



THE *ABC*S OF PHYTONUTRIENTS:

A BACK-TO-SCHOOL GUIDE TO WILD BLUEBERRY PLANT POWER

Back-to-school season puts food and nutrition back on families' minds, from mealtime inspiration at home to what goes into lunchboxes and snacks. It can also bring unfamiliar nutrition terms to the surface. **One example is phytonutrients: natural compounds in plants that may interact with the body and support health.¹**

Using wild blueberries as a colorful example, this guide breaks down the science of phytonutrients into a simple ABC:

A

for anthocyanins

B

for bioactives

C

for color

It also offers clear language for explaining these related terms to others.

Fruit and vegetable color can offer clues about what plant compounds they have, their nutritional value and health benefits.

Plant foods come in many colors: blue, purple, red, orange, yellow, green and more. These colors often come from natural plant compounds.

Color is a useful clue, but it is not the whole story.

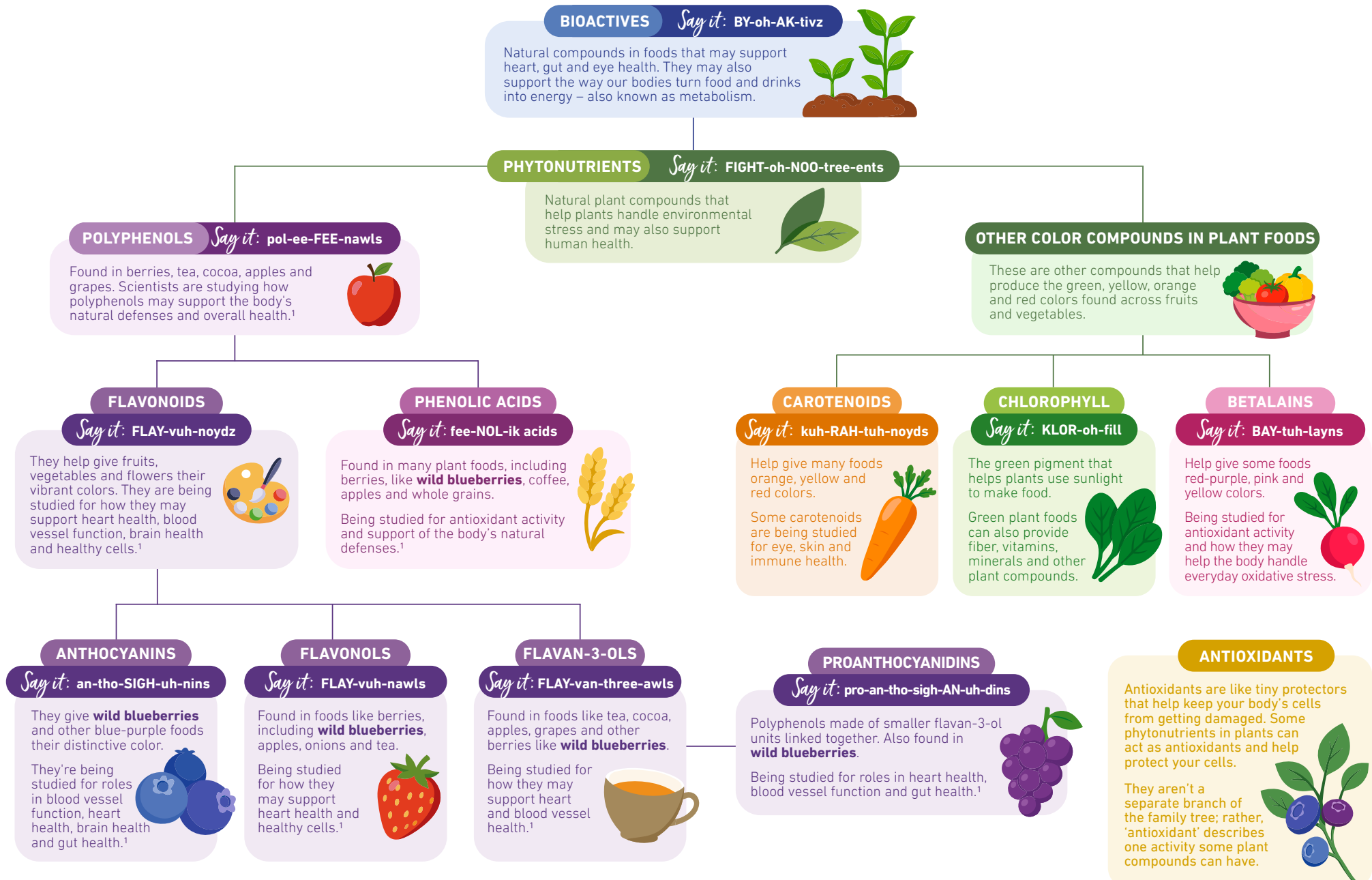
A food is more than one compound. It is a mix of many parts that work together. In nutrition science, this is sometimes called the food matrix.

Color can help explain plant compounds, but the whole food matters.

Eating a variety of colorful plant foods can help people get many types of nutrients.



Think of plant compounds like a family tree. Each branch leads to a more specific group of plant compounds.





Inside a Wild Blueberry: HOW THE PLANT-POWER TERMS FIT TOGETHER

THE COLOR IS THE CLUE. THE WHOLE BERRY IS THE STORY.

COLOR CLUE: ANTHOCYANINS

Wild blueberries get their deep blue-purple color mostly from anthocyanins. These natural plant compounds are found in the berry's skin and flesh.

Anthocyanins are the best-known polyphenols in wild blueberries.

MORE THAN ONE PLANT COMPOUND

Anthocyanins are only one part of the berry's polyphenol mix. Wild blueberries also contain other polyphenols, including:

- Flavonols
- Phenolic acids
- Flavan-3-ols
- Proanthocyanidins

THE WHOLE BERRY MATTERS

The whole berry matrix means all the parts of the berry working together: its plant compounds, fiber, vitamins, minerals, and water.

Wild blueberries are more than one color or one compound.



A PROTECTIVE ROLE

Anthocyanins and other polyphenols in wild blueberries can act as antioxidants, helping protect cells from oxidative stress – everyday wear and tear caused by stressors like metabolism, exercise, sunlight, and pollution.

WHAT SCIENTISTS ARE LEARNING ABOUT *Wild Blueberries*

Scientists have studied wild blueberries to better understand how their plant compounds may support health as part of an overall healthy eating pattern.¹

HERE IS WHAT RESEARCH SUGGESTS SO FAR:*

Blood Vessel Function: Studies suggest wild blueberries may help support healthy blood vessel function, especially how well blood vessels relax and move blood through the body. This matters because healthy blood vessels help deliver oxygen and nutrients where the body needs them.¹⁻³

Cardiometabolic Health: Researchers have found that wild blueberries may have favorable effects on some measures related to heart and metabolic health, especially vascular function. Results are more mixed for other measures, such as blood pressure, blood lipids, blood sugar and insulin response.¹⁻³

Gut Health: Wild blueberries contain polyphenols and fiber, which can interact with the gut microbiome, the community of tiny living things, including bacteria, that live in our digestive system. Some research suggests wild blueberry intake may help support a healthier mix of gut bacteria. Scientists are still learning how this may connect to heart, metabolic and overall health.^{1,4}

Brain Health: Scientists have studied wild blueberries and brain health in both children and adults. Research suggests wild blueberries may help support some measures of memory, mood, attention and thinking (cognitive function). While findings are promising, more research is needed to understand what these changes may mean for everyday learning, school performance and long-term brain health.^{1,3,5-9}

How They May Work

Scientists think wild blueberries may support health through several pathways working together,¹ including:

- Supporting blood vessel relaxation
- Helping the body manage everyday oxidative stress
- Interacting with the gut microbiome
- Supporting the body's natural defense systems
- Providing a mix of anthocyanins, other polyphenols, fiber and nutrients in the whole wild blueberry food matrix

*Studies used different preparations and doses of wild blueberries, including freeze-dried powder, drinks, and extracts. Results should not automatically be generalized to every form or serving of wild blueberries.



BIG NUTRITION WORDS CAN SOUND COMPLICATED, BUT THE MAIN IDEA IS SIMPLE:

Plant colors can signal different natural compounds, and eating a variety of colorful plant foods can help support overall health.

Wild blueberries are a colorful example of the food matrix and how all the terms work together because they contain anthocyanins plus a broader team of polyphenols, fiber and nutrients.



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NATURE'S CRAYON BOX

HOW FRUIT AND VEGETABLE COLORS SHOW PLANT POWER

Eat from the whole box of nature's crayons! Colorful fruits and vegetables have different plant helpers inside them.

These helpers are called **bioactives** - natural parts of foods that scientists study to learn how they work in our bodies. **Phytonutrients** are bioactives from plants. "Phyto" means plant.

Bioactives

Say it like this:
bye-oh-AK-tivs

Phytonutrients

Say it like this:
fight-oh-NOO-tree-ents

Whole fruits and vegetables also bring their own mix of fiber, vitamins, minerals, water, and many plant compounds that work together.

ANTHOCYANINS

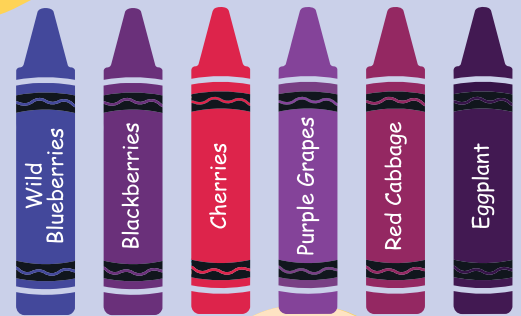
Say it like this:
an-tho-SIGH-uh-nins



Anthocyanins are nature's blue-purple-red crayons.

WHAT THEY ARE: Plant pigments that help color foods like wild blueberries, blackberries, cherries and red cabbage. Anthocyanins belong to a bigger plant compound family called **flavonoids** (FLAY-vuh-noydz), which are part of an even bigger family called **polyphenols** (pol-ee-FEE-nawls).

SCIENTISTS STUDY THEM FOR: How they may support blood vessel, heart, gut and brain health as part of healthy eating patterns.



CAROTENOIDS

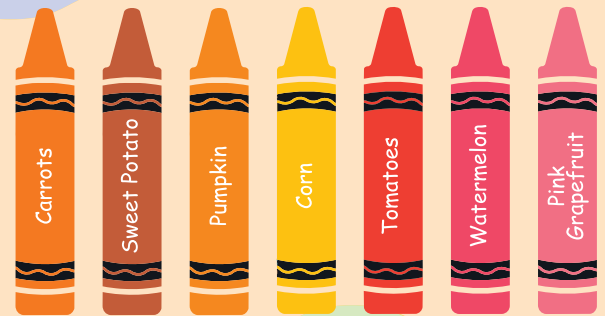
Say it like this:
kuh-RAH-tuh-noyds



Carotenoids are nature's yellow-orange-red crayons.

WHAT THEY ARE: Plant pigments that help color foods like carrots, sweet potatoes, pumpkin, corn and tomatoes. Some carotenoids, like lutein and zeaxanthin, are yellow but can be hidden in green vegetables because chlorophyll is so strong.

SCIENTISTS STUDY THEM FOR: How some carotenoids may support eye health, skin health and normal cell protection.



CHLOROPHYLL

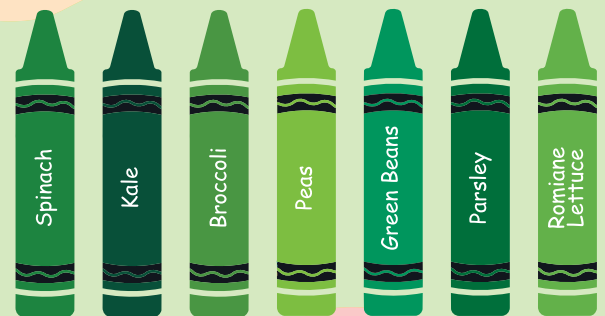
Say it like this:
KLOR-oh-fill



Chlorophyll is nature's green crayon.

WHAT THEY ARE: Chlorophyll is the green pigment that helps plants use sunlight.

SCIENTISTS STUDY IT FOR: Green foods with chlorophyll often come with fiber, vitamins, minerals, and other plant compounds that help support overall health.



BETALAINS

Say it like this:
BAY-tuh-layns

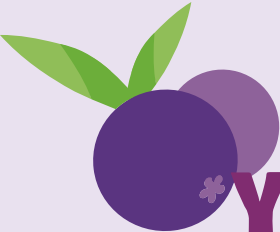


Betalains are nature's reddish and golden crayons.

WHAT THEY ARE: Betalains are plant pigments found in foods like beets and Swiss chard.

SCIENTISTS STUDY THEM FOR: Betalains may help support the body's natural ways of handling everyday wear and tear.





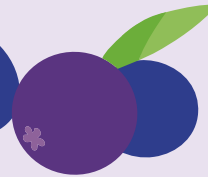
YOUR LUNCH HAS BLUE-PURPLE PLANT POWER!



**HI FROM YOUR LUNCHBOX!
TODAY YOU HAVE WILD BLUEBERRIES INSIDE.**

Blue-purple foods like wild blueberries get their color from plant helpers called anthocyanins.

Say it like this:
AN-THO-SIGH-UH-NINS



Anthocyanins are plant pigments that help make some foods blue, purple and red. Think of them as nature's blue-purple crayons.

Wild blueberries are small, but they carry a big team of plant compounds, including anthocyanins, plus fiber and nutrients. Scientists study how the different parts of foods, like wild blueberries, may support health.



**WILD BLUEBERRIES ARE ONE COLORFUL FOOD
THAT CAN BE PART OF A HEALTHY DAY.**



BLUE-PURPLE COLOR = ANTHOCYANIN CLUE
Wild blueberries are like tiny treasure chests of plant color.

WHAT BLUE-PURPLE BITE SHOULD WE TRY NEXT?



CIRCLE ONE AND ASK AN ADULT IF YOU CAN
MAKE IT TOGETHER:

WILD BLUEBERRY CREAMY VANILLA SMOOTHIE

Blend wild blueberries with avocado,
coconut milk, one date and vanilla until
smooth and creamy.



PURPLE YOGURT SWIRL

Wild blueberries stirred into yogurt
until it turns purple.

Grown-ups: follow your school's allergy rules and use an approved seed butter if
needed. Pack perishable foods with cold packs.

FROZEN WILD BLUEBERRY CUP

Pack frozen wild blueberries in a
small container. By lunch, they are
cold and spoonable.

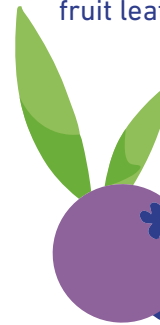


PB + WILD BLUEBERRY ROLL-UP

A tortilla rolled with peanut butter or
seed butter and wild blueberries.

WILD BLUEBERRY FRUIT LEATHER

Wild blueberries blended with apple
and honey, then baked into chewy
fruit leather.



RECIPES AVAILABLE AT
www.wildblueberries.com/recipes/
www.wildblueberryassociation.ca/recipes/

Back-to-School Story Starter: The ABCs of Phytonutrients, Explained Through Wild Blueberries



Hello!

Back-to-school season is the perfect time to talk about colorful foods for the lunchbox and mealtime inspiration, and few tell the story of plant-powered nutrition better than **wild blueberries**. Their signature blue-purple color comes from **anthocyanins**, making them one of nature's most visual examples of the plant compounds generating so much interest among nutrition scientists today.

As a registered dietitian, I know terms like bioactives, phytonutrients, polyphenols, flavonoids, anthocyanins and antioxidants can sound complicated. As a mom and co-author of the upcoming *New England Kids Cookbook* with my 9-year-old daughter, Lexi, I've learned that if we can't explain something clearly enough for kids to understand, we probably need a better explanation.

That's why we're excited to partner with the Wild Blueberry Association of North America (WBANA) to create a media resource designed to make covering the science of wild blueberries easier. *The ABCs of Phytonutrients: A Back-to-School Guide to Wild Blueberry Plant Power* gives reporters a simple, visual way to explain why wild blueberries have become one of the most recognizable examples of colorful, plant-powered nutrition.

Why wild blueberries? They make nutrition science visible. Their naturally deep blue-purple color sparks curiosity, while their anthocyanins, fiber and other plant compounds turn abstract nutrition concepts into something parents and educators can help children see, explore and understand. Using wild blueberries does more than introduce colorful foods, it helps bring the science behind them to life. Plus, their small size and sweet-tart flavor make them a natural fit for lunchboxes, snacks and family recipes.

Lexi and I worked with WBANA to create this toolkit and made sure it included ready-to-use reporting resources like:

1. **A two-page reporter's guide to the ABCs of phytonutrients**, from anthocyanins to bioactives, brought to life through wild blueberries.
2. **A visually engaging poster** that brings the science behind colorful fruits and vegetables to life through the concept of "nature's crayon box."
3. **A lunchbox notecard** families can use to explain blue-purple foods and wild blueberries to kids, plus tasty wild blueberry recipe ideas.

Designed as a reporter-ready resource, the toolkit makes one of nutrition's fastest-growing conversations easier to cover, with wild blueberries at the center. Here are just a few story angles it can support for back-to-school and beyond:

- Back-to-school nutrition: why wild blueberries belong in lunchboxes, breakfasts and after-school snacks
- What parents should know about the plant compounds found in wild blueberries
- Why wild blueberries are one of the most researched fruits for their naturally occurring anthocyanins
- The colorful science behind wild blueberries, and why their blue-purple color matters
- How wild blueberries make nutrition buzzwords like phytonutrients and polyphenols easier to understand
- Why nutrition experts are paying more attention to colorful foods like wild blueberries
- Kid-friendly ways to bring the science of healthy eating to life with wild blueberries



While no single food is a magic answer, wild blueberries offer a colorful, accessible way to explain how plant compounds and whole foods can contribute to healthy eating patterns. Of course, it also helps that wild blueberries are incredibly delicious (which is why we have 3 incredible kid-friendly wild blueberry recipes in our new cookbook)!

From our kitchen table to your story planning, we created this toolkit to help reporters tell a timely nutrition story through one of nature's most colorful foods. We hope it inspires stories that make the science behind wild blueberries more accessible while helping families better understand the colorful world of plant-powered nutrition.

Warmly,



Jenny Shea Rawn, MS, MPH, RD

Lexi Rawn, (9 years old)

Co-authors of New England Kids Cookbook: Tasty Favorites for Young Chefs
(available September 15th, 2026)

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Wild
Blueberries®

New Nutrition Education Resource: Teaching Phytonutrients Through Wild Blueberries



Hello!

Every back-to-school season brings new opportunities to help families build healthy habits. With growing interest in plant-forward nutrition, one topic that's getting more attention, yet remains surprisingly difficult to explain, is phytonutrients.

As a registered dietitian and mom, I believe that if children can't understand a nutrition concept, we need to explain it differently. That's the philosophy behind our upcoming ***New England Kids Cookbook***, which my 9-year-old daughter, Lexi, and I wrote together. She helped shape every recipe, field trip and nutrition concept, keeping us honest whenever something felt too complicated. That same approach guided the development of this resource. This kit, developed in partnership with the Wild Blueberry Association of North America (WBANA), is called ***The ABCs of Phytonutrients: A Back-to-School Guide to Wild Blueberry Plant Power***.

Why wild blueberries? It uses wild blueberries as the main example because their deep blue-purple color comes largely from **anthocyanins**, natural plant pigments that are part of the flavonoid and polyphenol families. Wild blueberries also contain fiber, vitamins, minerals and many plant compounds that are being studied for how they may work together in the body. They also have delicious flavor, and their tiny berry size is perfect for kiddos!

The toolkit includes ready-to-use teaching tools, including:

1. **A family-friendly visual guide** that simplifies bioactives, phytonutrients, polyphenols and anthocyanins using wild blueberries as the anchor.
2. **A colorful "Nature's Crayon Box" classroom poster** that helps children explore how the colors of fruits and vegetables tell a nutrition story.
3. **A lunchbox notecard** families can use to explain blue-purple foods and wild blueberries to kids, plus tasty wild blueberry recipe ideas.

Whether you're working one-on-one with families or leading a classroom, this toolkit helps you:

- Explain phytonutrients through the colorful, kid-friendly example of wild blueberries
- Use wild blueberries to bring concepts like anthocyanins, polyphenols and plant compounds to life
- Spark curiosity about colorful foods through the science behind wild blueberries
- Reinforce messages around colorful, plant-forward eating using wild blueberries as a familiar, real-world example
- Support classroom lessons, family nutrition education, counseling sessions and community programs with ready-to-use teaching tools
- Send families home with practical, evidence-informed resources – including recipes and activities featuring wild blueberries



The toolkit is grounded in current nutrition science while translating complex terminology into language children and parents can understand.

Whether you're counseling families, teaching students, leading community programs or creating nutrition education materials, we hope this toolkit helps you spend less time explaining nutrition terminology—and more time inspiring curiosity about colorful, plant-powered foods.

With appreciation,



Jenny Shea Rawn, MS, MPH, RD

Lexi Rawn, (9 years old)

Co-authors of New England Kids Cookbook: Tasty Favorites for Young Chefs (available September 15th, 2026)