum and unpack what it is, and what it's not

And when we do that, we'll see the differences in program materials and curriculum then finally take a few minutes to see what we need to be looking for in  
Selecting materials for a total program

If you have questions as we go along, please put them in chat and we'll try and watch for them and Jared if you can help us out with that I'd be grateful

Next slide

# What does this mean to you?



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Before we begin, my question to each of you, is What's your definition of curriculum?

If you'd each write this down and then just a few of you share, that would be great

There are some really great answers here, I hope to refer back to them as we continue this morning....keep these in mind as we move along

## Program and Curriculum Development; what's the difference?

- What program topics are you teaching?
- Why are you teaching them?



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Second question can we make it a poll?

Why are you teaching the things that you are:

Because it's my area of expertise

Because the clientele requested it

It was an ongoing program in the community

It sounded like fun

What is expected in your county or area?

What questions do you get on a regular basis?

Extension professionals use and develop teaching tools each and every day, we'll talk a little later as to how to integrate these into a curriculum package we create stuff

Next slide

# Program Development

- Satisfy local clientele
- Getting the “right” things for VITA and county highlights
- Curriculum development- yours or others
  - What’s your niche
  - You become an expert by developing curriculum

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We talked just before about the why’s of things we teach, one of those to meet the local needs,

Others would be for the P & T process or to compliment work of the office team or state teams you may be involved in

Curriculum development- whether it’s something that you develop or something that you adapt, add to and make your own are part of what develops you as an expert....let me share an example (food preservation)

Next slide

# Curriculum Development

- The program of activities from which such knowledge or skills can be acquired or constructed



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The individual learner is affected by:

What the individual bring to the situation

Selection of possible learning experiences guided by the knowledge of experts

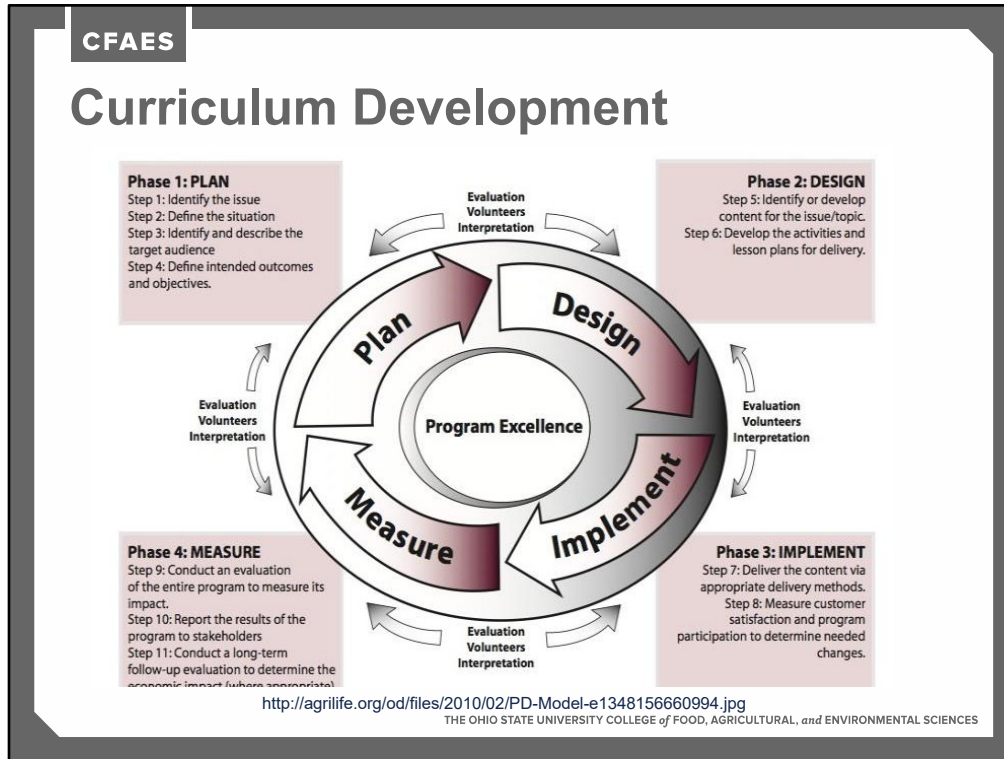
I'm choosing an example I'm familiar with, food preservation, specifically canning meats.

First it doesn't do any good to jump into the how to can meats unless there's a foundation of knowledge laid or the learner comes with a certain skill set

Second, because I've been learning and teaching this topic for many years, I'm comfortable in setting the learning environment up so that questions can be answered as we go along to make sure that the material is understood correctly.

As part of the state food preservation team, there are fact sheets, lessons on canning freezing, drying, pickling that were gradually completed to make a finished package. That package was an output from a model similar to this one

Next slide



There's a lot to look at on this slide but it clearly shows the cycle of development

1<sup>st</sup> plan- some of the issues that we spoke of before, figure out what the concern or need it and who wants it?

2<sup>nd</sup> design by developing some content for the issue or topic—is this something you have or does someone else have it that you can adapt?

can you develop the activities and lessons for teaching ?

3<sup>rd</sup> Implement it, deliver the content that works for you....on line, in person, etc

evaluate the outcome, did you feel you met the mark, did the clientele feel the same way? What would you change or keep the same?

4<sup>th</sup> Measure the entire program to see overall impact- not a one shot presentation

share the “so what” how does it affect your stakeholders

over time, what's the long-term impact?

Next slide



## Encouraging Curriculum Development: A Must in Today's Extension Profession

- Most models are complex.
- Early in your career...it is tweaking content
- **Can't we make this easier?**
- Yes! When you get to the point of developing your own curriculum – start with the things you do every day...

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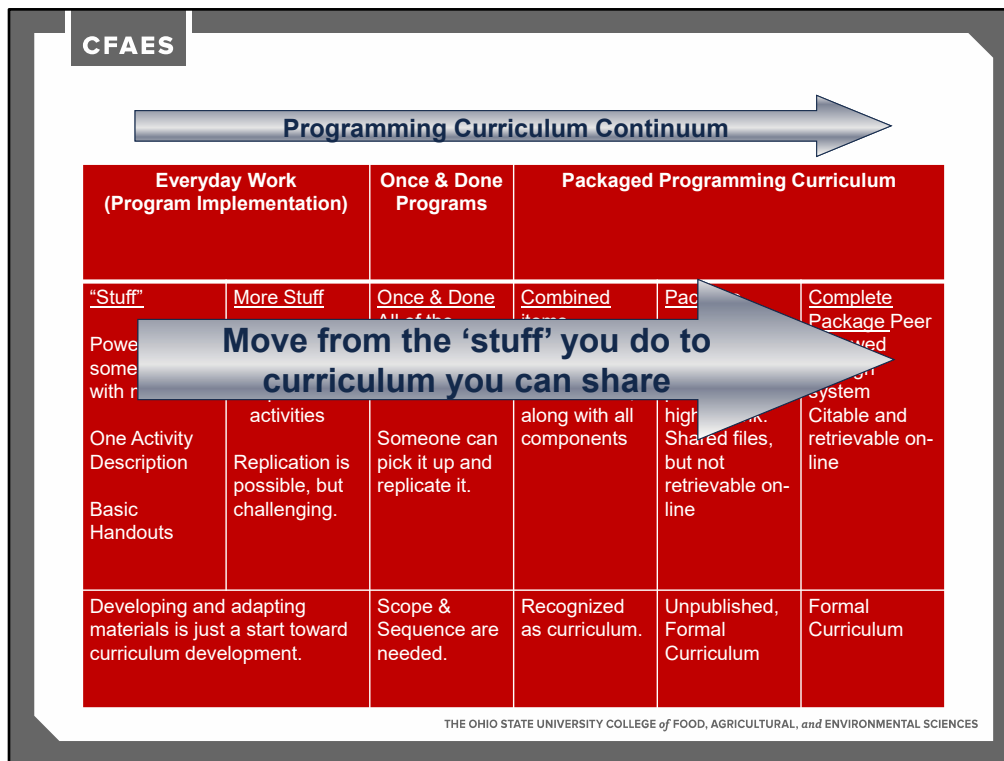
-Eric starts here and goes through slide 12...

It stands to reason that we are not expected to know everything all at once, it is a gradual process formal process to go through

Early on it's ok to tweak works of others, meeting needs of clientele in my home community. When I deepen my understanding, then I'm creating my area of expertise. I don't need to be an expert on everything!

State teams and mentors and area leaders will assist with this process

Next slide



We'll talk about the details of this a little later, but I think it's worth noticing in this graph that it's a gradual process that gains momentum with the addition of both teaching and addition of materials.

Stuff on your own, that will lead to curriculum

One time programs can build to a larger project (food preservation, canning, freezing, drying, etc)

Fact sheets, power points, can be accumulated into a curriculum with advertising and evaluation—we'll talk a little more about the elements of a curriculum at the end so you have a greater understanding

Next slide



## Activity – Program Worksheet

- What does your programming look like?
- Break out into program areas
  - Themes?
  - Clientele questions?
  - Strategies for partnerships?

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Breakout rooms by program area.

Give them a couple quick examples

4-H Year – volunteer training, QA/Livestock, camp, fair, awards,

FCS – food preservation.

ANR – pesticide and winter trainings, growing season scouting/control,

harvest

Hort - Spring bring gardening questions, Soil samples, What to grow, How much to grow, harvest

Then, give them 7 minutes in the breakout rooms

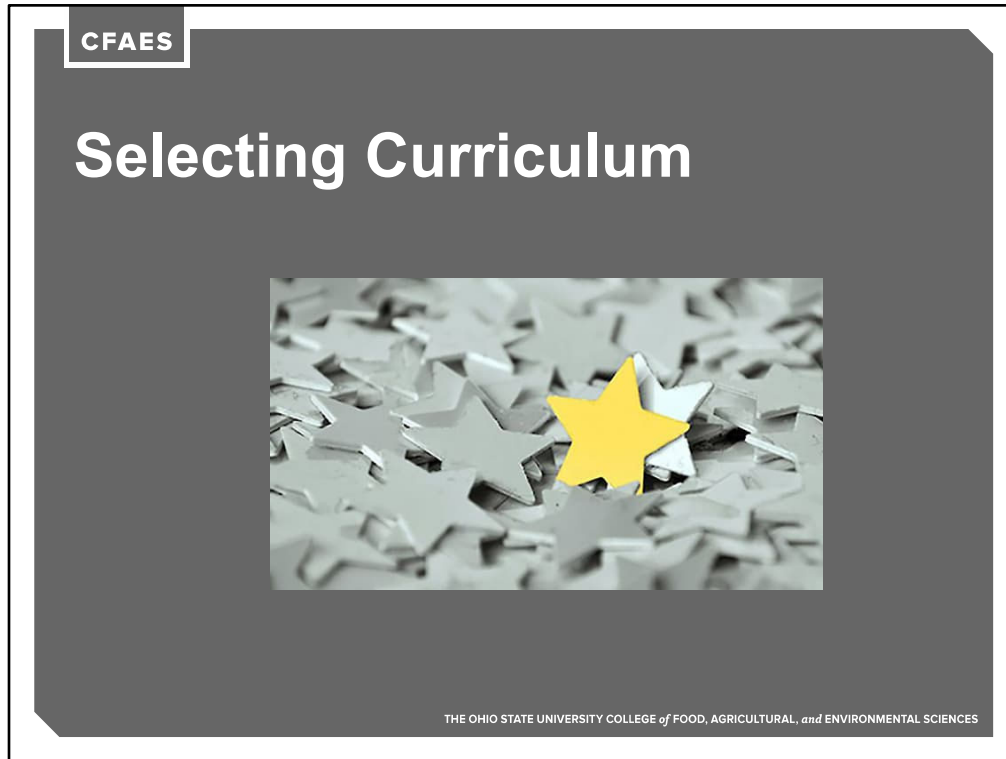
## Discussion

- Based on your plan of work...
- When do I need to use others' curriculum?
  - Does it already exist?
  - Can I edit it to fit my needs?

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1. What did you note on your month/season worksheet?
2. Did that help you think about what you need for curriculum? Or current programming to seek from other Educators?
3. Did it give you more ideas for things you can teach?
4. As you begin your career, assume that most everything you do will be curriculum from others. Depending on the program area, you may be tweaking content to make it fit your audience or location.



-Melinda starts here and goes through slide 14...

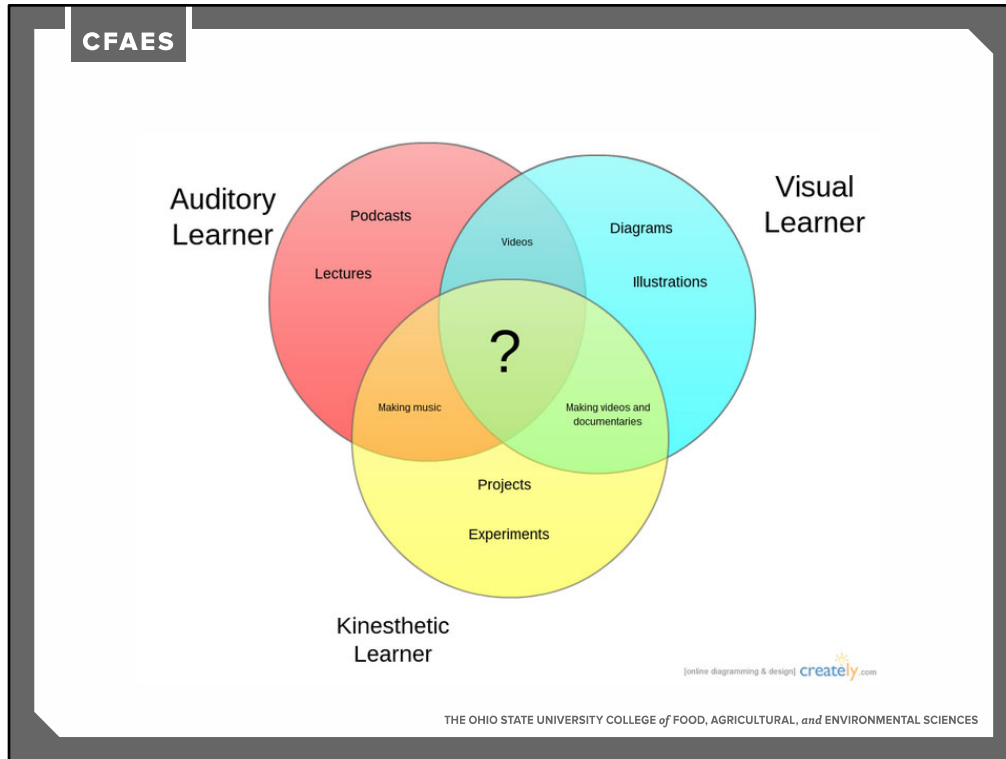
Taking time to find the one that meets your needs is a process and you don't have to do it all alone

In your community there are lots of agencies and organizations that have data for us to use:

Can any of you think of local partners that have data that you might use in developing programming? Can either speak out or use chat box

This is another place that mentors or coaches could be helpful for you, we'll talk more about this afternoon

One critical point in teaching  
Teaching style, what works for you--



People have learning preferences that are related to their learning style. How many of you know your learning style?

One way to describe how people learn is through the following three styles:

Visual (V)—learn by seeing or reading

Auditory (A)—learn by listening

Kinesthetic (K)—learn by doing

Because individuals differ in how they like to learn, building variety into teaching assures that everyone's preference is respected. It also improves the quality of instruction by putting the principles of adult learning into practice.

Below are some things we know about how adults learn. These points can help us to refine our teaching process:

*We tend to teach the way we like to be taught*, leaving out those who aren't like us. Teaching with variety opens the learning to all.

Visual (V), auditory (A), and kinesthetic (K) images are stored in different parts of the brain. Shifting teaching approaches keeps the whole brain "awake."

The majority of folks who struggle in school are strong Ks and yet we tend to teach to the As.

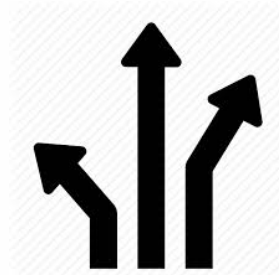
The brain “tunes out” when bored. Adding variety keeps learning interesting.  
Most people cannot focus on any one thing for more than 10 to 15 minutes.  
Shifting activities keeps learners engaged.

Why are we talking about learning styles in curriculum development?



## Where to start?

- Creating is not the first step
- Should you be teaching this, or looking for a speaker?
- Is it a common topic everyone else is already teaching?



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-Eric starts here and goes through slide 22...

As you seek material or programs from others, it's beneficial to understand not only your participants learning style, but your teaching style as well.

If you are using other's material (quite ok), what adaptations may need to be make so that it fits well with your audience and your expectations as a teacher?

If the content is specific, and might bring participant questions that you may not be able to answer with clarity, ask the author or other expert to teach the program or class for you. To maintain credibility and earn respect, we want to be able to provide research based information and answer questions that clientele may have.

If it's a common topic that someone else teaches well, they can be an invited speaker and you can focus your time and efforts in other areas.

Saying that, even if you host a meeting – you can add a short teaching session on a related topic, update or other item to be sure you are getting some teaching time. This is especially helpful when you are new – to show your clientele who you are and what you do.

## Core Value-Trust

- MyPlate
- USDA Nat'l Ag Library
- <https://www.nal.usda.gov/fnic/curricula-and-lesson-plans>
- National Meetings
- Conferences
- 4-H Books, Bulletins, etc.



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Unbiased research based- Where do I go to find materials and information?? Here are a few suggestions to get you started

First peer review is with your colleagues – have them read it over, give suggestions.

Peer reviewed process

<https://extension.osu.edu/policy-and-procedures-handbook/i-administration-policies/review-process-osu-extension-educational>

Peer review of educational materials can enhance credibility, protect your work, and strengthen scholarship credentials. Peer review can be formal and informal; the type of review you might request will vary depending on the scholarly material\*.

***Does the educational material I want to revise or create require formal peer review?***

In consultation with the appropriate assistant director(s), a determination will be made as to whether the publication will undergo a blind peer review.

## Colleagues!

- You and your coworkers
- Group think, sharing, innovation
- Disseminating research-based information



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We talked earlier about not needing to be an expert in everything. Seek out those who are skilled in the topics you might need in your county and plan reciprocal programming.

Use area and state teams to assist you in seeking topic areas to develop your expertise

Once you have the information, what are you going to do with it? How will it be shared? Really think about dissemination. We tend to think of teaching in group settings, but there are many opportunities with video and social media to extend more and more information to a larger group of people.

## No better time...

- Team Membership
  - Core vs. Education Member: Specialization
  - Make curriculum development a team goal
  - Help new educators by providing curriculum (encourage experts to share)
  - Enhance our culture of sharing curriculum
  - Fine tunes our expertise
  - Saves time
  - Advances reporting & impact



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The time is now – while you are still ‘new’ to build your own infrastructure. To make the connections you need for your professional skills and to serve your clientele.

Quality Indicators are established when your peers turn to you for information. As you build your programming you can select what part of the state activities to be a part of: state teams, statewide in-service programming, area programming planning, etc

With teaching, tailor each program to new audience---Do not assume that each presentation will be like the one before. Do your homework ahead of time, talk with the educator and identify expectations before you present

By participating in team sharing, your time can be better spent on long term program plans

Working together with others gathers larger pools of data and impact to report to stakeholders

## Educator Mentoring

- Ask experienced educators for curriculum
  - Helps you be a teacher from the get-go
  - More mileage out of their materials, examples for you
  - Encourage others to create, share
  - Gain more materials, viewpoints
- Use other new educator to teach programs you need
  - Helps their vita
  - Reciprocity comes back to you in areas where you need curriculum



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We'll talk more about the mentoring process this afternoon, but realize that you will probably identify formal and informal mentors throughout the state.

Establish relationships with those who can help you be a successful teacher-detailed curriculum, evaluation and confidence to teach on your own

take a new spin on materials, how might they be expanded or updated?

Is there new research to be added to what is currently available?

You may be assigned mentors, but also need to make connections with others as you realize your strengths and interests – and what other colleagues have those same interests.

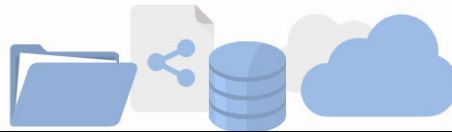
Sharing teaching in larger programs is helpful to everyone

PAT- 3 hours is a long time, break it up

Learn from others—good and the bad 😊

## Facilitate Sharing

- Team updates: Besides what's happening - What curriculum are you sharing?
- File sharing sites like Box.osu.edu
  - Easiest to share large files, information
- Divide up large tasks: Ex: MGV Training
  - Need for materials for outside instructors
  - Chapters – who is 'est'
- Change the culture – Demand it!
- Do it right = Expand efforts!



Working smarter not harder.....how can we share what's been successful for us?

-It is up to each of us to 'talk' curriculum during team meetings. What is being taught? Who is developing? How do we expand it beyond PowerPoint presentations?

-Share – example – MGV training materials BOX folder. We have all ANR educators on a box folder where they can download presentations, activities, notes and other information relating to each chapter of the MGV manual.

-The culture in academia is changing. Personally, I remember when people would not share certain things. When things were shared, there were no notes to follow. It was VERY difficult to replicate things. Today, it is easier. We should all be sharing as much as possible and using others' materials so we can focus more on our expertise.

-IF our teams have a culture of creating curriculum – each of us can expand our efforts within our expertise.

## Activity – Programming Scenario

- A community partner stops by to ask you to teach a topic that the previous educator taught for them several times. How do you address this important partner and the request?

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Respond in chat

How do I search? (discuss unbiased, research-based information)

-Get details from community member – details of topic, the whys, take notes to respond after searching.

-CHIP Needs assessment, health department

-Ask office staff about history

-Ask other educators in program area

-Search for curriculum

## Discussion

- Where can I find existing OSU Curriculum?
- What is available from others?
- What is acceptable and useable?

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-Some partners may have curriculum that does not meet our definition of research-based., or is out of date.

Work with mentors and state teams, as you find newer materials, share with others

Research based nonbiased information



# Developing Curriculum



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-Melinda starts here and goes through slide 24...

Yours might not look like this, but it should have all the parts that we will discuss

## Start with Sharing in Mind

- If you are spending the time on it:
  - It should be in forms that other program staff can use
  - Notes become more important
  - You become an expert in this area
  - Your end product is more useful to you and the system!
- When you have used others' materials:
  - Was the information easy to teach?
  - How much changing/updating was needed?
  - Are you citing them and telling them you used it?

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Spend time on materials and put in format for others to use.

Notes with additional information are essential as not everyone will have your knowledge level, include the simple details

Any additional tips you share help build your knowledge level and willingness to share with others

While this is pretty basic, make sure that you are citing your peers and telling them that you are using their materials!!

if you are updating, ask if they want to work with you on this?

Share new version

# Literature Review



A literature review should:

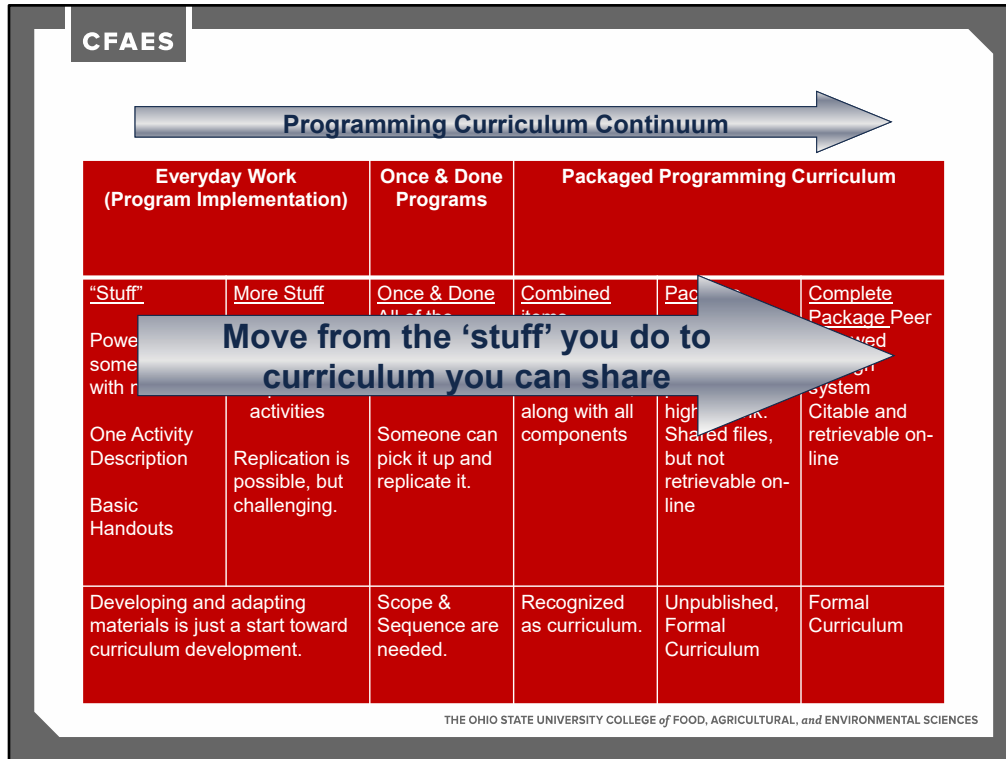
- provide a *critical evaluative* overview of existing curriculum
- synthesize connections to research, proven impacts
- Provide information about what has been discovered in the research to avoid duplication.
- identify gaps and inconsistencies in the literature (scholarly or peer-reviewed)

[go.osu.edu/litreview](http://go.osu.edu/litreview)

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-Eric starts here and goes through slide 34...

While this is late in the presentation it's an essential part of program and curriculum development ....what's already out there? What is the most current research to base your program on? This is not an opinion, or observation but documented, unbiased research to share....that's what makes us different from the rest of our community partners.



This is a format to get started.

Remember when we started we talked about the progression of the materials from left to right. It doesn't happen quickly but can build if we are mindful and purposeful with our time and efforts.

One time program, that becomes requested

Anyone else can pick it up and replicate it, all the way through the review process and capable of being published

## **Make Curriculum a Priority**

- When it does not exist
- When it makes sense
- Beyond pieces – a package.
- If we have good materials – colleagues will use and share their own expertise
- What is additional emphasis was placed on using current curriculum compared to developing new “stuff” all the time?

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Remember, only invest the time and effort when the need is evident.

### What should you include?

- Title
- Year Developed/Revised
- Overview/Need
- Overall objectives
- Target audience
- Curriculum description
- Role (authorship)
- Use by Others
- Impact

From your  
lesson plan

NOTE: You can reference project book/bulletin 'as listed in section....of this document'

To summarize in VITA as a program make sure that you include the details and specific reference to the role that you provided along with time invested.

## Curriculum Description: Typical Components

A package of materials

1. Introduction/Overview/Objectives/Target Audience
2. Lesson Plan/Outline/Table of Contents
3. Literature Review/Background Material
4. Instructions for Presenters/Qualifications Needed
5. Lessons/Modules
6. Supplemental Teaching Aids (factsheets, podcasts, etc.)
7. Marketing Materials (branding)
8. Evaluation Tools

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Here's a quick reference to all the components to a published, reviewed curriculum.

Literature Review will help develop **Lesson plans** and will show you where the possibilities are for improved curriculum or new ideas

Videos can be effective additions

Basic marketing tools, including appropriate branding (a must!)

NOTE: Mac users do not have Publisher, thus materials should be created in PowerPoint or another program that crosses platforms

# Everyday Examples



## Chris Penrose & Clif Little

- Southeastern Ohio Focus Area
  - Pastures, hay fields
  - Cow-Calf
  - Sheep
- Daily Work
  - Pasture Management & Renovation
  - Weed ID
  - Forage and Hay harvest, quality
  - New: Oil and gas leasing, contracts, pipelines



## **Chris Penrose & Clif Little**

- Programs Developed:
  - Forage & Grazing Schools, Pasture Walks
  - Hay Day; Beef & Sheep Schools
  - Easements, Right of Ways, Tax Management
- Curriculum Developed:
  - Factsheets (forages, nutrients, soils, etc.)
  - Videos, scripts, study guide: Livestock Pest. Ed.
  - Grazing School notebook; Evaluation Tools
  - Train-the-Trainer Activities
  - Forages: Judging Activity; Feeding Activity
  - FAMACHA: Results of implementation



## 4-H

- Focus Area: **Camping**
  - Tons of counselor trainings out there!
  - Do they cover what is required?
  - Are they updated?
- Daily Work
  - Selection of youth
  - Meeting camping standards
  - Meeting the needs of a new generation of youth and their learning styles



## 4-H

- Focus Area: **Committee Mgt & Leadership**
  - How many teaching activities do we have to help with this topic?
  - How many committees need help?
  - How can they improve to help you?
- Daily Work
  - Too many meetings!?
  - How to run effective meetings
  - How to do committee reports
  - ...



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Personally, I see 15-minute- learning activities as teaching tools is a WIDE OPEN opportunity for 4-H educators in Ohio. This could be simple teaching guides/discussion guides and a worksheet for 50 or more topics that could be a bulletin that is available for educators throughout the US.

Examples are time management, how to run a meeting, how to deal with difficult committee members, how to speak your voice and make your point, proper management of funds, helping children learn, teaching volunteers to help with club management, how to manage fundraisers, Robert's Rules, helping you design community service activities, and on and on and on....

## Activity - Discussion

- What have you seen that works?
- Look at successful curriculum?
- Here is an activity to do later...



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Give us examples in the chat box

-Melinda – Mindfulness

-Eric – Pesticide

-

CFAES

Activity - Homework

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My Programming Curriculum Planning Sheet<sup>1</sup>

#1. After completing and reviewing my VITA teaching table, my most frequent teaching topics include:

#2. Choose which one (or ones that might be combined) to determine your first plan of attack for turning your everyday work into curriculum (circle them).

#3. Give your program a working title:

#4. Identify the components you already have in place for this topic:

☐ Introduction

☐ Overview

☐ Objectives

☐ Target Audience

☐ Lesson Plan

☐ Outline

☐ Table of Contents

☐ Literature Review/Background Material

☐ Instructions for Presenters/Qualifications Needed

☐ Lessons/Modules

☐ Power Point Only

☐ Power Point with Script

☐ Teaching notes

☐ Supplemental Teaching Aids (factsheets, podcasts, etc.)

☐ Marketing Materials (branding)

☐ Evaluation Tools

#5. What are my next steps to take this program from a "One & Done event" to a packaged program curriculum?

Step 1:

Step 2:

Step 3:

Step 4:

#6. Who are my possible teammates, advisors, coaches, collaborators?

<sup>1</sup> Activity written and developed by Eric Barrett and Jacqueline Kirby Wilkins, OSU Extension.

How and when should you be developing your own curriculum?



## Canning Soup

HYG-5340

Family and Consumer Sciences

**Date:** 04/09/2018

**Melinda Hill, Extension Educator, Family and Consumer Sciences**

**Katharine Shumaker, Extension Educator, Family and Consumer Sciences**

There is nothing more satisfying than a warm bowl of homemade soup. Many of us are used to “opening a can” and heating up soup for a quick meal. Every family has their favorite recipes, but are they all able to be home canned safely? The answer depends on the ingredients.

- Soup containing “forbidden” ingredients (see below) cannot be safely home canned.
- A family soup recipe can be altered to follow the USDA guidelines before being canned. “Forbidden” ingredients can be added to the canned product just before serving.

### “Forbidden” Ingredients

These ingredients are not recommended for home canning because they alter the thickness and/or density of the final product which effects how long it takes for the soup to reach a safe temperature in the core of the jar. This may also impact product quality; the non-vegetable starches may break down during processing, and the dairy ingredients may separate or curdle.



Do not add these ingredients to soups intended for home canning:

- Any vegetables that do not have current USDA canning guidelines—such as broccoli, cabbage, cauliflower, celery, summer squash
- Pureeing a portion of the soup for thickening purposes

- Dairy products—such as cream, milk, cheese, sour cream, yogurt
- Non-vegetable starches—such as noodles, pasta, rice, flour, cornstarch, arrowroot

All soups MUST be pressure canned. Refer to the [Canning Basics](#) fact sheet (HYG-5338) for step-by-step directions for pressure canning. If you don't want to pressure can, or the soup already contains "forbidden" ingredients, then freeze it.

## **DO NOT ADD "FORBIDDEN" INGREDIENTS TO YOUR SOUP BEFORE PROCESSING!**

### **Guidelines**

There are endless varieties of soup you can make. The USDA guidelines for canning soup do not specify exact ingredients and measurements. They allow a lot of room to make your own combinations of ingredients—so long as you stay away from the "forbidden" ingredients referred to above.

So, what do you do when the recipe you want to make includes these "forbidden" ingredients? If possible, break down your family recipe to see if you could pressure can a combination of liquid, vegetables, dried beans or peas, meat, poultry, or seafood for shelf stable, long-term storage. Then you could add additional ingredients before serving the soup as part of a meal. See Table 1 for some examples.

There are four basic steps.

1. Decide what kind of soup "base" you want to make.
2. Determine what ingredients you can safely home process to make your soup "base."
3. Pressure can according to USDA guidelines in the charts below.
4. Prior to serving the soup, add additional ingredients (such as the "forbidden") or puree a portion of the soup to achieve the desired final product.



**Table 1.**

<b><i>What Kind of Soup Do You Want?</i></b>	<b><i>What Goes in the Canning Jar?</i></b>	<b><i>What to Add Prior to Serving Forbidden Ingredients</i></b>
Cream of _____ soup (mushroom, celery, chicken, etc.)	Broth or water, meat, vegetable, seasonings	<ul style="list-style-type: none"> <li>• Add butter, milk, cream, thickeners</li> <li>• Puree a portion of the soup</li> </ul>
Vegetable soup (with or without meat)	Broth or water, meat, vegetables, seasonings	<ul style="list-style-type: none"> <li>• Add thickener, rice, pasta, or noodles if desired</li> </ul>
Chicken or beef with noodles or rice	Broth or water, meat, vegetables, seasonings	<ul style="list-style-type: none"> <li>• Add thickeners, rice, pasta, or noodles</li> </ul>
Cheesy soup	Broth or water, meat, vegetables, seasonings	<ul style="list-style-type: none"> <li>• Add butter, milk, cheese, thickeners</li> <li>• Puree a portion of the soup</li> <li>• Add pasta or noodles</li> </ul>
Pureed vegetable (carrot, squash, tomato, etc.)	Broth or water, vegetables, seasonings	<ul style="list-style-type: none"> <li>• Puree a portion of the soup</li> <li>• Add milk, cream, or other thickeners if desired</li> </ul>
Bean soup	Broth or water, fresh or rehydrated beans, meat, vegetables, seasonings	<ul style="list-style-type: none"> <li>• Puree a portion of the soup</li> <li>• Add thickeners</li> <li>• Add dumplings</li> </ul>

\* Tomato or vegetable juice may be used in place of broth or water.

**Pressure can according to the charts below.**

## Steps to Prepare Soup for Canning

1. Select, wash, and prepare vegetables, meat, poultry, or seafood as described for the specific foods in their own canning instructions.
  - a. Preparing meat, poultry, or seafood: Cover meat with water and cook until tender. Cool meat and remove bones. Cut meat into bite-sized pieces. Reserve broth, if desired.
  - b. Preparing vegetables: Wash, trim, and prepare. Cook vegetables as described for a hot pack. Refer to OSU Extension [Basics for Canning Vegetables](#) fact sheet (HYG-5344). Be sure to check for proper size of vegetable pieces. **DO NOT** puree.
  - c. Preparing dried beans or peas: For each cup of dried beans or peas, add 3 cups of water, boil 2 minutes, remove from heat, soak 1 hour, and heat to boil; drain.
2. Combine solid ingredients with broth, tomato/vegetable juice, or water to cover. Boil 5 minutes. Salt to taste, if desired.
3. Using a slotted spoon, fill jars halfway with solid mixture. Add remaining liquid, leaving 1-inch headspace. Remove bubbles. Wipe jar rim.
4. Adjust lids and process following the recommendations in Table 2 or Table 3 according to the method of canning used.



**Table 2.** Recommended Process Time for **Soups** in a Dial-Gauge Pressure Canner.

			Canner Pressure (PSI) at Altitudes	
Style of Pack	Jar Size	Process Time	0 - 2,000 ft.	2,001 - 4,000 ft.
Hot	Pints	60* min.	11 lbs.	12 lbs.
	Quarts	75* min.	11 lbs.	12 lbs.
* Caution: Process 100 minutes if soup contains seafood.				

<b>Table 3.</b> Recommended Process Time for <b>Soups</b> in a Weighted-Gauge Pressure Canner				
			<b>Canner Pressure (PSI) at Altitudes of</b>	
<b>Style of Pack</b>	<b>Jar Size</b>	<b>Process Time</b>	<b>0 - 1,000 ft.</b>	<b>Above 1,000 ft.</b>
Hot	Pints	60* min.	<b>10 lbs.</b>	15 lbs.
	Quarts	75* min.	<b>10 lbs.</b>	15 lbs.
* Caution: Process 100 minutes if soup contains seafood.				

## Making Your Own Stock/Broth

### *Red Meat*

Rinse bones, cover with water, cover pot and simmer 3 to 4 hours. Remove meat from bones. Chill broth, skim off fat and return meat to broth. Reheat broth and meat to boiling. Fill jars, leaving 1 inch of headspace. Adjust lids and process according to Table 4 or Table 5.

### *Poultry*

Place carcass bones in a large stockpot and cover with water. Cover pot and simmer 30 to 45 minutes or until meat can be easily stripped from bones. Chill broth and skim off fat. Strip meat, discard excess skin and fat, and return meat to broth. Reheat to boiling and fill jars. Leave 1 inch of headspace. Adjust lids and process according to Table 4 or Table 5.

Homemade soups are something to savor, especially on a cold winter night. They can be a quick and easy meal on a rushed day. While it may not be possible to home can soup exactly like what you might buy in the store, with a few adjustments, you “can” home preserve your families favorite soup recipes.

<b>Table 4.</b> Recommended Process Time for <b>Meat Stock</b> in a Dial-Gauge Pressure Canner.				
			<b>Canner Pressure (PSI) at Altitudes of</b>	
<b>Style of Pack</b>	<b>Jar Size</b>	<b>Process Time</b>	<b>0 - 2,000 ft.</b>	<b>2,001 - 4,000 ft.</b>
Hot	Pints	20 min.	<b>11 lbs.</b>	12 lbs.
	Quarts	25 min.	<b>11 lbs.</b>	12 lbs.

<b>Table 5.</b> Recommended Process Time for <b>Meat Stock</b> in a Weighted-Gauge Pressure Canner.				
			<b>Canner Pressure (PSI) at Altitudes of</b>	
<b>Style of Pack</b>	<b>Jar Size</b>	<b>Process Time</b>	<b>0 - 1,000 ft.</b>	<b>Above 1,000 ft.</b>
Hot	Pints	20 min.	<b>10 lbs.</b>	15 lbs.
	Quarts	25 min.	<b>10 lbs.</b>	15 lbs.

## References

National Center for Home Food Preservation. University of Georgia. [nchfp.uga.edu](http://nchfp.uga.edu)

United States Department of Agriculture. *Complete Guide to Home Canning*, Agriculture Information Bulletin No. 539. 2009.

Ohio State University Extension. *Canning Meat, Poultry and Game*, Fact Sheet HYG-5330. [ohioline.osu.edu/factsheet/HYG-5330](http://ohioline.osu.edu/factsheet/HYG-5330)

Ohio State University Extension. *Canning Basics*, Fact Sheet HYG-5338. [ohioline.osu.edu/factsheet/HYG-5338](http://ohioline.osu.edu/factsheet/HYG-5338)

Ohio State University Extension. *Basics for Canning Vegetables*, Fact Sheet HYG-5344. [ohioline.osu.edu/factsheet/HYG-5344](http://ohioline.osu.edu/factsheet/HYG-5344)

*Photos by Food Preservation team.*

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# Safe, Simple, Easy to Learn

# Apples



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# Today's Topics



- Why do we preserve food at home?
- How best to meet our family's expectations?
- Freezing, Canning, and Drying, what's best for you?



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# Why do we Preserve Food?

- Preserve produce for later use
- Control quality and ingredients
- Personally fulfilling
- Have food on hand
- Family activity
- Share with others



***“Food Safety Always  
Comes First”***



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Before preserving any food  
consider the **types of foods** your  
family **enjoys** and the **usefulness** of  
the preserved product in your  
**lifestyle.**



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# An apple a day..... Keeps the Doctor Away



- Eating apples daily appeared to lower levels of cholesterol
- Apples contain soluble fiber, Vit C, and potassium
- They help regulate blood sugar and control appetite, protect against cancer and safeguard the lungs and prevent strokes



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# Apple Facts:



- Worldwide there are 7,500 apple varieties
  - 2,500 varieties grown in the United States
  - Approximately 50 varieties grown in Ohio
- Apples are grown commercially in 36 States
- Most apples are still picked by hand



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# Selecting Apples

- Pick fruit free of bruises, decay, or shriveled skin
- Select ripe fruit that is firm to the touch
- Handle gently
- Discard damaged products
- Store in cool location like refrigerator or basement/cellar



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# Yields – Planning Ahead



- 1-pound of apples = 3 medium apples
- 1-pound apples = 1 ½ cups applesauce
- 2-pounds apples = 9-inch pie
- 1-bushel apples = approximately 48 pounds or 16 to 20 quarts canned or frozen applesauce



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# Methods of Food Preservation

- Canning
- Freezing
- Drying



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# Basics for Handling Food Safely

- Prevent **bacteria** from spreading through your kitchen.
  - ✓ Wash hands!
    - 20 seconds before and after handling food
  - ✓ Sanitize!
    - Cutting boards, utensils, and countertops
    - Solution of 1 Tablespoon of unscented, liquid chlorine bleach in 1 gallon of water



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# Apple Slices - Varieties

Consider a mixture of:

- Braeburn
- Crispin
- Fuji
- Golden Delicious
- Granny Smith
- Honeycrisp
- Jonathan
- McIntosh



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# Apple Slices

- Wash, peel, core, and slice apples
- Prevent discoloration by using ascorbic acid or lemon juice
  - 1 tsp ascorbic acid per gallon of water or
  - $\frac{3}{4}$  cup lemon juice per gallon of water



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# Sweetening Apple Slices

Type of Syrup	Percent	Cups of Sugar	Cups of Water	Yield in Cups
Very Light	10%	1/2	4	4 1/2
Light	20%	1	4	4 3/4
Medium	30%	1 3/4	4	5
Heavy	40%	2 3/4	4	5 1/3



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# Freezing Apple Slices

- Syrup Pack
- Sugar Pack
- Dry Pack



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# Apple Sauce - Varieties

Consider these varieties:

- Cortland
- Jonagold
- Lodi
- McIntosh
- Melrose
- Red Cort
- Rome
- Stayman



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# Freezing Apple Sauce

- Cool by placing pan in cold water bath.
- Pack sauce in plastic containers, freezer bags, or wide-mouth jars.
- Leave ½-inch head space for pints and 1-inch for quarts.
- Store up to 8 - 10 months
- Thaw in refrigerator.



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# Methods of Canning

- Boiling Water Canning
  - ✓ Used for “acid” foods, pH 4.6 or lower
- Pressure Canning
  - ✓ Used for “low acid” foods, pH above 4.6



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# Canning Apple Sauce

- Treat apples for sauce as you would slices
- Place in pot with  $\frac{1}{2}$  cup water and simmer until tender
- Press through mill or sieve for smooth sauce
- Sweeten as desired
- Reheat to boiling
- Fill hot sauce into jars and process



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# Apple Butter

- Based on personal preference and family needs – select Reduced Sugar or Traditional Apple Butter:
  - Reduced Sugar includes 4 pounds of apples, 1 cup apple cider, ½ cup sucralose, and spices (yield 4-5 ½ pints)
  - Traditional includes 8 pounds of apples, 2 cups apple cider, 2 cups vinegar, 2 ¼ cups of each white and brown sugar, and spices (yield 8-9 ½ pints)



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# Apple Pie Filling - Varieties



Consider a mixture of:

- Cortland
- Fuji
- Golden Delicious
- Granny Smith
- Honeycrisp
- Jonathan
- McIntosh
- Rome



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# Apple Pie Filling



	<b>7 Quarts</b>
<b>Blanched Apple Slices</b>	<b>6 Quarts</b>
<b>Granulated Sugar</b>	<b>5 ½ Cups</b>
<b>Clear Jel ®</b>	<b>1 ½ Cup</b>
<b>Cinnamon</b>	<b>1 Tbsp</b>
<b>Cold Water</b>	<b>2 ½ Cups</b>
<b>Apple Juice</b>	<b>5 Cups</b>
<b>Bottled Lemon Juice</b>	<b>¾ Cup</b>

**Nutmeg and Yellow Food Coloring are Optional**



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# Freezing Whole Apple Pies

- Make as usual except add 1 extra TBSP flour or ½ TBSP cornstarch.
- Do not cut vents in top crust.
- Freeze in pan, unbaked.
- Bake without thawing.
- Freeze for 3 – 4 months!



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# Storing Home Canned Food

- Label and date all jars
- Store in a cool, dry, dark place
- Avoid temperature extremes
- Use within 1 year for best quality



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# Drying Apples

- Two methods of drying – oven or dehydrator.
- Select ripe fruit
- Even slices
- Pretreat



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# Drying Apples - Conditioning and Storage

- Test for doneness
- Pasteurization
- Conditioning



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# References:

- University of Georgia Cooperative Extension Service, National Center for Home Food Preservation.  
<http://uga.edu/nchfp>
- United States Department of Agriculture (2015). *Complete Guide to Home Canning*. Agriculture Information Bulletin No. 539
- University of Georgia Cooperative Extension, *So Easy to Preserve*, Sixth Edition, 2014.
- Ohio State University Extension, *Canning Basics*, <http://ohioline.osu.edu/factsheet/HYG-5338>
- Ohio State University Extension, *Basics for Canning Fruit*, <http://ohioline.osu.edu/factsheet/HYG-5343>





# References:

- Ohio State University Extension, *Food Preservation: Freezing Fruits*, <http://ohioline.osu.edu/factsheet/HYG-5349>
- Penn State Extension, *Let's Preserve Apples*, <http://extension.psu.edu/lets-preserve-apples>
- Michigan State University Extension, *Tips for Freezing Homemade Pie*, [https://www.canr.msu.edu/news/tips\\_for\\_freezing\\_homemade\\_pies](https://www.canr.msu.edu/news/tips_for_freezing_homemade_pies)
- University of Illinois Extension, *Apples and More Website*, <https://web.extension.illinois.edu/apples/facts.cfm>





# Questions?

- Contact your local OSU Extension Office  
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*“Safe, Simple, Easy to Learn Lesson: Apples”* developed by Melinda Hill, Wayne County, and Lisa Barlage, Ross County, Extension Educators, Family and Consumer Sciences, Ohio State University Extension. 9/2020



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*This material has been peer-reviewed for statewide distribution.*

Developed by **OSU Extension Food Preservation Team:**

- Lisa Barlage, Educator, Ross County
- Shari Gallup, Educator, Licking County
- Laura Halladay, Educator, Greene County
- Candace Heer, Educator, Morrow County
- Melinda Hill, Educator, Wayne County
- Amy Meehan, Healthy People Program Specialist
- Christine Kendle, Educator, Tuscarawas County
- Emily Marrison, Coshocton County
- Melissa Rupp, Fulton County
- Katharine Shumaker, Educator, Holmes County
- Treva Williams, Educator, Scioto County



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Safe, Simple, Easy to Learn

# Apples



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Fall is a wonderful time of year to talk about some of the favorite fruits.....Apples and the many ways they can be prepared for the winter months ahead

Good Morning, I'm Melinda Hill from OSU Extension Wayne Co and joining me is Lisa Barlage, OSU Extension in Ross Co.

Today we will be sharing with you.....

## Today's Topics



- Why do we preserve food at home?
- How best to meet our family's expectations?
- Freezing, Canning, and Drying, what's best for you?



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### Today's Topics

Reasons for preserving food at home. Ask the audience why they choose to preserve food at home or why they are attending this program. Type in the Chat.

### When to Harvest Produce

Resource for Educator – Ohio Proud Produce Availability chart

<http://www.ohioproud.org/docs/produceavailability.pdf>

### Cost of Preserving and Storing Food

Resource for Educator: From Colorado State University, Extension Fact Sheet, Cost of Preserving and Storing Food.

<http://extension.colostate.edu/topic-areas/nutrition-food-safety-health/cost-of-preserving-and-storing-food-8-704/>



## Why do we Preserve Food?

- Preserve produce for later use
- Control quality and ingredients
- Personally fulfilling
- Have food on hand
- Family activity
- Share with others



***"Food Safety Always  
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We preserve foods for different reasons:

- Some of us want to preserve our garden produce for later use.
- Some of us want to know and manage what is in our food, the ways it is grown, or the ingredients we use in preservation.
- Other individuals receive great personal satisfaction from doing food preservation as an activity.
- Another reason is the stored food is a convenience, it is food we have on hand when we need it.
- Many times Family and Consumer Sciences Educators are told that families enjoy getting together and canning, freezing, or drying.
- Sometimes neighbors have fun working together.
- Many people will distribute their food as a gift to loved ones. Note: In Ohio it is not legal to sell home canned products except in specific situations under cottage food

industry regulations.

Before preserving any food  
consider the **types of foods** your  
family **enjoys** and the **usefulness** of  
the preserved product in your  
**lifestyle.**



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Preserving food at home may require significant time, energy and money.

Before starting your preservation, it is important to consider the types of foods you plan to preserve and how they will fit into your family's lifestyle. Only preserve those foods your family will consume within 1 year.

## An apple a day..... Keeps the Doctor Away



- Eating apples daily appeared to lower levels of cholesterol
- Apples contain soluble fiber, Vit C, and potassium
- They help regulate blood sugar and control appetite, protect against cancer and safeguard the lungs and prevent strokes



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Experts agree with evidence that apples do indeed live up to the famous adage

Reviewed more than 80 studies and come up with additional benefits of eating apples

The pectin in apples blocks cholesterol absorption in our gut

Apple peels are packed with polyphenols- antioxidants that help prevent disease

A medium apple has about 80 calories.

All types of apples, not any best variety

University of California @ Davis and Florida State University  
Linnette Goard

## Apple Facts:



- Worldwide there are 7,500 apple varieties
  - 2,500 varieties grown in the United States
  - Approximately 50 varieties grown in Ohio
- Apples are grown commercially in 36 States
- Most apples are still picked by hand



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- Apple trees typically take 4 to 5 years to produce fruit and can live more than 100 years.
- Apple trees are a member of the Rose family.
- Apples are the second most valuable fruit grown in the US, with oranges being number one.
- Red delicious is still the most popular apple grown.
- It takes energy from 50 leaves to produce one apple.

Source: University of Illinois Extension



## Selecting Apples

- Pick fruit free of bruises, decay, or shriveled skin
- Select ripe fruit that is firm to the touch
- Handle gently
- Discard damaged products
- Store in cool location like refrigerator or basement/cellar



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### Selecting, Storing and Serving Ohio Apples

Be observant in choosing your fruit whether you are picking so they are in good condition

Apples bruise easily so handle with care

One bad apple....yes it does spoil others, so discard

Store in 32-35 degree temperatures, but check often for any signs of decay  
Wash before using

## Yields – Planning Ahead



- 1-pound of apples = 3 medium apples
- 1-pound apples = 1 ½ cups applesauce
- 2-pounds apples = 9-inch pie
- 1-bushel apples = approximately 48 pounds or 16 to 20 quarts canned or frozen applesauce



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### Selecting Storing and Serving Ohio Apples

We know there will be variability, but in general here's a guide to get started with your recipes

It will depend on the size and density of the apple for the final outcomes

There are guidelines concerning specific apples for best outcomes (sauce, baking, cider, etc)

Some are listed on Ohioline or  
check out charts on line or at your favorite purchase point  
combination of apples for fuller flavor and family preference

## Methods of Food Preservation

- Canning
- Freezing
- Drying



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**Methods:** There are several ways you can preserve food in your home. They include canning (using boiling water or steam pressure), freezing, drying and fermenting. Choose the method that is right for you. This decision may be based on the type of food you chose to preserve.

## Basics for Handling Food Safely

- Prevent **bacteria** from spreading through your kitchen.
  - ✓ Wash hands!
    - 20 seconds before and after handling food
  - ✓ Sanitize!
    - Cutting boards, utensils, and countertops
    - Solution of 1 Tablespoon of unscented, liquid chlorine bleach in 1 gallon of water



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We will start with the basic principle of handling food safely. The most important thing is to make sure your hands are clean and then that everything in your kitchen is cleaned and sanitized. Use a solution of 1 Tablespoon of bleach to 1 gallon of water.



## Apple Slices - Varieties

Consider a mixture of:

- Braeburn
- Crispin
- Fuji
- Golden Delicious
- Granny Smith
- Honeycrisp
- Jonathan
- McIntosh



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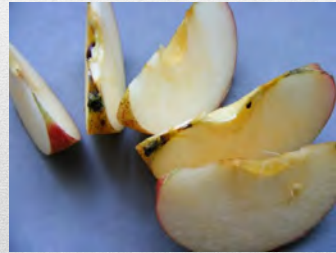
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Select varieties that are crisp and firm, not mealy textured. For both canning and freezing – crisp apple varieties are recommended.



# Apple Slices

- Wash, peel, core, and slice apples
- Prevent discoloration by using ascorbic acid or lemon juice
  - 1 tsp ascorbic acid per gallon of water or
  - $\frac{3}{4}$  cup lemon juice per gallon of water



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It is recommended for almost all methods of apple preservation (drying, pie filling, canned or frozen slices) that you use some method of anti-darkening/pre-treatment method.

To do that:

Dip apples in solution and drain to prevent discoloration. Do not soak in solution for optimum flavor and nutritive value.

Think about the end product you are going to use the apples for? Then think about the options you may have:

Syrup pack is usually for apples that will be used in desserts or mixed fruit

Dry pack or tray pack would be good for pie making (Freezing)

If choosing to freeze apples after treating mix  $\frac{1}{2}$  cup sugar with 1 quart of fruit and either pack into container or place on a tray and freeze before packing into containers.

## Sweetening Apple Slices

Type of Syrup	Percent	Cups of Sugar	Cups of Water	Yield in Cups
Very Light	10%	1/2	4	4 1/2
Light	20%	1	4	4 3/4
Medium	30%	1 3/4	4	5
Heavy	40%	2 3/4	4	5 1/3



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*The goal of adding sweetener is to keep the flavor, nutritive value and texture in the apple pieces, so they don't leach out into the liquid.*

*Light corn syrup, list brown sugar or mild-flavored honey may be used to replace as much as half of the sugar called for in the chart. (Ohioline 5343)*

• [https://nchfp.uga.edu/how/can\\_02/syrups.html](https://nchfp.uga.edu/how/can_02/syrups.html)

• Check sweeteners other than sugar???

## Freezing Apple Slices

- Syrup Pack
- Sugar Pack
- Dry Pack



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Syrup pack is preferred for uncooked deserts or fruit cocktail.

Sugar or dry pack are good for pies.

Dry pack would work well for smoothies or adding to oatmeal.

For sugar or dry pack you may want to steam blanch the apple slices 90 seconds to 2 minutes to prevent the ripening process.

## Apple Sauce - Varieties

Consider these varieties:

- Cortland
- Jonagold
- Lodi
- McIntosh
- Melrose
- Red Cort
- Rome
- Stayman



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Select varieties that are sweet, juicy and crisp. For tart sauce add 1 pound of apple of tart apples to 3 pounds of sweeter apples.

## Freezing Apple Sauce

- Cool by placing pan in cold water bath.
- Pack sauce in plastic containers, freezer bags, or wide-mouth jars.
- Leave ½-inch head space for pints and 1-inch for quarts.
- Store up to 8 - 10 months
- Thaw in refrigerator.



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Use the same process as canned sauce to prepare you apple sauce.



## Methods of Canning

- Boiling Water Canning
  - ✓ Used for “acid” foods, pH 4.6 or lower
- Pressure Canning
  - ✓ Used for “low acid” foods, pH above 4.6



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There are two approved methods for canning foods at home:

### **Boiling water canning**

Boiling water canning is used for canning acid foods. At sea level, water boils at 212°F.

As altitude increases, water boils at lower temperatures. Since lower temperatures would be less effective in killing bacteria, processing time would have to be increased as altitude increases.

### **Pressure canning**

Pressure canning is only safe method for canning low acid canned foods. When canned under pressure, temperatures higher than the boiling point of water can be reached.

These higher temperatures, like 240°F, are necessary to destroy spores of bacteria that cause botulism, a very deadly type of food poisoning, as well as spores of bacteria that cause spoilage.

Note to educators: pH is a measure of acidity; the lower its value the more acid the food.

*[Have both types of canners, jars, lids, bubble freers, jar fillers, lid wands, etc. to show during or after the presentation.]*

## Canning Apple Sauce

- Treat apples for sauce as you would slices
- Place in pot with  $\frac{1}{2}$  cup water and simmer until tender
- Press through mill or sieve for smooth sauce
- Sweeten as desired
- Reheat to boiling
- Fill hot sauce into jars and process



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from National Center

About 21 pounds of apples should yield 7 quarts or about 13.5 pounds for 9 pints

Combination of apples can give sweeter or more tart flavor.

After treating slices, cook in a large (8-10 qt. pot), and cook, stirring occasionally until tender.

The mill will produce a more fine, smooth sauce, as not using it will provide a chunky style sauce.

Sweetening is your choice, recommended  $\frac{1}{8}$  c. per quart

Headspace is important, leave  $\frac{1}{2}$  inch from the fruit to the lid for processing

Hot pack for water bath canning, pints for 15 min 20 min for quarts. Add 5 minutes if you are higher than 1,000 feet sea level

Hot pack for pressure canning: pints for 8 minutes, quarts for 10 minutes at 6 pounds for a dial gauge or 5 pounds for a weighted gauge  
(increasing a pound for over a 1,000 feet in dial gauge and going to 10 pounds in the

weighted gauge)

## Apple Butter

- Based on personal preference and family needs – select Reduced Sugar or Traditional Apple Butter:
  - Reduced Sugar includes 4 pounds of apples, 1 cup apple cider, ½ cup sucralose, and spices (yield 4-5 ½ pints)
  - Traditional includes 8 pounds of apples, 2 cups apple cider, 2 cups vinegar, 2 ¼ cups of each white and brown sugar, and spices (yield 8-9 ½ pints)



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Fruit butters are made by cooking the fruit pulp with sugar to a thickened state to use on a variety of breads or pancakes or other desserts.

Varieties that are recommended include: Jonathan, Winesap, Stayman, Golden Delicious, or McIntosh.

Apple Butter is essentially apple sauce cooked longer and maybe a little sweeter or additional spices, depending on your preference

recipes for 4 pints usually cook from 30 minutes to 3 hours. Because of the cooking time with little water, pay close attention, easily scorched

use a simmer, not a boil to cook product down, stir constantly to avoid burning.

**Crockpot.....????????????????**

National Centers recipe used apple cider (2 cups) and 2 cups vinegar, with the sugar as listed above, cinnamon and cloves are most used.

Some recipes call to peel the fruit, or you can just core and remove the seeds before cooking. If you have a food mill, you can remove the skins and seeds as well.

Please note: because the fruit will vary from year to year, so will your recipe (even it's the same one)

Fruit that is slightly immature will have more pectin, thus a thicker product.

Mention sterilize jars or process for 10 minutes



## Apple Pie Filling - Varieties



Consider a mixture of:

- Cortland
- Fuji
- Golden Delicious
- Granny Smith
- Honeycrisp
- Jonathan
- McIntosh
- Rome



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Experts recommend a mixture of sweet and tart apples for the very best flavor in apple pies.

## Apple Pie Filling



	7 Quarts
Blanched Apple Slices	6 Quarts
Granulated Sugar	5 ½ Cups
Clear Jel®	1 ½ Cup
Cinnamon	1 Tbsp
Cold Water	2 ½ Cups
Apple Juice	5 Cups
Bottled Lemon Juice	¾ Cup

Nutmeg and Yellow Food Coloring are Optional



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### A Note About Thickeners

“Clear Jel®” is a chemically modified corn starch that produces excellent sauce consistency even after fillings are canned and baked. There are other chemically modified corn starch products on the market; however, Clear Jel® is the only one that has been tested for these recipes. Traditional corn starch, flour, tapioca and other thickeners may break down when used in these pie fillings, causing a runny sauce consistency. You also must use Clear Jel® and not Instant Clear Jel®.

## Freezing Whole Apple Pies

- Make as usual except add 1 extra TBSP flour or  $\frac{1}{2}$  TBSP cornstarch.
- Do not cut vents in top crust.
- Freeze in pan, unbaked.
- Bake without thawing.
- Freeze for 3 – 4 months!



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The extra TBSP flour or cornstarch will help prevent boiling over when pies are baking.

Freezing unbaked pies yields a better fresh-fruit flavor than freezing baked pies. Bottom crusts may become soggy though.

Cut the vents in the crust before you bake the frozen pie. Place pie pan on baking sheet.

## Storing Home Canned Food

- Label and date all jars
- Store in a cool, dry, dark place
- Avoid temperature extremes
- Use within 1 year for best quality



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If the jars sealed properly, remove rings and wash jars to remove any possible residue. Label and store the food in a cool, dry, dark place.

Avoid storing canned items near heat pipes or in areas where they will be exposed to extreme hot or cold temperatures. For best quality, use home canned foods within one year.

If the jars do not seal, you can reprocess the food if you do so within 24 hours or you store the jars in the refrigerator overnight. In order to reprocess, you have to start over and reprocess using new lids. If you do not wish to reprocess, you can either refrigerate the food and use it within 3 or 4 days or you can freeze it for longer storage.



## Drying Apples

- Two methods of drying – oven or dehydrator.
- Select ripe fruit
- Even slices
- Pretreat



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Drying the oldest method of food preservation. By definition food dehydration is the process of removing water from food by circulating hot air through it.

Oven drying works if your oven will allow 140 to 150 degrees f. with a cracked door. Many new ovens start at 200 degrees.

Food dehydrators will make the most high-quality product.

The nutritive value of food is only minimally affected by drying.

Remember dried fruit is higher in carbohydrates than fresh, so serving sizes should be smaller.

Even slices are key for evenly drying the product, 1/8-1/4 inch seem to work well for most causes

Peel can be left on, but will take longer to dry

Remember to pretreat the slices so they won't darken—commercial stabilizer, fruit juices or steam blanching can be used- allow to soak for 2 minutes

this process prevents the oxidation or color changes in fruits. Ascorbic acid (vit. C) is one of the most common methods to use. One teaspoon with 2 cups of water and



allow fruit to soak for 3-5 minutes, then drain well and place on dryer trays.

Fruit juices can also be used—pineapple, or orange juice will work but remember the juice may impart it's flavor as the slices soak for 3-5 minutes. Drain well and place on dryer trays.

Steam blanching can be used but the flavor and texture of the fruit might change, bring water to boil and place produce in a basket over the water. Cover tightly and blanch

# Drying Apples - Conditioning and Storage

- Test for doneness
- Pasteurization
- Conditioning



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Slices are dry when they are pliable, springy and creamy white. No moisture will appear when the apples are cut. The slices should not stick together when folded in half, but they should not be so dry as to crack or break.

Pasteurization is done most often for foods that are vine dried or air dried, both of which should not apply to apples however to pasteurize either place food in a bag and freeze for 48 hours or heat the dried food at 150 for 30 minutes or 175 for 15 minutes, being careful not to scorch the food

Conditioning is the last step before storage

place the fruit in a tightly sealed glass jar for 7-10 days. If condensation appears, return to the dehydrator for more drying

if no condensation appears, package dried food for long term storage., keeping out of sunlight for best results

## References:

- University of Georgia Cooperative Extension Service, National Center for Home Food Preservation.  
<http://uga.edu/nchfp>
- United States Department of Agriculture (2015). *Complete Guide to Home Canning*. Agriculture Information Bulletin No. 539
- University of Georgia Cooperative Extension, *So Easy to Preserve*, Sixth Edition, 2014.
- Ohio State University Extension, *Canning Basics*, <http://ohioline.osu.edu/factsheet/HYG-5338>
- Ohio State University Extension, *Basics for Canning Fruit*, <http://ohioline.osu.edu/factsheet/HYG-5343>



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## References:

- Ohio State University Extension, *Food Preservation: Freezing Fruits*, <http://ohioline.osu.edu/factsheet/HYG-5349>
- Penn State Extension, *Let's Preserve Apples*, <http://extension.psu.edu/lets-preserve-apples>
- Michigan State University Extension, *Tips for Freezing Homemade Pie*, [https://www.canr.msu.edu/news/tips\\_for\\_freezing\\_homemade\\_pies](https://www.canr.msu.edu/news/tips_for_freezing_homemade_pies)
- University of Illinois Extension, *Apples and More Website*, <https://web.extension.illinois.edu/apples/facts.cfm>



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## Questions?

- Contact your local OSU Extension Office  
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*This material has been peer-reviewed for statewide distribution.*

Developed by **OSU Extension Food Preservation Team:**

- Lisa Barlage, Educator, Ross County
- Shari Gallup, Educator, Licking County
- Laura Halladay, Educator, Greene County
- Candace Heer, Educator, Morrow County
- Melinda Hill, Educator, Wayne County
- Amy Meehan, Healthy People Program Specialist
- Christine Kendle, Educator, Tuscarawas County
- Emily Marrison, Coshocton County
- Melissa Rupp, Fulton County
- Katharine Shumaker, Educator, Holmes County
- Treva Williams, Educator, Scioto County



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# CANNING BASICS

HYG-5338

Family and Consumer Sciences

Last Updated: 05/28/2015

Revised by: Linnette Goard, Field Specialist, Food Safety, Selection and Management, Family and Consumer Sciences

Original author: Ruth Anne Foote, Extension Agent, Home Economics, retired

Methods for canning foods at home have changed greatly since the procedure was first introduced almost two centuries ago. Since then, research has enabled home canners to simplify and safely preserve higher quality foods. Knowing why canning works and what causes food to spoil underscores the importance of following directions carefully.

## How Canning Preserves Foods

Invisible microorganisms are all around us. Many are beneficial; others are harmful. All foods contain microorganisms, the major cause of food spoilage. Proper canning techniques stop this spoilage by using heat to destroy microorganisms. During the canning process, air is driven from the jar and a vacuum is formed as the jar cools and seals, preventing microorganisms from entering and recontaminating the food.



It does not take long at 212°F, the temperature at which water boils, to force air out, create a vacuum and seal a jar. It does, however, take a specific amount of heat for a specific amount of time to kill certain bacteria. Although a jar is "sealed," all bacteria are not necessarily killed.

Adequate acid (as in pickled products and fruits) or sugar (as in jams and jellies) protects against the growth of some microorganisms. In low-acid foods, however, some microorganisms are not destroyed at 212°F. Low-acid foods, therefore, must be heated to higher temperatures that can be reached only with a pressure canner.

Low-acid foods such as vegetables, meat, poultry and fish must be pressure canned at the recommended time and temperature to destroy *Clostridium botulinum*, the bacterium that causes botulism food poisoning. Canning low-acid foods in a boiling water canner is absolutely unsafe because 212°F is not high enough to

destroy botulinum bacteria. If botulinum bacteria survive and grow inside a sealed jar, they can produce a deadly toxin. Even a taste of food containing this toxin can be fatal. Boiling food 10 minutes at altitudes below 1,000 feet should destroy the toxin. For altitudes above 1,000 feet, boil foods 11 minutes.

## Food Acidity

The acidity level, or pH, of foods determines whether they should be processed in a boiling water canner or pressure canner. The lower the pH, the more acidic the food.

Acidic foods have pH values below 4.6. These foods include pickles, most fruits, and jams and jellies made from fruit. (In pickling, the acid level is increased by adding lemon juice, citric acid or vinegar.) Acidic foods contain enough acidity either to stop the growth of botulinum bacteria or destroy the bacteria more rapidly when heated. Acidic foods may be safely canned in a boiling water canner.

Low-acid foods have pH values higher than 4.6. They do not contain enough acid to prevent the growth of botulinum bacteria. These foods are processed at temperatures of 240°F to 250°F, attainable with pressure canners operated at 10 to 15 pounds per square inch (psi) of pressure. The exact time depends on the kind of food being canned, the way it is packed in jars and the size of the jars. When you mix low-acid and high-acid foods, assume the mixture remains low-acid.

Although tomatoes used to be considered an acidic food, some are now known to have pH values slightly above 4.6, which mean they are low-acid. To safely can them as acidic foods in a boiling water canner, you must add lemon juice or citric acid.

## Adjust for Altitude to Ensure a Safe Product

When canning, you must know your altitude—even in Ohio. Do not use process times recommended for canning food at sea level if you live at an altitude above 1,000 feet. Water boils at lower temperatures as altitude increases. Lower boiling temperatures are less effective for killing bacteria. You must increase either the process time or canner pressure to make up for lower boiling temperatures. Use publications based on United States Department of Agriculture (USDA)-approved guidelines to select the proper processing time and canner pressures for your altitude.

## Using Boiling Water Canners

Most boiling water canners are made of aluminum or porcelain-covered steel. They have removable racks and fitted lids. The canner must be deep enough so that at least one inch of briskly boiling water will be over the tops of jars during processing. Some boiling water canners do not have flat bottoms. A flat bottom is more energy efficient on an electric range. A ridged bottom can be used more efficiently on a gas burner. To ensure uniform processing of all jars with an electric range, the canner should be no more than 4 inches wider in diameter than the element on which it is heated. If you have a ceramic or glass top range, check the manufacturer's instructions before you begin to can.



# Steps for Successful Boiling Water Canning

1. Fill the canner halfway with water.
2. Preheat the water to 140°F for raw-packed foods and to 180°F for hot-packed foods.
3. Load filled jars, fitted with lids, into the canner rack and use the handles to lower the rack into the water, or fill the canner, one jar at a time, with a jar lifter.
4. Add more hot water, if needed, so the water level is at least 1 inch above jar tops. Cover with the canner lid.
5. Turn heat to its highest position until the water boils vigorously.
6. Set a timer for the minutes required for processing the food.
7. Lower the heat setting to maintain a gentle boil throughout the process schedule.
8. Add more boiling water, if needed, to keep the water level above the jars.
9. When jars have been processed for the recommended time, turn off the heat and remove the canner lid.
10. Using a jar lifter, remove the jars and place them on a towel, leaving at least 1 inch of space between the jars during cooling.

## Using Pressure Canners

Newer models of pressure canners have been extensively redesigned. Those made before the 1970s were heavy-walled kettles with clamp-on or turn-on lids. They were fitted with a dial gauge, a vent port in the form of a petcock or counter-weight and a safety fuse. Modern pressure canners are lightweight, thin-walled kettles; most have turn-on lids. They have a removable jar rack, gasket, dial or weighted gauge, automatic vent/cover lock, vent port (steam vent) to be closed with a counter weight or weighted gauge, and safety fuse. A pressure canner must be used for all low-acid foods.

Two serious canning errors can occur when pressure processing:

- Internal canner pressures are lower at higher altitudes. Canners must be operated at increased pressures as the altitude increases.
- Air trapped in a canner lowers the temperature obtained at 5, 10 or 15 psi and results in under-processing. To be safe, vent all pressure canners 10 minutes before they are pressurized.

Dial gauges should be checked for accuracy each year before use. Check with your local OSU Extension office for information on this service. If your gauge reads high or low by more than 2 pounds at 5, 10 or 15 psi, replace it or have it repaired.

Clean lid gaskets and other parts according to the manufacturer's directions. Use only canners approved by the Underwriter's Laboratory (UL).



## Steps for Successful Pressure Canning

1. Put 2 to 3 inches of hot water in the canner. Place filled jars on the rack, using a jar lifter. Fasten canner lid securely.
2. Leave weight off vent port or open petcock. Heat at the highest setting until steam flows from the petcock or vent port.
3. While maintaining the high heat setting, vent the canner by allowing steam to escape for 10 minutes, and then place weight on vent port or close petcock. The canner will pressurize during the next 3 to 5 minutes.
4. Start timing the process when the pressure reading on the dial gauge indicates that the recommended pressure has been reached, or when the weighted gauge begins to jiggle or rock.
5. Regulate heat under the canner to maintain a steady pressure at, or slightly above, the correct gauge pressure. Quick or large pressure variations during processing may cause unnecessary liquid losses from jars. One type of weighted gauge should jiggle 2 or 3 times per minute, while another type should rock slowly throughout the process. Check the manufacturer's directions.
6. When the timed process is completed, turn off the heat, remove the canner from heat if possible and let the canner depressurize. Do not force-cool the canner. Forced cooling will cause liquid loss from the jars and may result in food spoilage. Forced cooling may warp the canner lid and cause seal failure. Depressurization of older canner models should be timed. Standard size, heavy-walled canners require about 30 minutes when loaded with pints, and 45 minutes when loaded with quarts. Newer thin-walled canners cool more rapidly and are equipped with vent/cover locks. These canners are depressurized when their vent lock piston drops to a normal position.
7. After the canner is depressurized, remove the weight from the vent port or open the petcock. Wait 2 minutes, unfasten the lid and remove it carefully. Lift the lid away from you so that the steam does not burn your face.
8. Remove jars with a lifter and place on towel away from drafts, leaving at least 1 inch between jars during cooling.

## Stay Clear of Unsafe Canning Methods

Never open-kettle can or process jars of food in conventional ovens, microwave ovens or dishwashers. These practices do not prevent all risks of spoilage.

Steam canners and electric water bath canners are not recommended because safe processing times have not been adequately researched. Using boiling water canner processing times with either of these canners may result in spoilage. So-called "canning powders" are useless as preservatives and do not replace the need for proper heat processing.

## Lids

The common self-sealing lid consists of a flat metal lid held in place by a metal screw band, which secures the jar shut during processing. The flat lid is crimped around the circumference of its bottom surface to form a trough, which is filled with a colored gasket compound. When jars are processed, the lid gasket softens and flows slightly to cover the jar-sealing surface, yet allows air to escape from the jar. The gasket then forms an airtight seal as the jar cools. The shelf life of unused lids is about 5 years from date of manufacture. The gasket compound in older unused lids may fail to seal on jars. Buy only the quantity of lids you will use in one year.

To ensure a good seal, carefully follow the manufacturer's directions in preparing lids for use. Examine all metal lids carefully. Do not use old, previously used, dented or deformed lids or lids with gaps or other defects



in the sealing gasket.

## Filling and Processing

After filling jars with foods, release air bubbles by inserting a flat plastic spatula between the food and the jar. Slowly turn the jar, and move the spatula up and down to allow air bubbles to escape. Adjust the headspace, and clean the jar rim (sealing surface) with a clean, damp cloth or paper towel.

Place the lid, gasket down, onto the cleaned jar rim. Uncleaned jar-sealing surfaces may cause seal failures. Then fit the metal screw band over the flat lid. Tighten the lid fingertip tight. Do not use force or a jar tightener.

As jars cool, the contents in the jar contract, pulling the self-sealing lid firmly against the jar to form a vacuum. If screw bands are too loose, liquid may escape from the jars during processing, and seals may fail. If screw bands are too tight, air cannot vent during processing, and food will discolor during storage. Overtightening also may cause lids to buckle and jars to break, especially with raw-packed, pressure-processed food.

## After Processing

After removing hot jars from a canner, do not retighten their lids. Retightening hot lids may cut through the gasket and cause seal failures. Cool the jars at room temperature for 12 to 24 hours on towels or racks. The food level and liquid volume of raw-packed jars will be noticeably lower after cooling. Air is exhausted during processing, and food shrinks. If a jar loses excessive liquid during processing, do not open it to add more liquid.

After jars have cooled, remove screw bands. Wash and dry bands, then store them in a dry area. If bands are left on stored jars, they become hard to remove and often rust, making them unsuitable for further use.

Seals on cooled jars can be tested by one of these methods:

- Press the middle of the lid. If it springs up when released, the lid is not sealed.
- Tap the lid with the bottom of a teaspoon. If the jar is sealed correctly, it will make a ringing, high-pitched sound. A dull sound means the lid is not sealed. Food touching the underside of the lid, however, also will cause a dull sound. Test seal by another method to make sure it is sealed.
- Hold the jar at eye level and look across the lid. The lid should be concave (curved down slightly in the center). If the center of the lid is either flat or bulging, it may not be sealed.

## Unsealed Jars: What to Do

If a lid fails to seal, you must reprocess within 24 hours. Remove the lid, and check the jar-sealing surface for tiny nicks. If necessary, change the jar. Always use a new, properly prepared lid, and reprocess using the same processing time. The quality of reprocessed food is poor.

Instead of reprocessing, unsealed jars of food also can be frozen. Transfer food to a freezer-safe container and freeze. Single, unsealed jars can be refrigerated and used within several days.

## Storing Canned Foods

Tightly sealed, cooled jars are ready to be stored. Wash the lid and jar to remove food residue; rinse and dry jars. Label and date jars, and store them in a cool, dark, dry place (50°F to 70°F is ideal). Do not store jars above 95°F or near hot pipes, a range, a furnace, in an uninsulated attic or in direct sunlight. Under conditions such as these, food will lose quality rapidly and may spoil. Dampness may corrode metal lids, break seals and allow contamination and spoilage. Plan to use home-canned food within one year for optimum quality and nutritional value.

## How to Identify and Handle Spoiled Canned Food

Never taste food from a jar with an unsealed lid or food that shows signs of spoilage. As you use jars of food, examine the lid for tightness and vacuum; lids with concave centers have good seals.

Before opening the jar, examine the contents for rising gas bubbles and unnatural color. While opening the jar, smell for unnatural odors and look for spurting liquid and mold growth (white, blue or green) on the top food surface and underside of lid.

Spoiled acidic food should be discarded in a place where it will not be eaten by humans or pets.

Treat all jars and cans of spoiled low-acid foods, including tomatoes, as though they contain botulinum toxin and handle in one of two ways:

- If the suspect glass jars are still sealed, place them in a heavy garbage bag. Close the bag, and place it in a regular trash container or bury it in a landfill.
- If the suspect glass jars are unsealed, open or leaking, detoxify (destroy the bacteria) as follows before disposal: Carefully place the containers and lids on their sides in an 8-quart or larger pan. Wash your hands thoroughly. Carefully add water to the pan until it is at least one inch above the containers. Avoid splashing the water. Place a lid on the pan, and heat the water to boiling. Boil 30 minutes to ensure that you have destroyed all toxins. Cool and discard the lids and food in the trash, or bury in soil. Sanitize all counters, containers and equipment that may have touched the food or containers; don't forget the can opener, your clothing and hands. Place any sponges or washcloths used in the cleanup in a plastic bag and discard.

## Recommended Resources for Canning

Andress, E., and J. Harrison. So Easy to Preserve. 6th ed. Athens: Cooperative Extension Service, the University of Georgia, College of Family and Consumer Sciences, College of Agricultural and Environmental Sciences, 2014.

The University of Georgia, College of Family and Consumer Sciences. "National Center for Home Food Preservation." [nchfp.uga.edu/index.html](http://nchfp.uga.edu/index.html).

United States Department of Agriculture. Complete Guide to Home Canning, Agriculture Information Bulletin No. 539. 2009.

## References

Andress, E., and J. Harrison. So Easy to Preserve. 6th ed. Athens: University of Georgia Cooperative Extension Service, 2014.

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# BASICS FOR CANNING FRUIT

HYG-5343

Family and Consumer Sciences

Last Updated: 05/28/2015

Revised by: Christine Kendle and Katharine Shumaker, Extension Educators, Family and Consumer Sciences

Fruits can be canned with the boiling water bath method because they contain high enough acid levels to prevent the growth of *Clostridium botulinum* spores and the production of botulism toxin. Additionally, when fruits are properly canned, they are heated long enough at high enough temperatures to destroy spoilage-causing microorganisms.

## Equipment

A water bath canner can be any large metal container with a fitted lid deep enough to fit a rack on the bottom, the jars, 1 to 2 inches of water above the jars, and 2 to 4 inches of space to allow for boiling.



A pressure canner also may be used in place of a water bath canner if it is deep enough. Place the lid, but do not fasten it. Leave the petcock and/or vent open so steam can escape and pressure does not build up during heating. As with a water bath canner, the jars need to be covered with 1 to 2 inches of water during processing, and space for boiling should be considered.

Use standard canning jars and lids. Commercial food jars, such as mayonnaise and coffee jars, are not recommended because they might not properly seal and are more likely to break than standard canning jars. Check jars, ringbands and lids for defects. Look for chips, cracks, dents, rust and anything else that will prevent airtight seals. Wash jars in hot soapy water and rinse well.

Prepare two-piece metal lids according to manufacturer's directions. Ringbands may be reused if they are not rusted, dented or damaged; lids may be used only once.

## Preparing the Produce

Choose fresh, firm fruits for canning. Wash all fruit thoroughly regardless of whether or not it will be pared. Do not soak; soaking might cause the fruit to lose flavor and nutrients. Handle gently to avoid bruising.

## Preventing Darkening

Some fruits darken when peeled or cut and then exposed to air. Choose one of these treatments to retard this natural occurrence while preparing fruit for canning:

- Use a commercial ascorbic acid mixture—available in grocery and drug stores—prepared according to package instructions.
- Drop fruit in a solution of 1 teaspoon or 3,000 milligrams ascorbic acid (vitamin C) and 1 gallon water. Vitamin C tablets also may be used. Drain fruit before proceeding.
- Drop fruit into a citric acid or lemon juice solution (1 teaspoon food-grade citric acid or  $\frac{3}{4}$  cup lemon juice to 1 gallon water). Drain fruit before proceeding.

## Sweetening Options

Sugar helps canned fruit hold its shape, color and flavor, but it is not needed to prevent spoilage. Fruits also can be packed in hot water or juice. Processing is the same for unsweetened and sweetened fruit. Any of the following may be used to provide sweetness.

### Sugar Syrup

Mix sugar with water and heat until the sugar dissolves; skim if necessary. Use proportions for the sweetness you desire. The table below may be used as a guide and makes enough syrup for a 9-pint canner load.

Water	Sugar	Type Syrup
6½ cups	$\frac{3}{4}$ cup	Very Light (10 percent sugar)
5¾ cups	1½ cups	Light (20 percent sugar)
5¼ cups	2¼ cups	Medium (30 percent sugar)
5 cups	3¼ cups	Heavy (40 percent sugar)

### Juice

Unsweetened apple juice, pineapple juice or white grape juice may be good options, depending upon the type of fruit being processed. These juices can be added either diluted or undiluted, based upon personal preference. Juice can also be extracted from the fruit itself. To extract juice, thoroughly crush ripe, sound, juicy fruit. Heat to simmering (185°F to 210°F) over low heat. Strain through a jelly bag or cheese cloth.

### Sugar Mixed Directly With Fruit

Add  $\frac{1}{4}$  to  $\frac{1}{2}$  cup sugar to each quart of prepared fruit. Bring to a simmer over low heat. Pack fruit while it's hot in the hot juice that cooks out.

### Sweeteners Other Than Sugar



Light corn syrup, light brown sugar or mild-flavored honey can replace as much as half of the sugar used in canning fruit. It is best not to use molasses, sorghum or other strong-flavored syrups; their flavors overpower the fruit flavor and might darken the fruit.

## Artificial Sweeteners

Some artificial sweeteners can be added to liquids before canning. Other sweeteners should be added to fruit canned in plain water just before serving. Saccharin-based sweeteners can turn bitter during processing. Aspartame-based sweeteners lose their sweetening power during processing. Check labels for equivalents to the amount of sweet flavor desired.

## Canning Juice

### Grape Juice

Choose fruit of good quality for eating fresh and cooking. Sweet, well-colored, firm, mature fruit work well. An average of 24.5 pounds will produce 7 quarts; 16 pounds will produce 9 pints. Follow directions for preparation of juice as outlined in the table at the end of this fact sheet.



### Apple Juice

Good quality apple juice is made from a blend of varieties. For best results, purchase fresh juice from a local cider-maker within 24 hours after it has been pressed. Follow directions for preparation of juice as outlined in the table at the end of this fact sheet.



## Filling Jars

### Raw Pack Method

Place raw prepared fruit into jars and cover with hot syrup, juice or water. Pack tightly because raw fruit shrinks during processing. Raw packed fruit is more likely to float. Check the table at the end of this fact sheet for the correct amount of headspace to leave between the top of the fruit and the jar lid.

### Hot Pack Method

Heat fruit in syrup, water, extracted juice or steam before placing it in jars. Pack loosely and cover with desired hot liquid. Check the table at the end of this fact sheet for the correct amount of headspace to leave between the top of the fruit and the jar lid.

## Sealing Jars

Remove trapped air bubbles by sliding a nonmetallic spatula around the inside of the jar walls. If needed, add more liquid. Wipe the jar rim with a clean, dampened paper towel to remove any food particles. Place prepared lids on jars and metal ringbands. Screw metal bands down, fingertip tight. Avoid overtightening.

## Preparing the Canner

Fill canner halfway full with water. To prevent jar breakage, preheat the water to 140°F for raw packed fruits or to 180°F for hot packed fruits. Place closed jars in canner and add boiling water as needed to bring water 1 to 2 inches over the jar tops. Cover the canner with the lid and turn burner to highest heat setting. Bring the water to a vigorous boil. Lower the heat setting to maintain a gentle boil, and start timing. See the table at the end of this fact sheet for specific processing times. Add boiling water as needed during the processing. When processing is complete, turn off heat and let stand for 5 minutes. Remove canner lid and use a jar lifter to remove jars. Then place them on a rack, dry towel or newspaper. Avoid placing jars on a cool surface as this might cause them to break. Do not tighten ringbands or touch the lids until jars have cooled. Allow the jars to cool, undisturbed, away from drafts for 12 to 24 hours.

## Checking Seals and Storage

Listen for the familiar "ping" and look for the slight depression in the lid's center to know that it has properly sealed. Remove the ringbands, wipe jars with a damp cloth, and add labels. Store in a cool, dry, dark place.

## Signs of Spoilage

If a jar does not seem completely normal before or after opening, do not use. This includes leaking jars, bulging lids and jars that spurt when opened. If the food looks spoiled, foams or has an off odor during preparation, discard it.

## References

Andress, E., and J. Harrison. So Easy to Preserve. 6th ed. Athens: University of Georgia Cooperative Extension Service, 2014.

United States Department of Agriculture. Complete Guide to Home Canning, Agriculture Information Bulletin No. 539. 2009.

Canning Directions for Preparing and Processing Fruit Using a Boiling Water Bath					
Fruit	Style of Pack	Jar Size	Minutes of Processing Time at Altitudes of...		Preparation
			0–1,000 ft	1,001–3,000 ft	
Apples (sliced)	Hot	Pints or Quarts	20	25	Prepare syrup if desired. Pare, core, and slice apples. Use anti-darkening treatment. Drain. Boil apples 5 minutes in 1 pint syrup, juice or water per 5 pounds apples; stir occasionally. Fill jars with hot slices and hot liquid; leave one-half inch headspace.
		Pints or Quarts	5	10	Refrigerate fresh (purchased) juice for 24–48 hours. Without mixing, carefully pour off clear liquid and discard sediment. Strain clear

Apple Juice	Hot				liquid through a paper coffee filter or through double layers of damp cheesecloth. Heat quickly, stirring occasionally, until juice begins to boil. Fill immediately into sterile pint or quart jars, or fill into clean, hot half-gallon jars, leaving one-fourth inch headspace.
		Half-Gallon	10	15	
Applesauce	Hot	Pints	15	20	Prepare applesauce (sweetened or unsweetened). Heat to simmering. Pack hot applesauce into jars; leave one-half inch headspace.
		Quarts	20	25	
Apricots (halved or sliced)	Hot	Pints	20	25	Prepare same as peaches, but leave the skins on if you like.
		Quarts	25	30	
Berries, whole (blueberries, blackberries, currants, dewberries, elderberries, gooseberries, huckleberries, logan berries, mulberries, strawberries, raspberries)	Raw	Pints	15	20	Wash berries in cold or ice water to firm fruit. Use scissors to snip off “heads and tails” of gooseberries. Drain. Prepare and boil syrup, if desired. Add ½ cup syrup, juice or water to each jar. Pack berries into jars; leave one-half inch headspace. Shake jars while filling to get a full pack. Fill jars to one-half inch from top with boiling syrup or water.
		Quarts	20	25	
	Hot	Pints or Quarts	15	20	(Best for firm berries that hold their shape well.) Wash and drain berries. Use scissors to snip off “heads and tails” of gooseberries. Prepare and boil syrup, if desired. Add ½ cup syrup, juice or water to each jar. In a saucepan, cover berries with water and heat to boiling for 30 seconds. Drain. Pack hot fruit in jars and cover with boiling liquid; leave one-half inch headspace.
Cherries, whole (sweet or sour)	Raw	Pints or Quarts	25	30	Wash and drain cherries; remove pits if desired. Add ½ cup hot water, juice or syrup to each jar. Pack fruit in jars and cover with hot liquid; leave one-half inch headspace.
					Wash and drain cherries; remove

	Hot	Pints	15	20	pits if desired. In large saucepan add ½ cup water, juice or syrup for each quart of drained fruit and bring to a boil. Fill jars with cherries and cover with cooking liquid. Leave one-half inch headspace.
		Quarts	20	25	
Fruit purees (except figs, melons, papayas, ripe mangos, coconuts, tomatoes)	Hot	Pints or Quarts	15	20	Use sound, ripe fruit. Wash. Remove pits, if necessary. Cut large fruit in pieces. Measure fruit into large saucepan. Add 1 cup hot water for each quart of fruit. Simmer until soft, stirring frequently. Press through a strainer or food mill. Add sugar to taste, if desired. Reheat to simmering. Pack hot into jars, leaving one-fourth inch headspace.
Grape Juice	Hot	Pints or Quarts	5	10	Wash and stem grapes; place in saucepan and add boiling water to cover grapes. Simmer slowly until skin is soft. Strain through damp jelly bag. Refrigerate juice for 1–2 days. Carefully pour off clear liquid and save; discard sediment. Add juice to saucepan and sweeten to taste. Heat and stir until sugar dissolves and juice begins to boil. Fill immediately into sterile pint, quart or half-gallon jars, leaving one-fourth inch headspace.
		Half-Gallon	10	15	
Grapes, whole	Raw	Pints	15	20	Wash, drain and remove stems from grapes. Pack grapes into jars and cover with boiling water, syrup or juice; leave one inch of headspace.
		Quarts	20	25	
Grapefruit and Orange Sections	Raw	Pints or Quarts	10	15	Wash and peel fruit; remove white tissue to prevent a bitter taste. Fill jars with sections and cover with hot syrup, citrus juice or boiling water; leave one-half inch headspace.
		Pints	25	30	Wash fruit. Submerge in boiling water 30–60 seconds to loosen skins. Dip in cold water and peel. Cut in half, remove pits. Slice, if

Peaches or Nectarines	Raw				desired. Use an anti-darkening treatment. Drain. Pack drained fruit into jars, then cover with boiling syrup, juice or water; leave one-half inch headspace.
		Quarts	30	35	
	Hot	Pints	20	25	Wash fruit. Submerge in boiling water 30–60 seconds to loosen skins. Dip in cold water and peel. Cut in half, remove pits. Slice, if desired. Use an anti-darkening treatment. Drain. Heat drained fruit in hot syrup or water. Pack hot fruit in jars and cover with boiling syrup, juice or water; leave one-half inch headspace.
		Quarts	25	30	
Pears	Hot	Pints	20	25	Wash pears. Peel, cut in halves or quarters, and core. Use an anti-darkening treatment. Drain. Boil drained pears for 5 minutes in syrup, juice or water. Pack hot fruit in jars and cover with boiling syrup, juice or water; leave one-half inch headspace.
		Quarts	25	30	
Pineapple	Hot	Pints	15	20	Select firm, ripe pineapples. Wash and peel, removing eyes and tough fibers of core. Slice or cube. In large saucepan, add pineapple to hot syrup, water or juice; simmer 10 minutes. Fill jars with hot pieces and cover with cooking liquid; leave one-half inch headspace.
		Quarts	20	25	
Plums (halved or whole)	Raw	Quarts	25	30	Wash and stem. To can whole plums, prick skins. Freestone varieties may be halved and pitted. Pack fruit into jars and cover with boiling syrup, juice or water; leave one-half inch headspace.
	Hot	Pints	20	25	Wash and stem. To can whole plums, prick skins. Freestone varieties may be halved and pitted. Add plums to hot syrup, juice or water and boil 2 minutes. Cover saucepan and let stand 20–30 minutes. Fill jars with hot plums and cover with cooking liquid; leave
		Quarts	25	30	



					one-half inch headspace.
Rhubarb, stewed	Hot	Pints or Quarts	15	20	Wash rhubarb and cut into one-half inch pieces. Place pieces in saucepan. Add ½ cup sugar to each quart rhubarb and let stand to draw out juice. Bring to a boil. Pack hot into jars and cover with hot cooking liquid; leave one-half inch headspace.

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# FREEZING FRUITS

HYG-5349

Family and Consumer Sciences

Last Updated: 05/28/2015

Revised by: Bridgette Kidd, MPH, RD, former Healthy People Program Specialist, Family and Consumer Sciences

Freezing fruits is the simplest, easiest and quickest method of preservation. Freezing costs more than canning or drying because of freezer purchase and operating costs, but it preserves more nutrients and fresh flavor, if done properly. Freezing does not completely destroy bacteria, molds and yeasts that cause food spoilage, but it does significantly retard their growth. As soon as food is thawed, microorganisms will continue to grow. Freezing also slows chemical changes that affect quality. Natural enzymes in fruits cause flavor, color, texture and nutritive value changes. Freezing slows enzyme activity but does not stop it. You can prevent enzyme-browning in light-colored fruits by treating them with ascorbic acid and other commercial products.

## Selecting and Washing Fruits

Fully ripe fresh fruits lose quality rapidly after harvesting. Harvest only the amount you can preserve within a few hours; otherwise, refrigerate, then freeze as soon as possible. Choose fully ripe but firm fruit. Under-ripe fruits may be bitter. Freeze soft, very ripe fruits as purées. To thoroughly remove dirt, bacteria and pesticide residue, wash all fruits in cold water. Drain and rinse several times with cold water. Lift fruits from water to prevent redepositing of dirt and residues. Do not let fruits soak.



## Packaging Materials

Air leads to flavor loss or off-flavors. If moisture evaporates, frozen food becomes dry, tough and might develop grayish spots called "freezer burn." To prevent air exposure and moisture loss, use only moisture-proof, vapor-proof packaging designed for freezing. Examples are "can or freeze" glass jars, plastic freezer containers, heavyweight aluminum foil, plastic-coated freezer paper, and heavy duty plastic wraps and bags. Only sealing tape designated for freezer use will adhere at freezing temperatures.

Rigid freezer containers are often reusable and have straight sides and flat lids to allow for easy stacking in the freezer. The straight sides also make it easier to remove frozen food. Place freezer bags in rigid

containers for easy stacking.

Do not use cardboard cartons; they are not sufficiently moisture-resistant and vapor-resistant for long-term frozen food storage. Also, do not reuse plastic containers from cottage cheese, ice cream, whipped topping, margarine, etc. These containers are not designed to protect foods in long-term freezer storage. Pack fruit and syrup tightly in freezer bags or rigid containers. Squeeze air from bags before sealing. Leave ½ to 1 inch of headspace for expansion in rigid containers. Whole berries and cut fruit pieces may be frozen in a single layer on a tray until solid; package at once in freezer bags or freezer containers. Label and date product and return it to freezer.

## Freezing

Because water in fruits expands during freezing and breaks cell walls, thawed fruits might leak juices and be soft. To retain quality, freeze fruits quickly at lowest possible freezer setting. Freeze only 2 to 3 pounds of food per cubic foot of available storage space in 24 hours.

## Storing

Maintain freezer at 0°F or less to best protect the quality of foods, including fruits. If power fails, keep freezer closed; food should stay frozen 24 to 48 hours. If available, protect food with 25 pounds of dry ice per 10 cubic feet of freezer space. Food can safely be refrozen if it still contains ice crystals. Some loss of quality and food value will occur. Keep an inventory, and use oldest foods first. The more food you put into your freezer in a year, the less the operating cost per pound. Use frozen fruits within one year. Citrus fruit and juices should be used within 6 months.

## Thawing

Defrost fruit in its original package in one of the following ways: (1) at room temperature in a pan of cool water—use only the thawing-in-water method if water can be kept cool (under 70°F) and the food can thaw in less than 2 hours; (2) in a microwave oven (only if fruit is to be used right away); or (3) in the refrigerator.

Allow 6 to 8 hours in the refrigerator for thawing a 1-pound package of fruit packed in syrup, or thaw slightly longer for unsweetened fruit. Allow one-half to 1 hour for fruit thawing in running, cool water. Serve fruit with a few ice crystals still remaining. Completely thawed fruits will be limp or mushy and may discolor.

## Directions for Freezing Fruit

1. Wash and sort fruit. Discard poor-quality pieces. Work with small quantities. Pare and remove pits, seeds and blemishes. Leave whole, slice or purée (see Table 2 or directions for individual fruits).
2. Treat washed and sorted fruit with ascorbic acid (available at drugstores, 1 teaspoon = 3 grams) or some other treatment to prevent discoloration, particularly with apples, peaches and nectarines. Add crystalline ascorbic acid to chilled syrup just before using, or follow manufacturer's directions if using other anti-darkening products.
3. Pack with sugar or syrup, or leave unsweetened (dry). Unsweetened fruits lose quality faster than sweetened fruits. Sugar helps fruit retain its flavor, color and texture, but it is not necessary to preserve fruit safely. Artificial sweetener can also be added to fruit prior to freezing. Artificial sweeteners give a sweet flavor but do not furnish the beneficial effects of sugar.

# Types of Pack

The type of pack used will depend on the intended use. Fruits packed in syrup are generally best for uncooked dessert use; those packed in dry sugar or left unsweetened are best for most cooking purposes because there is less liquid in the product.



## Sugar Pack

Sprinkle sugar over the fruit and mix gently. Allow to stand for 10 to 15 minutes to draw out juice—which will dissolve sugar—or freeze immediately.

## Syrup Pack

Dissolve sugar in lukewarm water until the solution is clear. Cool, then add ascorbic acid and just enough syrup to cover fruit (about ½ to ⅔ cup per pint). To keep fruit under syrup, place a small, crumpled piece of plastic or freezer wrap on top and press fruit down into syrup before sealing the container. One-fourth of the sugar may be replaced by light corn syrup or mild-flavored honey.

## Dry Pack

Pack fruit in container, seal and freeze. Good for small, whole fruits that taste good without sugar.

## Tray Pack

Spread a single layer of fruit on shallow trays and freeze. When frozen, package promptly and return to freezer. This pack allows portions to be used when needed.

## Other Unsweetened Packs

Unsweetened fruit may also be packed in water, unsweetened juice or pectin syrup. Pectin syrup is often used for fruits such as strawberries or peaches that retain their texture better than if frozen in water or juice. (To make pectin syrup, dissolve one package powdered pectin in 1 cup water, heat to boiling and boil for 1 minute. Add 1¾ cup water and cool.) To keep the fruit under liquid, follow directions for syrup pack.

## Artificial Sweeteners

Sugar substitutes can be used in any of the unsweetened or dry packs, or they can be added to the fruits before serving. However, sugar substitutes do not offer the beneficial effects of sugar.

Table 1. Syrups for Use in Freezing				
Type of Syrup	Percent Syrup*	Cups of Sugar**	Cups of Water	Yield of Syrup in Cups
Very light	10	½	4	4½
Light	20	1	4	4¾
Medium	30	1¾	4	5
Heavy	40	2¾	4	5½

Very heavy	50	4	4	6
*Approximate				
**In general, up to one-fourth of the sugar may be replaced by corn syrup or mild-flavored honey. A large proportion of corn syrup may be used if a very bland, light-colored type is selected.				

Table 2. How To Prepare Fruits for Freezing	
Fruits	Preparation
Apples	Wash, peel, core and slice.
	Syrup pack: Use cold 40 percent syrup; add ½ teaspoon (1,500 mg) ascorbic acid per quart of syrup. Slice apples into syrup in container, seal and freeze.
	Sugar pack: To prevent darkening, dissolve ½ teaspoon (1,500 mg) ascorbic acid in 3 tablespoons water. Sprinkle over fruit or steam blanch 1½ to 2 minutes. Mix ½ cup sugar to 4 cups fruit. Pack, seal and freeze.
	Dry or tray pack: Treat with ½ teaspoon (1,500 mg) ascorbic acid in 3 tablespoons water to prevent browning.
Applesauce	Wash, peel if desired, core and slice. Add ⅓ cup water to each quart of slices. Cook until tender. Cool and strain. Sweeten to taste with ¼ to ¾ cup sugar per quart of sauce. Pack into containers.
Apricots	Wash, halve and pit. Peel and slice if desired. If not peeled, heat in boiling water ½ minute to keep skins from toughening during freezing. Cool in cold water and drain.
	Syrup pack: Use cold 40 percent syrup and add ¾ teaspoon (2,250 mg) ascorbic acid per quart of syrup. Seal and freeze.
	Sugar pack: Pretreat fruit by dissolving ¼ teaspoon (750 mg) ascorbic acid in 3 tablespoons cold water; sprinkle over 4 cups fruit. Mix ½ cup sugar per quart of fruit and stir until dissolved. Pack, seal and freeze.
Avocados	Peel, cut in half, remove pit and purée. Add ¼ teaspoon ascorbic acid to each quart of purée, or add 1 tablespoon lemon juice for each 2 avocados. Pack, seal and freeze.
Bananas	Peel and mash thoroughly. Add ½ teaspoon (1,500 mg) ascorbic acid per cup of mashed banana. Pack, seal and freeze.
Blackberries	Wash carefully in cold water, discarding soft, under-ripe or defective fruit. Drain well.
	Syrup pack: Pack berries into containers and cover with cold 40 to 50 percent syrup. Seal and freeze.
	Sugar pack: Gently mix ¾ cup sugar with 1 quart (4 cups) berries. Pack, seal and freeze.
	Dry pack: Pack, seal and freeze berries. Or, freeze first on a tray and then pack into containers, seal and return to freezer.
Blueberries	Dry pack: Do not wash (washing results in a tougher-skinned product). Pack berries into container or freeze on a tray, then package. Wash before using while berries are still frozen.



	Sugar pack: Wash first, then mix $\frac{2}{3}$ cup sugar to 4 cups berries. Pack, seal and freeze.
Cherries, red sour	Wash, stem and pit.
	Syrup pack: Use cold 50 percent syrup. Pack, seal and freeze.
	Sugar pack: Mix $\frac{3}{4}$ cup sugar to 4 cups cherries, then pack, seal and freeze.
	Dry pack: Pack, seal and freeze. Or, freeze first on a tray and then pack into containers, seal and return to freezer.
Cherries, sweet	Wash, stem and pit.
	Syrup pack: Use cold 30 to 40 percent syrup with $\frac{1}{2}$ teaspoon ascorbic acid per quart syrup. Pack, seal and freeze.
	Dry pack: Pack, seal and freeze. Or, freeze first on a tray and then pack into containers, seal and return to freezer.
Cranberries	Stem and sort. Wash and drain.
	Syrup pack: Use cold 50 percent syrup.
	Dry pack: Pack, seal and freeze. Or, freeze first on a tray, then pack into containers, seal and return to freezer.
Grapes	Sort, stem and wash. Leave seedless grapes whole; cut grapes with seeds in half and remove seeds.
	Syrup pack: Cover with 40 percent cold syrup, seal and freeze.
	Juice: Crush grapes. Add 1 cup water per gallon of grapes. Simmer for 10 minutes, then strain through a jelly bag. Let set overnight in refrigerator to remove tartrate crystals. Pour off clear juice for freezing and discard sediment. Pack, seal and freeze.
Mangoes	Wash, peel and slice.
	Syrup pack: Use 30 percent syrup. Pack, seal and freeze.
	Dry pack: Tray freeze, then pack into containers, seal and return to freezer.
	Purée: Mash slices thoroughly or chop in a food processor. Pack, seal and freeze.
Melons (cantaloupe, honeydew or watermelon)	Scrub melon, peel and remove seeds. Then, cut melons into slices, cubes or balls.
	Syrup pack: Put in containers and add cold 30 percent syrup. Seal and freeze.
	Dry pack: Pack into containers, seal and freeze.
Peaches, nectarines	Sort, wash and peel.
	Syrup pack: Use cold 40 percent syrup and add $\frac{1}{2}$ teaspoon (1,500 mg) ascorbic acid per quart (4 cups) of syrup. Slice peaches directly into cold syrup in containers, press fruit down and add syrup to cover.
	Sugar pack: To retard darkening, sprinkle ascorbic acid solution ( $\frac{1}{4}$ teaspoon in 3 tablespoons cold water) on each quart fruit. Mix $\frac{2}{3}$ cup sugar to 4 cups fruit. Pack, seal and freeze.
Pineapple	Pare and remove core. Slice, dice crush or cut the pineapple into wedges or sticks.

	Dry pack: Pack, seal and freeze.
Plums, prunes	Wash, halve or quarter and pit.
	Syrup pack: Cover with cold 40 to 50 percent syrup. To improve quality, add ½ teaspoon (1,500 mg) ascorbic acid to each quart syrup. Seal and freeze.
Raspberries	Sort, wash, and drain well.
	Syrup pack: Pack berries in containers and cover with cold 40 percent syrup. Seal and freeze.
	Sugar pack: To 1 quart berries, add ¾ cup sugar and mix carefully to avoid crushing. Pack, seal and freeze.
	Dry pack: Pack, seal and freeze berries. Or, freeze first on a tray and then pack into containers, seal and return to freezer.
Rhubarb	Wash, trim and cut into 1-inch lengths. Heating rhubarb in boiling water 1 minute, then cooling promptly in cool water helps retain color and flavor.
	Syrup pack: Pack into containers and cover with cold 40 percent syrup, seal and freeze.
	Dry pack: Pack tightly into containers without sugar. Seal and freeze.
Strawberries	Wash and remove caps.
	Syrup pack: Cover berries in container with a cold 50 percent syrup. Seal and freeze.
	Sugar pack: Mix ¾ cup sugar to 4 cups berries, stir and let stand 15 minutes. Pack, seal and freeze.
	Dry pack: Pack, seal and freeze berries. Or, freeze first on a tray and then pack into containers, seal and return to freezer.

## References

Andress, E., and J. Harrison. So Easy to Preserve. 6th ed. Athens: University of Georgia Cooperative Extension Service, 2014.

Kuhn, G. D., and A. V. A. Resurricion. How to Freeze Food the Right Way. Pennsylvania State University Cooperative Extension Service.

Michigan State University Cooperative Extension Service. Preserving Food Safely. Version 3.0. Home Economics Library Program.

National Center for Home Food Preservation. "How Do I? ... Freeze." [nchfp.uga.edu/how/freeze.html](http://nchfp.uga.edu/how/freeze.html).

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Previously revised by: Deb Angell, Extension Educator, Family and Consumer Sciences, retired

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Roger Rennekamp, Associate Dean and Director, Ohio State University Extension

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# DRYING FRUITS AND VEGETABLES

HYG-5347

Family and Consumer Sciences

Last Updated: 05/28/2015

Revised by: Melinda Hill, Extension Educator, Family and Consumer Sciences

Original author: Dorris Herringshaw, Extension Educator, Family and Consumer Sciences, retired

Drying is the oldest method of preserving food. Throughout history, the sun, the wind and a smoky fire were used to remove water from fruits, meats, grains and herbs. By definition, food dehydration is the process of removing water from food by circulating hot air through it, which prohibits the growth of enzymes and bacteria.

## Nutritional Benefits of Dried Food

Dried foods are tasty, nutritious, lightweight, easy to prepare and easy to store and use. The energy input is less than what is needed to freeze or can, and the storage space is minimal compared with that needed for canning jars and freezer containers.

The nutritional value of food is only minimally affected by drying. Vitamin A is retained during drying; however, because vitamin A is light sensitive, food containing it should be stored in dark places. Yellow and dark green vegetables such as peppers, carrots, winter squash and sweet potatoes have high vitamin A content. Vitamin C is destroyed by exposure to heat, although pretreating foods with lemon, orange or pineapple juice increases vitamin C content.

Dried fruits and vegetables are high in fiber and carbohydrates and low in fat, making them healthy food choices. Dried fruit has a higher concentration of carbohydrate than fresh fruit; therefore, serving sizes tend to be smaller. According to MyPlate and the USDA's Dietary Guidelines for Americans, ½ cup of dried fruit is equivalent to 1 cup of fresh fruit. Diabetic individuals must especially take into consideration smaller serving sizes when planning meals and snacks to avoid elevated blood glucose levels.

## Equipment Needed for Drying

To be certain of the final quality and consistent drying of foods, a dehydrator is recommended, especially with unpredictable Ohio weather. Sharp knives and a food processor or blender will also make the drying task easier.

Many guidelines call for blanching, steaming or pretreating foods. Equipment for these processes includes a deep kettle with a lid and a wire basket, a colander, or an open mesh cloth bag to hold produce. A nonmetal bowl is best for pretreating fruits and vegetables to prevent discoloring.

## Preparing Food for Drying

Select ripe fruit for drying. For best results, use fresh produce, free from blemish and mold.

Even slicing of food allows the dry air to circulate and dry the surface area of the food first. Cut foods into  $\frac{1}{8}$ -inch to  $\frac{1}{2}$ -inch slices. The higher the water content, the larger you should make the slice size. Small slices of high-moisture foods such as watermelon would disappear when all the moisture has evaporated.

Peel fruits and vegetables, including bananas, melons, winter squash, and other fruits and vegetables. Some foods such as apples or tomatoes may be dried with the peel on, but realize that unpeeled fruit takes longer to dry. Whole fruits and vegetables can be dried, but time and attention will be required for a successful product. Before drying, place them in boiling water and then in cold water to crack the skin. This process is referred to as "checking" the product and will hasten the drying process.

## Pretreatment for Fruits

Pretreatments are recommended techniques used to make quality products. Pretreatments not only prevent darkening and improve quality; they also cause the destruction of pathogens that could cause foodborne illness—such as *Escherichia coli* O157:H7, *Salmonella* species and *Listeria monocytogenes*. Pretreatments include dipping, blanching, cooking or candying.

Dipping prevents oxidation or color changes in fruits and vegetables. Dipping fruits in ascorbic acid (vitamin C) is one of the safest ways to prevent fruit from turning brown, but its effects may not last as long as sulfuring. Ascorbic acid can be purchased from drug or grocery stores, in powder or tablet form. One teaspoon is equal to 3,000 milligrams in tablet form. Mix 1 teaspoon in 2 cups of water. Allow the fruit to soak for 3–5 minutes, then drain well and place on dryer trays. After two "dips" with produce, add more acid to continue the effectiveness.

Commercial fresh fruit stabilizers or mixtures can also be used, but they might not be as effective and most are more costly. Dilute  $1\frac{1}{2}$  tablespoons of stabilizer in 1 quart water. Again, soak for 3–5 minutes, then drain and place on dryer trays. Refresh the solution after two times of soaking produce.

Fruit juices can also be used. Dip fruits in pineapple or orange juice or other high vitamin C fruit. Remember each fruit will also lend its flavor as fruits soak for 3–5 minutes. Drain well and place on dryer trays. Use twice before placing, and the juice is still safe to use in other drinks or recipes.





Sodium sulfite is another commercial product for pretreating foods. Sodium metabisulfite is available at many wine supply shops or some pharmacies. Stir 1 tablespoon of sodium metabisulfite into 1 quart of cold water. Allow fruit to soak 10–15 minutes, then drain and place on dryer trays. This solution is only good for one dip; remake for more than one use.

Steam blanching can be used, but the flavor and texture of the fruit might change. This process is the same as for vegetables. Bring water to a boil. Place produce in a basket not over 2 inches deep, over the boiling water. Cover tightly with a lid and blanch according to Table 1.

## Preparation for Vegetables

Generally speaking, vegetables are great to dry because they contain less acid than fruits and can be dried until they are brittle. When properly dried, vegetables contain only 10 percent moisture, and no known microorganisms can grow at that level. Wash, peel and trim produce; then, cut into pieces for drying (could be slices, sticks, cubes or shredded), taking care to remove any tough or "woody" part of the item. Even pieces are one secret to successful drying, as all will dry at the same rate. Only prepare what can be dried at one time.

Blanching is recommended for vegetables, as it stops the enzyme action that controls the color and flavor during storage. It also helps to decrease the drying time and cooking time at the other end because the tissue walls of the produce have been relaxed and moisture can escape and re-enter more easily. Boiling water blanching or steam blanching are both effective, but steam blanching is more time consuming.

Water blanch vegetables by submerging them in a wire basket into a pot of boiling water for the designated time (see Table 1).

Steam blanch vegetables as above, but do not submerge; the water should not come into contact with the product. Cover and steam according to Table 1. Only steam blanch small amounts at a time.

After blanching, cool quickly in an ice water bath; then, drain and place in a single layer on the drying tray. It's OK if the vegetables are still warm; that will hasten the drying process. As with fruits, pay attention to the end of the drying time so the product does not scorch.

## Test for Dryness

Dried fruits are generally done when they reach about 20 percent moisture content. Because fruit will be more pliable when warm, cool several pieces and test by folding the fruit upon itself; it should not stick together. Berries should rattle when stored in a container. When drying is complete, cool the fruit before storing, but don't leave out to gather additional moisture from the air. The product is then ready to be conditioned.

Dried vegetables should be crisp when dried and should "snap" when broken in two. At this stage of moisture, no conditioning is needed.

## Pasteurization

If food was dried outdoors, which is not recommended in the Ohio climate, there could be eggs on the food from insects that touched the food during drying. To pasteurize and kill the eggs post-drying, either place food in a freezer bag and freeze for 48 hours or heat the dried food at 150°F for 30 minutes or 175°F for 15

minutes. Be careful not to scorch the food.

## Conditioning

After drying or pasteurizing, conditioning of dried foods is the last step before final storage.

For fruit, place the cooled product in a tightly sealed glass jar, shaking daily for 7–10 days. If condensation develops, return to the dehydrator for more drying. Package dried food for long-term storage after conditioning for 10 days. Remember to keep food with high vitamin A or C out of direct sunlight during storage.

## Making Fruit Leathers

### Leathers From Fresh Fruit

Select ripe or slightly overripe fruit. Wash fresh fruit or berries in cool water. Remove peel, seeds and stem. Cut fruit into chunks. Use 2 cups of fruit for each 13-inch by 15-inch fruit leather. Puree fruit until smooth. To prevent darkening, add 2 teaspoons of lemon juice or  $\frac{1}{8}$  teaspoon ascorbic acid (375 milligrams) for each 2 cups of light-colored fruit.

If you choose to sweeten the leather, add corn syrup, honey or sugar. Corn syrup or honey is best for longer storage because they do not crystallize. Sugar is fine for immediate use or short-time storage. Use  $\frac{1}{4}$  to  $\frac{1}{2}$  cup sugar, corn syrup or honey for each 2 cups of fruit. Saccharin-based sweeteners could also be used to reduce tartness without adding calories. Aspartame sweeteners might lose sweetness during drying.

### Leathers From Canned or Frozen Fruit

Home-preserved or store-bought canned or frozen fruit may also be used to make leathers. Drain fruit and save liquid. Use 1 pint of fruit for each 13-inch by 15-inch leather. Puree fruit until smooth; if too thick, add liquid. Add 2 teaspoons of lemon juice or  $\frac{1}{8}$  teaspoon ascorbic acid (375 milligrams) for each 2 cups of light-colored fruit to prevent darkening. Applesauce can be dried alone or added to any fresh fruit puree as an extender. It decreases tartness and makes the leather smoother and more pliable.

## Preparing the Trays

For drying in the oven, a 13-inch by 15-inch cookie pan with edges works well. Line pan with plastic wrap, being careful to smooth out wrinkles. Do not use waxed paper or aluminum foil.

To dry in a dehydrator, purchase specially designed plastic sheets or line plastic trays with plastic wrap. Items placed on the trays should not touch; allow space between items for air flow. Remember to watch food more closely at the end of drying times, as the decline in moisture causes food to dry faster and may scorch.

## Pouring the Leather

Fruit leathers can be poured into a single large sheet (13-inch by 15-inch) or into several smaller size pieces. Spread purée evenly, about  $\frac{1}{8}$ -inch thick, onto drying tray. Avoid pouring purée too close to the edge of the cookie sheet. Larger fruit leathers take longer to dry. Approximate drying times are 6 to 8 hours in a dehydrator or up to 18 hours in an oven.

# Drying the Leather

Dry fruit leathers at 140°F. Leather dries from the outside edge toward the center. Test for dryness by touching center of leather; no indentation should be evident. While warm, peel leather from plastic and roll. Then, allow the leather to cool and rewrap the roll in plastic.

Chances are, the fruit leather won't last long enough for storage. If it does, it will keep up to 1 month at room temperature. For storage up to 1 year, place tightly wrapped rolls in the freezer.

## References

Andress, E., and J. Harrison. So Easy to Preserve. 6th ed. Athens: University of Georgia Cooperative Extension Service, 2014.

Kendall, P., and J. Sofos. Drying Fruits, Food and Nutrition Series, No. 9.309. Fort Collins, CO: Colorado State University Extension. Accessed on August 5, 2014. [extension.colostate.edu/topic-areas/nutrition-food-safety-health/drying-fruits-9-309/](http://extension.colostate.edu/topic-areas/nutrition-food-safety-health/drying-fruits-9-309/)

USDA. "Fruits: Nutrients and Health Benefits." Accessed on August 5, 2014. [choosemyplate.gov/food-groups/fruits-why.html](http://choosemyplate.gov/food-groups/fruits-why.html).

**Table 1. Drying Table**

Food	Preparation for Drying	Dryness Test
Fruits		
Apples	Pare, core and cut into 1/8-inch slices or rings. Pretreat dipping for 2 minutes.	Pliable, springy feel, creamy white. No moist area when cut.
Bananas	Peel, cut into 1/4-inch slices. Dip in 1/2 cup pineapple juice mixed with 1/4 cup honey.	Sticky, chewy, caramel-like color.
Berries	Leave whole, except slice strawberries in half.	No visible moisture when crushed.
Cherries (any kind)	Remove stems and pits. If juicy, drain 1 hour.	Leathery but sticky.
Grapes	Leave whole, remove stems. Dip in boiling water to crack skins.	Pliable, dark brown.
Peaches and apricots	Peel if desired, remove pits, slice. Pretreat dipping solution.	Pliable and leathery.
Pears	Pare and remove core and woody tissue. Cut into 1/4-inch slices or rings, or into quarters or eighths. Pretreat dipping solution.	Leathery, springy feel.
Pineapple	Peel, core and slice 1/2-inch thick.	Pliable, spongy to the touch.

Plums	Same as prunes. Use freestone varieties. Pretreat.	Pliable and leathery.
Prunes	Cut in halves and remove pits or leave whole. Halves: No pretreatment. Whole: To soften and crack skins and to help fruit dry better, hold in steam or boiling water for 2 minutes.	Pliable and leathery.
Vegetables		
Beans, green and lima	Shell. Steam 15–20 minutes, or until tender but firm.	Shatters when hit.
Beans, snap	Trim and slice lengthwise (or cut in 1-inch pieces). Steam about 3–5 minutes, or until tender but firm. Spread about ½-inch deep on trays.	Brittle, dark green to brownish.
Beets	Trim off all but 1 inch of tops and roots. Steam whole about 30–60 minutes, depending on size, or until cooked through. Cool and peel. Cut in ¼-inch cubes, or slice ⅛-inch thick. Spread not more than ¼-inch deep on trays.	Brittle, dark red.
Broccoli	Trim, slice lengthwise in ½-inch strips. Steam 10 minutes or until tender but firm.	Brittle, very dark green.
Cabbage	Trim, cut into ⅛-inch thick strips. Steam 5–10 minutes, or until tender but firm. Spread evenly to a depth of not more than 1 inch. Pretreat with lemon juice.	Crisp, pale yellow to green.
Carrots	Scrape or peel. Slice crosswise ⅛-inch thick, or dice in ¼-inch cubes. Steam small pieces 3 minutes (or shred before steaming). Spread in thin layer on trays.	Very brittle, deep orange.
Celery	Remove leaves, cut stalks into ½-inch pieces. Water blanch 1 to 2 minutes or until tender. Stir occasionally during drying.	Very brittle.
Corn	Husk and trim. Blanch whole ears 9 minutes. For medium or raw kernels, blanch 3–5 minutes. Cut corn from cob after blanching.	Shatters when hit.
Eggplant	Peel and slice ⅛- to ¼-inch thick. Dip in lemon juice solution for 5 minutes or steam 5 minutes (or until tender).	Leathery to brittle.
Greens	Trim off tough stems. Steam 5 minutes or until tender. Spread leaves that mat, such as spinach, about ¼-inch deep.	Crisp, very dark green.
Mushrooms	Peel the larger mushrooms. Dry whole or slice, depending on size. No precooking necessary. If stems are tender, slice for drying; if tough, discard. Spread on trays.	Leathery to brittle.

Onions	Peel, slice into 1/8-inch rings. Blanch 1 minute. If dried for seasoning, do not steam.	Very crisp.
Peas, green	Steam shelled peas 3 minutes or until tender. Stir during drying.	Shatter when hit with a hammer.
Peppers (all kinds) and pimentos	Cut into 1/2-inch strips or rings. Remove seeds. Steam 10 minutes. Spread rings 2 layers deep; spread strips not more than 1/2-inch deep.	Pliable.
Pumpkin and winter squash	Quarter, remove seeds and pit, cut in 1-inch strips and peel. Slice strips crosswise 1/4-inch thick. Bake at 300°F until soft. Place in dehydrator.	Leathery.
Soybeans, edible green	Blanch pods in steam 10–15 minutes, or until beans are tender but firm. Shell.	Shatter when hit.
Squash, summer and zucchini	Trim, slice 1/4-inch thick without peeling and steam 6 minutes or until just tender. Pretreat optional.	Leathery to brittle, yellow.
Tomatoes (meaty varieties only)	Dip in boiling water for 1 minute. Peel, remove stem end and slice 1/8-inch thick.	Leathery, dull red.

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# Being Present for the Holidays

Melinda Hill, Wayne County  
Kate Shumaker, Holmes County

Ohio State University Extension  
Family and Consumer Sciences



***What do you  
look forward  
to during the  
holidays?***



***What stresses  
you out the  
most during  
the holidays?***

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Do you find yourself feeling stressed and rushed by the chaos and busy-ness that typically comes with the month of December?

Poll questions What stresses you out the most during the holidays?

Traffic

Traveling

Relatives

Shopping

Baking

Cleaning

Decorating

Lack of Money

Lack of time

Commercialism

Wait for responses, give examples:

Examples:

Working long hours

- Fighting traffic

- Caring for aging parents
- Paying the bills

Then holidays on top of all that! Juggling work and added family responsibilities

- planning for holiday gatherings
- shopping for gifts and
- cooking
- decorating
- social events

## ***What stresses you out the most during the holidays?***

- Traffic
- Traveling
- Relatives
- Shopping
- Baking
- Cleaning
- Decorating
- Lack of Money
- Lack of time
- Commercialism



## How does stress affect you?

*Physically – Emotionally – Mentally*

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## HEALTH IMPACTS OF STRESS

- Digestive disorders
- Headaches
- Sleep disorders

May worsen

- Asthma
- Depression
- Anxiety
- Mental illness



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Long-term stress may contribute to or worsen a range of health problems including digestive disorders, headaches, sleep disorders, and other symptoms. Stress may worsen asthma and has been linked to depression, anxiety, and other mental illnesses

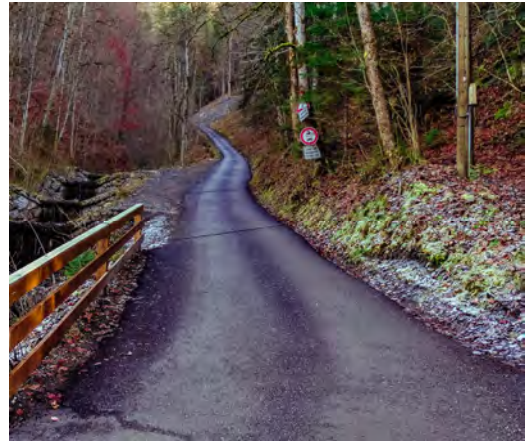
***“Mindfulness means paying attention  
in a particular way:  
on purpose,  
in the present moment,  
and nonjudgmentally.”***

*~ Jon Kabat-Zinn*

## BENEFITS OF MINDFULNESS PRACTICE

- Decreased stress and anxiety
- Improved attention, memory, and the ability to focus
- Reduced chronic pain
- Strengthened immune system
- Relationship satisfaction

~ Mayo Clinic



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- “Mindfulness training has gained increasing traction in recent years as a feasible and promising intervention for enhancing facets of both psychological and physical health across development” (Fountain-Zaragoza & Prakash, 2017, p.1).
- Mindfulness practice is associated with a number of well-being indicators (Brown & Ryan, 2003). **Can read the bulleted list on the slide.**
- It’s important to note that the “effects of practice may vary according to the specifics of practice experience” (Wielgosz, Schuyler, Lutz & Davidson, 2016).
- Part of the goal of Mindful Wellness is to inform participants about the potential benefits they can realize from practicing mindfulness. This link from the Mayo Clinic is brief but highlights the researched benefits of mindfulness: [mayoclinichealthsystem.org/hometown-health/speaking-of-health/mindfulness-and-our-mental-health](https://mayoclinichealthsystem.org/hometown-health/speaking-of-health/mindfulness-and-our-mental-health) (Wickham, 2015).

## MINDFUL WELLNESS PRACTICES

- Breathing exercises
- Body scan
- Imagery exercises
- Progressive Muscle Relaxation
- Physical activities
- Mindful eating

*...can be a part of every day life.*



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These are some examples of mindfulness practices or exercises that people use on a regular basis.

In general, participants of mindfulness training “are taught to develop mindfulness skills through a range of formal and informal mindfulness practices, including, amongst others, the body scan, mindfulness of the breath, body, sounds and thoughts, mindful movement and mindfulness of everyday activities” (Cavanagh et.al, 2014, p.119)

If this particular group is going to be participating in a series of lessons with the Mindful Wellness curriculum, they will learn more details about these topics and activities in future lessons.



# Let's practice!

## Breathing Exercises



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**Let's practice!**

## **Body Scan & Progressive Muscle Relaxation**



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# Let's practice!

## Imagery Exercises







# Let's practice!

## Mindful Eating



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## Sources

Carter, Shannon. *Holiday Stress Webinar*, YP4H 2017

University of Wisconsin, Madison. *Six Mindfulness Tips for the Holidays*. <https://www.uwhealth.org/meditation-stress-reduction/six-mindfulness-tips-for-the-holidays/52319>

Hopkins Medicine. *4 Mindful Tips to De-Stress This Holiday Season*. <https://www.hopkinsmedicine.org/health/wellness-and-prevention/4-mindful-tips-to-destress-this-holiday-season>

Ohio State University Extension. *Mindful Wellness Curriculum* (2019).



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Scott D. Morgan  
Wayne Savings Community Bank  
151 N. Market St.  
Wooster, OH 44691

National Extension Association of Family & Consumer Sciences  
325 John Knox Rd. Suite L103  
Tallahassee, FL 32303

RE: Letter of Support for Melinda Hill

Dear NEAFCS,

I have worked with Melinda Hill in the capacity of a volunteer in conjunction with the financial literacy programs offered through The Ohio State University (OSU) Extension office in Wooster, Wayne County, Ohio. The particular programs in which I have actively participated are the Master Money Mentor (MMM) program and the Steps To Home Ownership (STHO) program. I believe I have a unique perspective on the efficacy of these programs due to my position and the needs of my employer.

My employer is a small, community bank, and although I have filled various roles over the years in the bank, my primary responsibilities have been as Community Reinvestment Act (CRA) Officer and Home Loan Officer. The CRA is a federal regulation that requires a bank to "give back" and "invest in" the communities where the bank operates through collecting deposits and disbursing loans. This actually turns out to be a difficult goal to achieve for small banks in rural areas and small towns. I was constantly looking for avenues to contribute to my community that would provide a realistic, measurable and practical impact for individuals in the areas of available financial education, growth in personal financial responsibility and a path to home ownership. Thankfully, the programs that Melinda effectively operates through the OSU Extension were just the ticket!

I have been a volunteer with the MMM program for approximately 15 years and during that time have counseled more than a dozen clients. To be able to actually have a program that provided materials and instruction to me so that I could then pass on those tools and knowledge to individuals desiring to better themselves, organize their life priorities, provide for their families, and to be a responsible user of credit, has and does empower me and my clients.

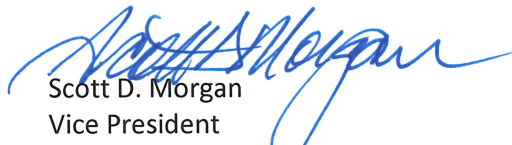
Although there are numerous examples, I remember in particular about a man I will call "Bob." Bob, like so many in my community, had been ravaged by the trials of life. He had been through a toxic relationship and was left to raise and provide for two children alone. Bob was also dealing with health challenges, and employment, income, and housing issues. He desperately desired to have his own home and raise his children in a safe and stable environment. He began working with Habitat for Humanity, whose clients are required to acquire budgeting and home ownership education, and which has often been fulfilled through the MMM and STHO programs. I was privileged to provide the MMM service to him and he eagerly pursued that opportunity to its fullest and to completion. He now is a proud and thankful owner of a home that sits on one of the main streets in our town. I often pass his home and am reminded of the good that those programs, under the direction of Melinda, have brought to my neighborhood.

Quite a number of years ago, Melinda asked me to be a guest speaker at her STHO sessions. Melinda often engages community members, not only for their area of expertise, but also to familiarize her clients with service providers that they may perceive as intimidating. The STHO program is the epitome of practicality and making dreams feasible. The class attendees are often folks struggling with the reality of their decisions based on a lack of knowledge and the feeling hopelessness at ever being able to have their own place to call home. My visits encompass the topics of the loan process, lender expectations, and how to navigate the miry world of the credit report. Clients of both Wayne Habitat for Humanity and Wayne Metropolitan Housing Authority has utilized this program for their clients. Involving these organizations exponentially increases the impact of the program in the community. Melinda related to me that in just the last 5 years the program has had over 923 participants. This program nearly died in our community when funding dried up from the university, as well as state and federal agencies. At that time, she partnered with a local bank to financially sponsor the program to keep it going. Melinda's innovative implementation of these programs not only requires a great deal of effort, but also personal sacrifice. She cares about the people she is serving and often offers the STHO sessions at various times throughout the year and in the evenings to make attendance attainable for all, even if they have difficult work and family schedules.

Of course, Melinda advances the Extension office and it's services by her work, but she also promotes the activities through the media where her articles appear in the local newspaper and her interviews on the local cable station.

I am so thankful for the efforts of Melinda that reaped a great harvest in our county and provided a route for folks to lift themselves and ultimately build a stronger community. It's happening here!

Sincerely,



Scott D. Morgan  
Vice President  
Wayne Savings Community Bank



Ohio State University Extension  
Family and Consumer Sciences

342 Campbell Hall  
1787 Neil Avenue  
Columbus, OH 43210-1220

614-688-5378 Phone  
614-688-4708 Fax

March 4, 2021

To: NEAFCS Awards Committee

From: Pat Bebo MS, RDN

Re: NEAFCS Extension Educator of the Year Award – Melinda Hill

Dear Award Committee Members,

It is with great pleasure that I submit this letter of support for Melinda Hill's application for the NEAFCS Extension Educator of the Year Award. Melinda is the 2013 recipient of the Marylyn R. Spiegel Excellence in FCS Award, the highest recognition award through Ohio State University's Family and Consumer Sciences Program. She has received many such awards over the years including awards from ESP, NEAFCS and other national organizations during her career recognizing her excellence in teaching, curriculum development and service to her profession.

Melinda has endeavored to be as well rounded as possible in the content area of family and consumer science evidenced by earned and maintained professional certifications (CFLE, CFCS and a Certification for Homebuyer Education). These certifications ensure that her professional knowledge is always current which in turn allows her to meet community needs and lead statewide teams for program development and publications.

Melinda regularly works with state and national colleagues to advance Family and Consumer Sciences as well as support overall Extension professionals as they embark on their career journey. She has taken on leadership roles in local and state organizations, as well as, leadership roles with national organizations. She is an active member and past president of OJCEP as well as a former state president for ESP. Indeed, Melinda is an active member of several professional organizations where she can serve, support and collaborate with other professionals to further the Extension FCS profession. Melinda continually takes on local supervisory roles first as a county director and now as an area leader, sharing her wisdom and knowledge to advance the careers of her colleagues.

Melinda has a strong history of working in teams developing solid curricula that have been recognized at the national and state levels, she also demonstrates a strong fact sheet publication history. As an Educator in Wayne County, Melinda has a well-rounded FCS program addressing the needs in her community by providing educational opportunities in all three areas of the Ohio FCS program (healthy people, healthy relationships and healthy finances). Melinda's strong FCS foundation allows her to respond to the ever changing needs in her county.

Because of her commitment to Extension, the scope, growth and impact of her programming is easily seen in her accomplishments. I feel her innovation, leadership and the strength of her Extension work throughout her career makes her an excellent candidate for this award and I strongly support the application.

Sincerely,

*Pat Bebo MS, RDN*

Pat Bebo MS, RDN  
Assistant Director Extension  
Family and Consumer Sciences, CFAES  
Assistant Dean, EHE



THE OHIO STATE UNIVERSITY

College of Food, Agricultural, and Environmental Sciences  
Ohio State University Extension

Office of the Director, Jacqueline Wilkins

3 Agricultural Administration Building  
2120 Fyffe Road  
Columbus, Ohio 43210-1084

614-292-1842 Phone  
<http://extension.osu.edu>

February 28, 2021

National Nominating Committee  
National Extension Association of Family & Consumer Sciences

To whom it may concern,

I am writing to support the nomination of Melinda Hill for the 2020 NEAFCS Educator of the Year Award. I have worked with Melinda off and on for the last 25 years in my roles as OSU Extension State Parenting Specialist, as the Regional Director and then Director, and as her direct supervisor. Melinda has consistently demonstrated excellence in her service to OSU Extension, and in particular, FCS for over two decades now. She is recognized as a superior educator, not only by me, but also by everyone with whom I have come across who knows her. When I think about what the criteria is for this recognition, I know that Melinda is deserving in every way possible.

Melinda has been developing and implementing strong and relevant Extension programming for over 25 years. Over the years, she has taught well over 1,500 direct programs, with an outreach to over 30,000 participants, covering topics around strengthening families, nutrition and health, food preservation, and financial management. In addition, she has participated in the design and development of over 39 publications including multiple factsheets, family life blogs (Eat, Save and Be Healthy), radio spots, weekly news articles and has provided one-on-one consultations that have reached many, many more individuals across the state and beyond. She has a variety of peer-reviewed journal articles and an impressive number of national presentations. She has also been a successful grant writer and fund developer across the span of her career, acquiring well over \$500,000.

Melinda has been a valued and effective member of many teams, centered on her specialization in family health and finances. She is currently an active participant and contributor to the Food Preservation Team, where she and her colleagues have designed a National Curriculum Package "Save, Simple Easy to Learn, Home Food Preservation (2011) which received a Team Teaching award (2013) and currently serves as foundational training material for Ohio Educators. She was a co-author of Smart Start with Money (teaching preschoolers about money curriculum) which was the recipient of multiple awards (Ohio JCEP Team Teaching in 2014 and NEAFCS Early Childhood Child Care Training Award in 2016). This curriculum was used with more than 115 teachers and was accepted by Ohio Child Care Resource and Referral Agency as a statewide training for Ohio's Step up to Quality ratings and shared with peers nationwide. She was a co-author on Money 101, Keys to Financial Stability, which won second place for Financial Management at the Central Region in 2018. This basic financial literacy curriculum was awarded a \$50,000 grant from United Way to implement with over 434 individuals who were delinquent in child support, with 93 % reporting behavior change-- the list goes on and on.

Team members had the following to say about her teamwork and collegiality, "Melinda has a passion to always improve her teaching and the Wayne County Extension team. I see her as concerned about other program areas as her own. She truly wants people to be engaged and enriched by Extension teachings. She truly cares and is concerned." Another said this, "Her leadership has helped to transform perceptions of the



Extension Office, thereby increasing utilization of their services. Ms. Hill's ability to broaden OSU-EXT service area and to be considered as an active and important community resource is probably one of her greatest accomplishments." Still another indicated, "The work that Ms. Hill has done helps our county better use its resources and prevents duplication of services. By partnering on projects in our community, we are better able to leverage limited dollars and serve the maximum number of citizens."

Melinda continues to be very involved in service and professional development to the profession. Her memberships include the American Association of Family and Consumer Sciences, Ohio Association for the Education of Young Children, National Association for the Education of Young Children, National Extension Association of Family and Consumer Sciences; Member, National Council on Family Relations, and Ohio JCEP. Evidence of leadership and training includes the PILD conference; HUD Certification Training; Board, Wayne Association for the Education of Young Children (Co-chair for the annual Week of the Young Child); Co-chair, Nutrition Coalition; Family First Council (Prenatal to 5 subcommittee); Participant, Housing Coalition. Hill was awarded the FCS Healthy Finances Professional Development Award, the NEAFCS 1st place national winner for Educational Curriculum, and the 2013 Marilyn R. Spiegel Excellence in Family and Consumer Sciences Extension Award. Recently, Melinda has been recognized with the Family and Consumer Sciences Healthy Team Award for Professional Development (2018), and the Distinguished Service Award, Family and Consumer Sciences, (over 20 years of service) from the Ohio Joint Council of Extension Professionals/Epsilon Sigma Phi Alpha Eta Chapter (2018).

Melinda is incredibly well respected by her peers, administration, and her community. One client reported that, "Wayne FCFC respects and relishes our relationship with Wayne OSU Extension. It has been a very symbiotic relationship and one that is enhanced by Ms. Hill's commitment to the Extension message and to serving our community." A fellow colleague put it this way, "Melinda is a highly effective educator. I have seen her programs in the past and have been impressed with the manner in which she quickly gains rapport with an audience and keeps their interest throughout the entire program." Another peer said, "Melinda is an asset to this organization. She is a great role model for others in the system. I am proud to call her a colleague and a friend." Still another wrote, "Melinda is an excellent Family and Consumer Sciences Educator. She is a role model within the State and Nationally."

In summary, Melinda Hill is extremely competent, productive and knowledgeable. She has an obvious passion for Extension and is recognized by all of her peers and administration as highly skilled and is sought out often for her expertise. I consider Melinda to be the perfect example of what an Extension educator should be; I wish I had one of her in every county! I value her as an employee and colleague and, in my opinion, Melinda Hill is incredibly deserving of this recognition as she exemplifies what it means to be an extraordinary Extension Educator in every aspect of her work.

Please feel free to contact me should you have any questions.

Yours truly,

A handwritten signature in blue ink, appearing to read 'Jacqueline', with a long horizontal flourish extending to the right.

Jacqueline Kirby Wilkins, Ph.D.  
Associate Dean and Director, Chair, OSU Extension



4779 Kidron Road  
Dalton, OH 44618

We have worked with Melinda Hill for years. Her professional demeanor, as well as her vast knowledge, are very important for our brand, our customers and our community.

Her team provides the valuable service of pressure canning lid testing twice a year at our retail store in Kidron. This even draws lots of Amish, who rely on this service to safely use their canners. Here is a video of Melinda at Lehman's during canner testing. Over the past decade, we estimate she has tested over 1,300 lids.

[\(56\) Pressure Canner Testing - YouTube](#)

She has also “starred” in several videos for us: How to Use a Pressure Canner has over 100,000 views.

[\(56\) How to Use a Pressure Canner - YouTube](#)

We also have how-to videos from her on our web site. We have many customers that desire a simpler life but need to be educated on the use of our products. This is where Melinda comes in – providing compelling, accurate information on food preservation.

[Canning Supplies, Equipment and Accessories | Lehman's](#)

Always eager to share her knowledge with our customers, Melinda has written at least half a dozen blogs for us, on topics from food preservation, to budget friendly meals, to preserving family tradition. [Sample Blog - [Getting Ready for Food Preservation - Lehman's Country Life](#)[Lehman's Country Life](#)]

Melinda has done product demonstrations for Lehman's, specifically on our food dehydrator. When she does demos, complete with yummy samples such as dried apples or kale chips, we see sales double or even triple.

She has taught sold-out classes – customers tell us they traveled to our store just to take one of Melinda's classes. Some attendees are seasoned canners, looking for a refresher course, but often they are folks not familiar with canning and she gives them the confidence to preserve the harvest.

In summary, our community and the families we serve are better equipped to safely preserve and prepare food for their families, because of Melinda and her team at the extension office.

Glenda Lehman Ervin  
Director of Marketing  
Lehman's



To: NEAFCS Educator of the Year Review Committee

From: Treva Williams *Treva Williams*  
Area Leader and Extension Educator, Family and Consumer Sciences

Date: March 9, 2021

Re: Nomination of Melinda Hill

I have had the opportunity and pleasure of working with Melinda Hill during my entire 27-year career with Ohio State University Extension. We have held similar types of positions during this time, both serving as Family and Consumer Sciences Educators, County Extension Directors, and Area Leaders. We have worked together on various programmatic teams including Healthy Finances, Healthy Relationships, and Food Preservation.

Melinda is recognized statewide for her expertise in financial education programming and food preservation. She consistently has published numerous fact sheets and curriculum on these topics and they have been shared not only in Ohio but also across the nation. Melinda translates research-based information into a practical and usable format which is well received by both peers and clientele. She not only attends NEAFCS conferences but also has presented either a session or poster at 7 of the last 10 conferences.

Melinda serves as a role model to new Family and Consumer Sciences Educators having been both a formal and informal mentor to these individuals as they begin their employment with Ohio State University Extension. Her calm, thoughtful demeanor creates a welcoming environment for new employees to feel comfortable as they ask questions and learn how to do their job. Recently in a meeting a co-worker mentioned that when tough discussions are occurring, Melinda carefully thinks through the situation and then responds, often by asking questions to obtain more information and help others see situations differently.

I personally have seen Melinda increase her skills not only within programmatic areas but also within leadership roles. She accepted the County Extension Director role in Wayne County which she held for seven years. When that structure model ended, Melinda accepted the role of Area Leader and currently oversees approximately 20 staff across four counties. She is responsible for fiscal and operational management within these counties. Unlike some other states, this is a .5 FTE position and she still maintains a .5 FTE appointment as an Extension Educator. She also is currently serving as a member of the State Mentoring Task Force to implement a new employee onboarding system and mentoring system within Ohio State University Extension.

She has held numerous leadership roles within our professional associations in Ohio including President of the Ohio Affiliate for NEAFCS and President of the Alpha Eta chapter of Epsilon Sigma Phi. She serves on regional and national committees within these organizations. Melinda has also held leadership roles within

the National Association for the Education of Young Children – Ohio Association and Wayne County Association, and the American Association for Family and Consumer Sciences, Ohio Association and Wayne Association.

Melinda is an amazing team member and always willing to work with others. She has a fantastic attitude and is a personal and professional role model for those around her. I am thrilled to be asked to write a letter of support for Melinda Hill for the NEAFCS Educator of the Year nomination as I know she is extremely deserving of this award.