

SCRATCH NUTRITION LAB · SESSION 2

Plant **Power**

Vegetables, fiber, and the plant-forward plate

9:16 – 11:03 · Evans High School, Culinary Arts Level 3



HOW TODAY WORKS

Two halves.



69 min

9:16 - 10:25

Talk, argue, and look at your own plate



38 min

10:25 - 11:03

Juice Lab — you press it, you taste it

Nobody talks at you for two hours. That was never the plan.

What vegetable do you actually like?

And name one you have never tried but would be willing to.

No wrong answers. "None" is an answer — say it, and we'll come back to you at the end of the lab.

How were vegetables cooked in your house?

CELEBRATED?

Seasoned, waited for, fought over at the table.

The pot everybody hovered around. The dish that had a name in your house.

OR TOLERATED?

Boiled, plain, the thing you had to finish first.

The side you pushed around the plate until you were allowed to leave.

KEY CONCEPT

Fiber — the body's broom

Fiber is the most under-eaten nutrient in the American diet. It doesn't digest. It passes straight through, doing critical work the entire way.



It doesn't digest — that's the whole trick.

10-15g

What most Americans eat in a day.

25-38g

What your body actually needs.

TWO KINDS, TWO JOBS

Soluble and insoluble

SOLUBLE

Oats · beans · apples · citrus

Dissolves into a gel. Slows digestion, steadies blood sugar, and binds LDL cholesterol so your body can get rid of it.

INSOLUBLE

Leafy greens · nuts · whole grains

Adds bulk and speeds everything along. Linked to lower risk of colorectal cancer and diverticular disease.

Beta-glucan, the soluble fiber in oats, has the strongest cholesterol evidence of any single food component.

WHY THIS ONE MATTERS FOR US

Black Americans have the highest rate of colorectal cancer of any group in the country.

The gap is tied to screening and access — and significantly to lower fiber intake, more processed meat, and less vegetable variety.

That last part is the part you can move.

Increasing plant variety is one of the most direct interventions that exists.

Your gut talks to your brain.

100 million

Neurons in your gut — more than your spinal cord.

90%

Of your serotonin is made in the gut.



**Mood. Focus.
Stress.**

Serotonin is the chemical most tied to mood. The mix of bacteria in your gut affects your mood, your stress response, and how well you think — and what you feed them is fiber.

FEED THEM OR ADD THEM

Prebiotics vs. probiotics

PREBIOTICS

The food.

Garlic · onions · leeks · asparagus · oats · bananas

Fibers you can't digest — but your gut bacteria can.

PROBIOTICS

The workers.

Yogurt · kefir · kimchi · sauerkraut · miso

Live bacteria that move in and set up shop.

This was already your food.

Modern nutrition science is only now catching up to what these kitchens already knew.

Plantains

resistant starch · A · B6 ·
potassium

Sweet potato

beta-carotene · C · fiber

Okra

soluble fiber · blood sugar
moderator

Collard greens

calcium · K · sulforaphane

Black-eyed peas

folate · iron · fiber · zinc

Callaloo

calcium · iron · A and C

Yam

complex carbs · potassium ·
manganese

Bitter melon

documented blood-sugar
lowering

GOOD FATS, BAD FATS

Fat is not the enemy.

Your body needs it for hormones, cell walls, brain function, and absorbing vitamins A, D, E and K. The question is which kind — and how much.



Monounsaturated

Olive oil · avocado · almonds

Anti-inflammatory. Heart and brain.



Omega-3

Fatty fish · walnuts · flaxseed

Brain structure. Memory and problem solving.



Saturated

Butter · processed meat · palm oil

Too much raises LDL and heart risk.



Trans

Partially hydrogenated oils

Inflammation. Avoid entirely.

MICRONUTRIENTS

The hidden crew.

Vitamins and minerals don't get the spotlight — but without them, the show stops. They're the backstage crew that makes the main act run.



VITAMINS

A	Vision and skin health
B-Complex	Metabolism and energy production
C	Immunity and collagen
D	Calcium absorption, bone strength
E	Protects cells from oxidative stress
K	Blood clotting and bone health



MINERALS

Calcium	Strong bones and teeth
Iron	Carries oxygen through blood
Magnesium	Muscle and nerve function
Potassium	Fluid balance and blood pressure
Zinc	Wound healing and immunity
Selenium	Defends against oxidative damage
Iodine	Thyroid hormone production

HOW YOU ACTUALLY GET THEM

You don't need a supplement shelf. Just a colorful plate.

FAT-SOLUBLE: A, D, E, K

These four need fat to be absorbed at all. Olive oil on your greens isn't a garnish — it's how the vitamins get in.

WATER-SOLUBLE: B AND C

Not stored — you need them regularly. Heat and long boiling cut them down, which is one more argument for raw, roasted, or quick-cooked.

Collard greens

calcium · K

Sweet potato

beta-carotene → A

Okra

vitamin C

Black-eyed peas

iron · zinc

Callaloo

iron · A · C

Plantain

potassium · B6

Small nutrients. Big impact.

MAKING VEGETABLES IRRESISTIBLE

The barrier isn't access. It's technique.



ROAST

400°F. Caramelizes the natural sugar, crisps the edges.



GLAZE

Maple, honey, balsamic in the last few minutes.



SPICE

Your September blends — jerk sprouts, adobo sweet potato.



ACID

Lemon, lime, vinegar at the end. Flavor with no salt.

"Season your vegetables like you season your meat. They deserve the same respect."

BEFORE WE TOUCH THE BLENDER

Juice or blend?

JUICING

Pulls the liquid out, pulp goes in the trash.

The fiber leaves with the pulp. You get the sugar without the brake.

BLENDING

Keeps the whole fruit in the cup.

Fiber stays. Sugar arrives slowly. You stay full.

Neither one is cheating. But you should know which one you picked.

38 MINUTES · ONE JUICER, THEN THE BLENDER

Juice Lab

JUICE ONE

Carrot & Orange

Carrots · oranges

Orange goes in, orange comes out.

JUICE TWO

Cucumber, Grape & Mint

Cucumber · green grapes · mint

Flavor with no salt and no sugar.

JUICE THREE

Kale, Orange & Strawberry

Kale · oranges · strawberries

The fruit carries the kale. You drink it anyway.

THEN PUT THE FIBER BACK. Pour what's left into the blender with frozen fruit. Same fruit, different result — and you taste both.



KEEP THE PULP. Nobody empties the catch bin. That pulp is the whole point of the next slide.

WHILE YOU DRINK IT

So... is juice healthy?

WHAT IS IN THE CUP

Vitamins, minerals, and sugar.

Everything water-soluble made it through. So did all of the fruit sugar, with nothing left to slow it down.

WHAT IS IN THE BIN

The fiber.

The pulp you just looked at is the soluble and insoluble fiber from slide five. It never reached the glass.

Our own manual puts most juices with the simple carbs — fast and flashy, high then burn. The pro tip on that same page: eat your carbs close to their original form.

BEFORE YOU GO

Name one plant you're
adding **this week.**

Out loud. One you've never tried, or one you already like and will actually buy.

*We're not asking you to change everything.
One plant. This week.*

Scratch Nutrition Lab × Evans High School

THIS WEEK'S RECIPE

**Carolina Gold Cobb
Salad**

In the lab