

SCRATCH NUTRITION LAB · SESSION 1

Why Food Matters

Your body, your history, your culture, your plate.

Chef Isaac Floyd, M.S. · Scratch Nutrition Lab × Evans High School



Today's Plan

30 min

0:00

Get to Know You

Who I am, who you are, and why we're here.

15 min

0:30

My Flavor Profile

A fun sheet about the foods and flavors you love.

45 min

0:45

Why Food Matters

Body, history, culture, and the basics of nutrition.

30 min

1:30

In the Kitchen

We make a seasoning blend together.



Meet Chef Isaac

Most people call me Izzy.



Nutrition professor

Master of Science in Nutrition Sciences



Corporate chef

Cooking for people is how I show up



Food science

Research & development at Nestlé



Founder

FG Kids (the nonprofit behind this lab) and Spatial Apex



Author

Scratch Nutrition Manual · Spatial Computing: Volume One

What I Do



FG Kids

Cooking, nutrition, and science events for young people
fgkidsproject.com



Spatial Apex

Spatial computing, education, and my YouTube channel
spatialapex.co

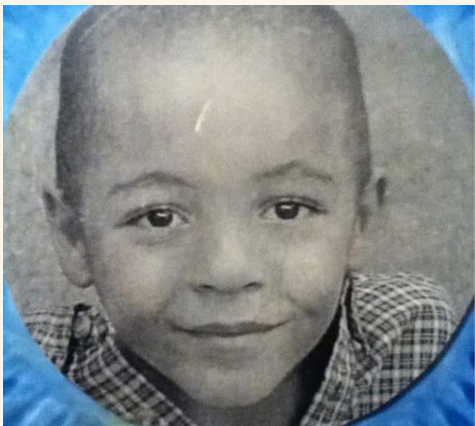
From My Kitchen



Take CTRL, my cookbook

Open the full book on screen and flip through a few pages together.

OVER THE YEARS



Early days



Growing up



Kent State graduation



Research symposium

ON CAMERA

A Clip From My Channel



GET TO KNOW YOU

Your turn. Who's in the room?

Your name and your grade

A dish someone at home makes that you love

If you could cook anything, what would it be?

Why did you join this class?

MY FLAVOR PROFILE

Tell me what you love to eat.

Not a test. No wrong answers.

It helps me plan recipes you'll actually want to cook.

Grab a sheet and a pen. Skip anything you don't want to answer.

ON THE SHEET



Your favorite flavors



How spicy you like it



Your favorite foods and dishes



A dish that tastes like home



How you feel about healthy food



What you want to learn to cook

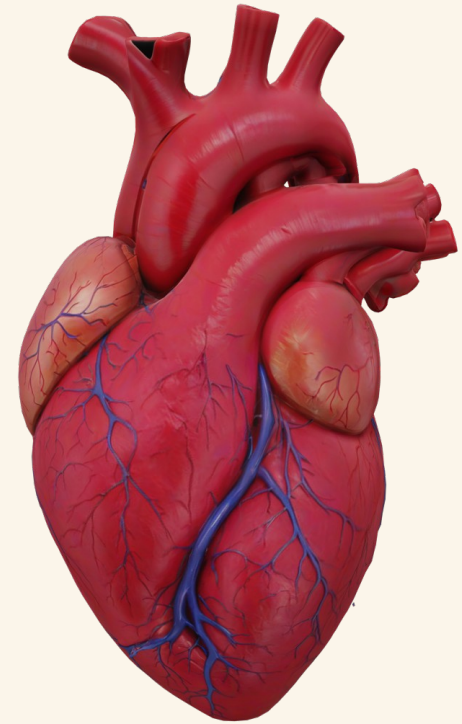
01

Food & Biology

Where your food goes, and how it reaches every system in your body.

Your body runs on what you eat.

Your body is made of systems that work together to keep you alive. Every one of them has a direct connection to nutrition.



SHOUT IT OUT

Where does your food go after you swallow it?

Name every stop you can think of

What happens to the food at each stop?

How does food get from your gut to the rest of your body?

The Digestive Path



Mouth

Chewing breaks food down. Saliva starts digestion.



Esophagus

Muscle waves push food to the stomach.



Stomach

Churns food with acid and enzymes into a liquid (chyme).



Small Intestine

Nutrients are broken down to their smallest parts and absorbed.



Large Intestine

Absorbs water and forms waste.

THE HELPERS

Salivary glands · Liver · Gallbladder · Pancreas

Food never passes through them, but they send in the juices (enzymes, bile, acid-neutralizers) that make digestion work.

Two Ways Food Gets Broken Down

Mechanical

Physically breaking and moving food

- Chewing
- Stomach churning and mixing
- Muscle waves (peristalsis) moving food forward
- Squeezing that mixes food with digestive juices

Chemical

Using the body's chemicals to break food apart

- Enzymes
- Stomach acid
- Bile (helps fat mix with water)
- Hormones that tell each organ when to act

WATCH

Digestion in Motion



*Video: short digestive system animation
(your pick — keep it under a few minutes)*

Your Gut Talks to Your Whole Body



Brain & Nerves

Gut bacteria help make chemical messengers your brain uses to focus and feel calm.



Heart & Blood

Carries nutrients to every cell and carries waste away.



Lungs

Work with the heart to move oxygen to your tissues.



Hormones

Control hunger and how nutrients are absorbed, stored, and used.



Muscles

Move your body, and push food through your gut.



Bones

Store minerals like calcium, phosphorus, and magnesium.



Immune System

Gut bacteria are a key part of how your body defends itself.



Kidneys

Clean your blood and help balance pH and blood pressure.

02

Food Through History

How the way we get and make food has changed, and what that changed for us.

How Eating Changed Over Time



Hunting & Gathering

Food came straight from the land.



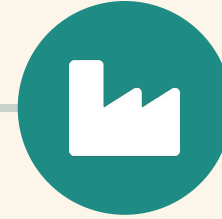
Farming

About 10,000+ years ago, people began growing crops and raising animals.



Preserving

Salting, smoking, drying, and fermenting made food last.



Industrial Age

Factories, canning, refrigeration, and shipping changed everything.



Today

Fast, packaged, shipped across the world, ready in minutes.

What Industrialization Changed

Then

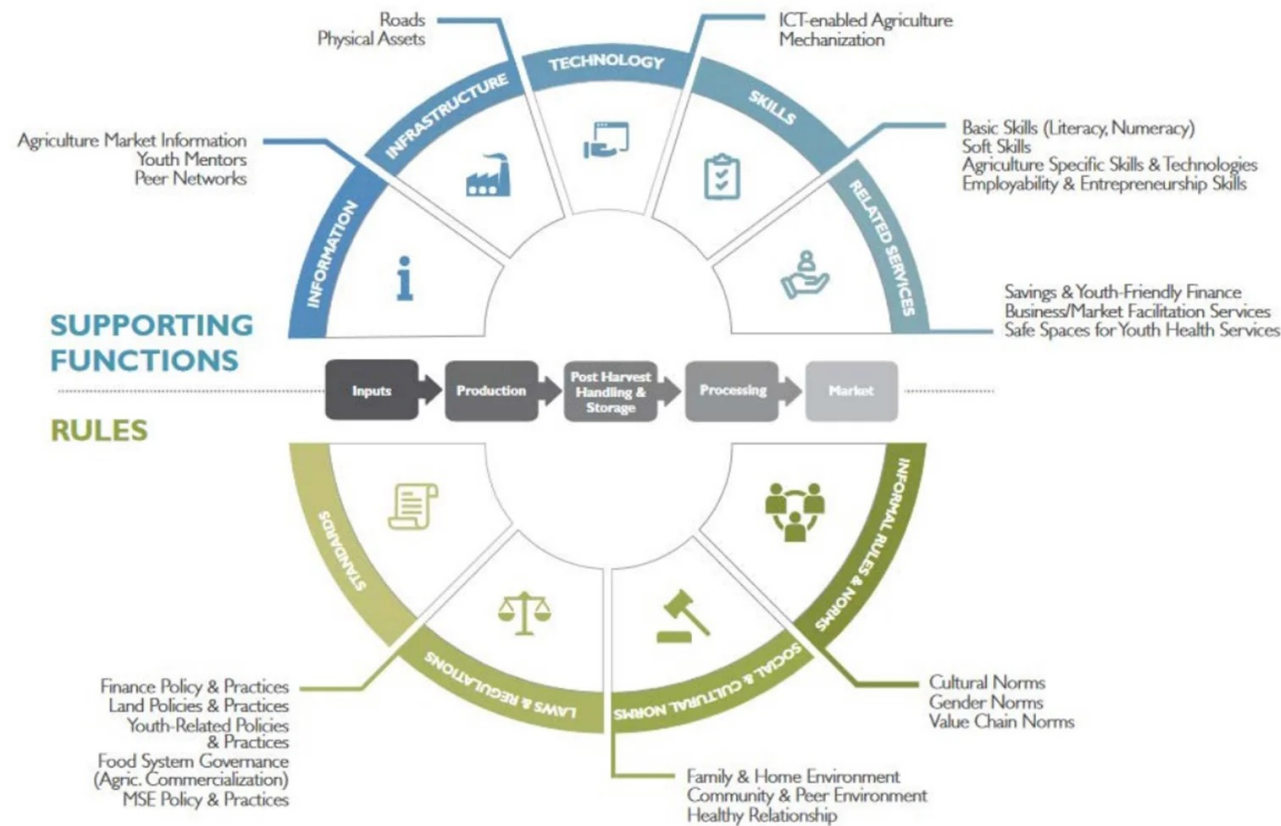
- Grown or raised close to home
- Cooked from scratch
- Eaten in season
- You knew what was in it

Now

- Made in factories and shipped far
- Built to last on a shelf
- Available all year
- Long ingredient lists

Food got faster and easier. It also got harder to know what we're eating.

Every Step Shapes Your Plate



Food system graphic (from your PPTS folder)

**Inputs → Production → Storage
→ Processing → Market**

Every step decides what reaches the store near you, what it costs, and what's in it.

Your family, your community, and your culture are part of the system too.

SHOUT IT OUT

What did your grandparents eat that you don't?

A dish you only get at a family gathering

Something they grew, caught, or made from scratch

Something you eat that they never had

03

Culture & Food

Food carries history, identity, and family.

Every Culture Has a Flavor Story



Passed Down

Recipes and techniques handed from one generation to the next.



Seasoned Its Own Way

Spices, herbs, and sauces that make a dish taste like home.



Tied to Health

Some traditions balance food and wellbeing, like Ayurveda in India.

SHOUT IT OUT

How does your culture eat?

A dish that means "home" to you

Who cooks it, and when?

What seasonings make it taste right?

Where You Live Shapes What You Eat



Food Insecurity

Not having consistent access to enough food for an active, healthy life.



Nutrition Insecurity

Having food, but not the nutrients you need for a healthy, high-quality life. This happens in every kind of neighborhood.

WHAT SHAPES YOUR PLATE

What stores are nearby

What food costs

Family traditions

History

What My Research Found

Master's thesis: Black college students, ages 18–24, at a Midwestern university

133

students in the study

90%

average score on "I have a lot of pride
in my ethnic group"

56%

average score on "When I feel hungry, I
can easily choose healthy food", the
lowest of any confidence question



Stronger cultural identity went with rating your own diet as healthier.



More confidence making healthy food choices went with rating your own diet as healthier. This was the strongest link in the study.

Floyd, 2019 · Kent State University · These are connections, not proof that one causes the other.

04

Why Nutrition Matters

Because you matter.

SHOUT IT OUT

Is nutrition important to you?

Hands up: yes, no, or not sure

Why or why not?

Where do you hear about nutrition? (Family, social media, sports, school?)



You are important.

Your body matters. Your life matters.
You deserve food that's healthy and delicious.

QUICK POLL

Can food be healthy and delicious at the same time?

YES · NO · NOT SURE

If no: why not?

Name a food you think is both

Chef Isaac's Rules

1

Season your vegetables the way you season your meat.

2

Put the flavors you love on the foods that love you back.

Flavor Is the Name of the Game

We're wired to love flavor. What matters for your health is which foods you put that flavor on.



The rub you'd put on your protein...

...works on your vegetables too.

Same flavor. Better plate.

SHOUT IT OUT

What flavors do you love?

Sauces, seasonings, spices, snacks. Anything.

Sweet

Salty

Spicy

Sour

Savory

Smoky

Herby

Tangy

05

Food Fundamentals

What every food is made of.

The Six Classes of Nutrients

MACRONUTRIENTS

Needed in large amounts



Carbohydrates



Protein



Fat



Water

MICRONUTRIENTS

Needed in small amounts



Vitamins



Minerals

Every food is built from carbs, protein, and fat, in different amounts.

Each one gives your body energy, measured in calories per gram:

4

calories
per gram

Carbohydrates

4

calories
per gram

Protein

9

calories
per gram

Fat

The Big Three at a Glance



Carbohydrates

- Your body's main fuel
- Broken down into sugars
- Includes fiber, which your gut needs



Protein

- Builds and repairs your body
- Makes enzymes and hormones
- Broken down into amino acids



Fat

- Stores energy
- Helps absorb vitamins A, D, E, and K
- Broken down into fatty acids

Vitamins & Minerals: Small Amounts, Big Jobs

Vitamins

Water-soluble

B vitamins and vitamin C. Travel through your blood.

Fat-soluble

Vitamins A, D, E, and K. Need fat to be absorbed.

Minerals

Major minerals

Needed in larger amounts: calcium, potassium, sodium, magnesium.

Trace minerals

Needed in tiny amounts: iron, zinc, and others.

YOUR GOALS

You matter. So what do you want your food to do for you?

How do you want to feel day to day?

What do you want to be able to do? (Sports, school, work, cooking)

What's one thing you want to learn to cook?

IN THE KITCHEN • 30 MIN

Let's Build a Seasoning Blend

Rule #1 in action: a blend you'd put on meat, made for your vegetables too.

INGREDIENTS

- *[Ingredient + amount]*
- *[Ingredient + amount]*
- *[Ingredient + amount]*
- *[Ingredient + amount]*
- *[Ingredient + amount]*
- *[Ingredient + amount]*

STEPS

1. *[Step]*
2. *[Step]*
3. *[Step]*
4. *[Step]*



THANK YOU

**You're worth a
healthy, delicious
plate.**

Scratch Nutrition Lab × Evans High School

NEXT SESSION

Your Nutrition Survey

A short survey about how you eat and how confident you feel in the kitchen.

[Session 2 topic]

[One line on what's next]