Eating Your Heritage: Using Ancestral Native American Foods as a New Paradigm for Indigenous Health and Wellness

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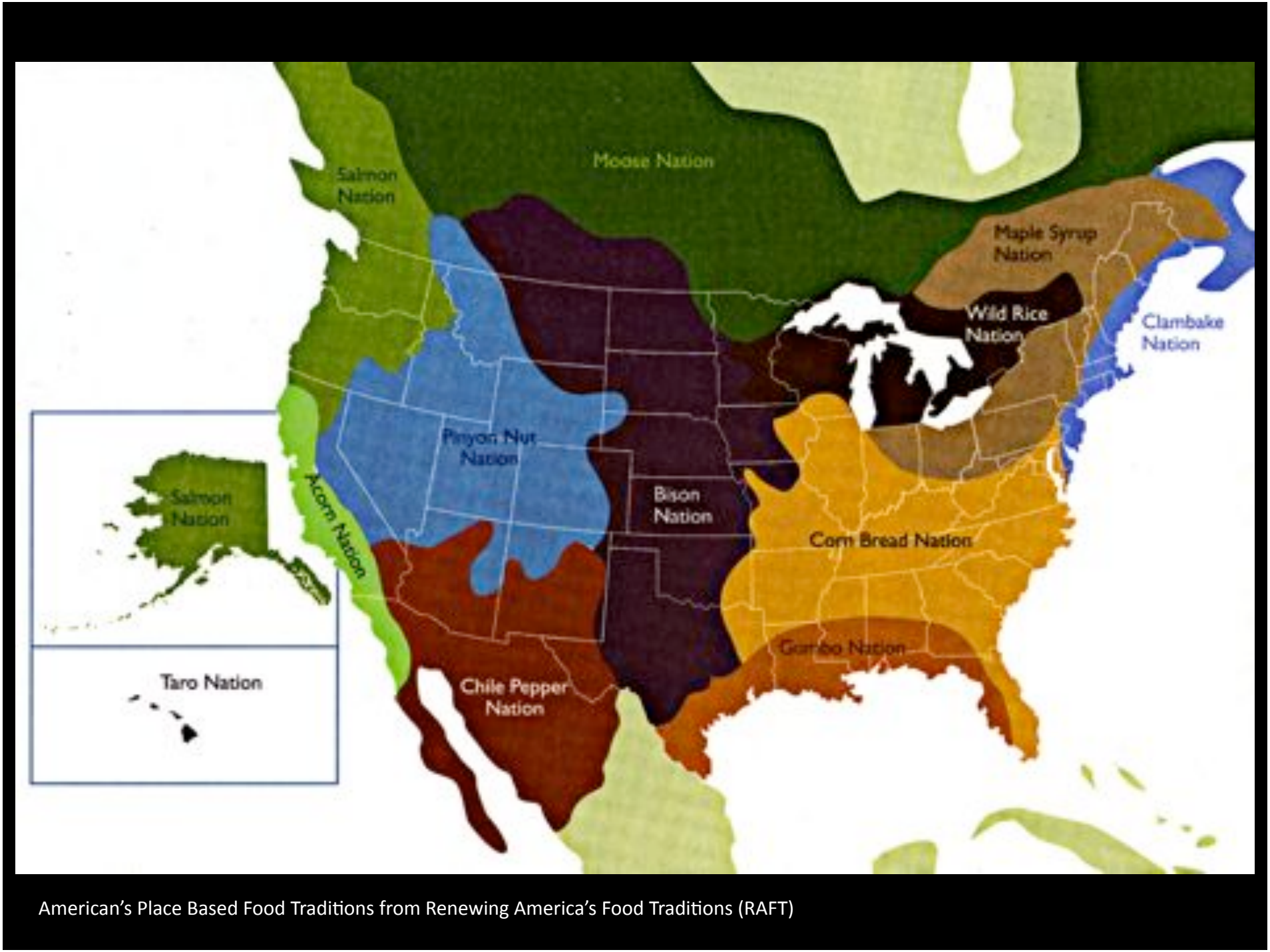
By Lois Ellen Frank, Ph.D.

By using ancient ancestral foods in contemporary kitchens, Native communities can reclaim a new Native American cuisine based on wild and cultivated plant foods of the past for health, wellness, and to solve contemporary health problems, now and in the future. We are in essence going back to the future.

What are the Indigenous foods of the past?

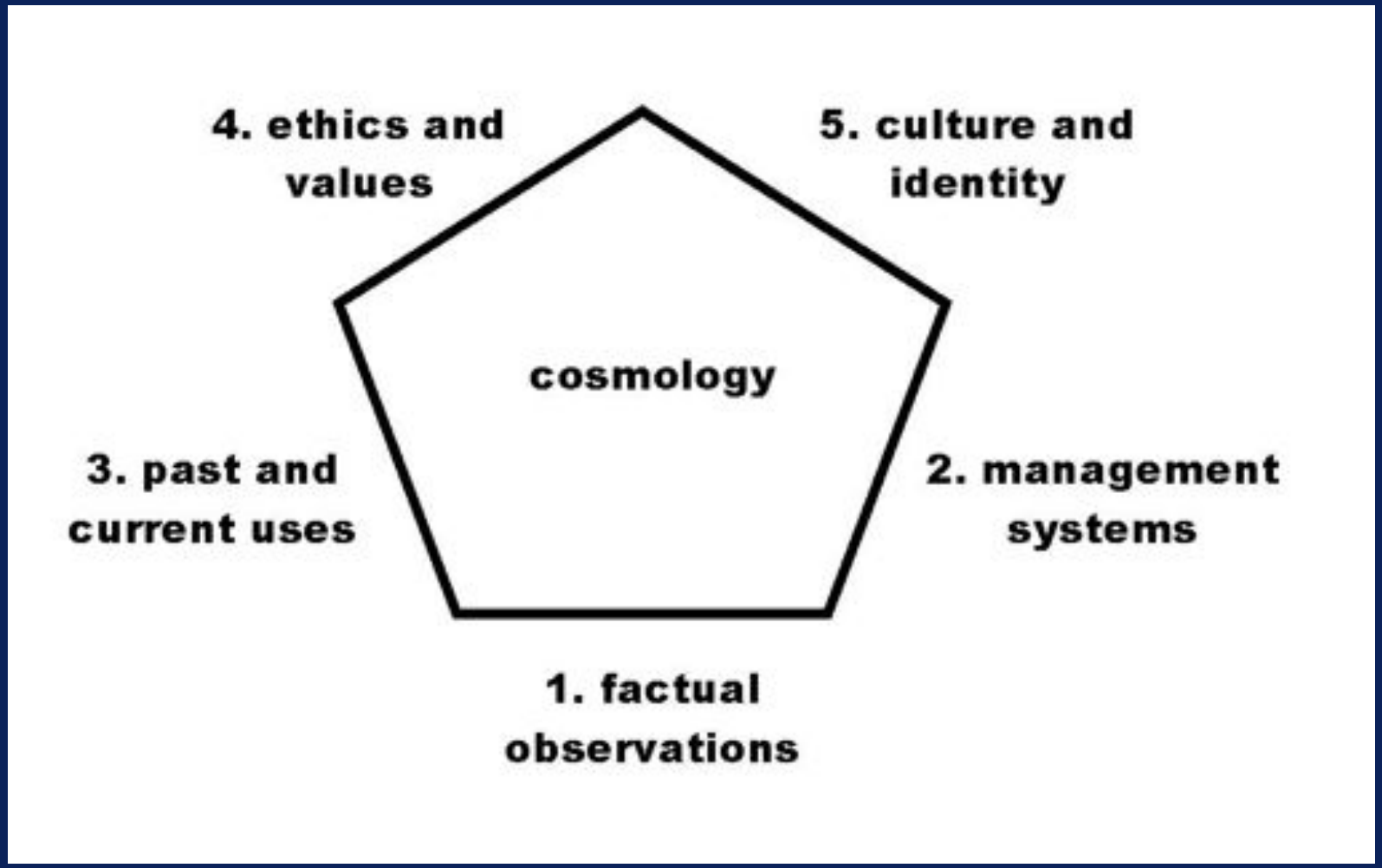


American's Place Based Food Traditions from Renewing America's Food Traditions (RAFT)

Native Food Traditions

Indigenous culture groups adapted to, consumed, survived, and thrived on foods (cultivated and wild plants, herbs, and fungi) native to their particular homeland and ecosystem. Additional ingredients were acquired through trade with neighboring culture groups.

Traditional Ecological Knowledge or TEK Model in Indigenous Communities



Traditional Ecological Knowledge

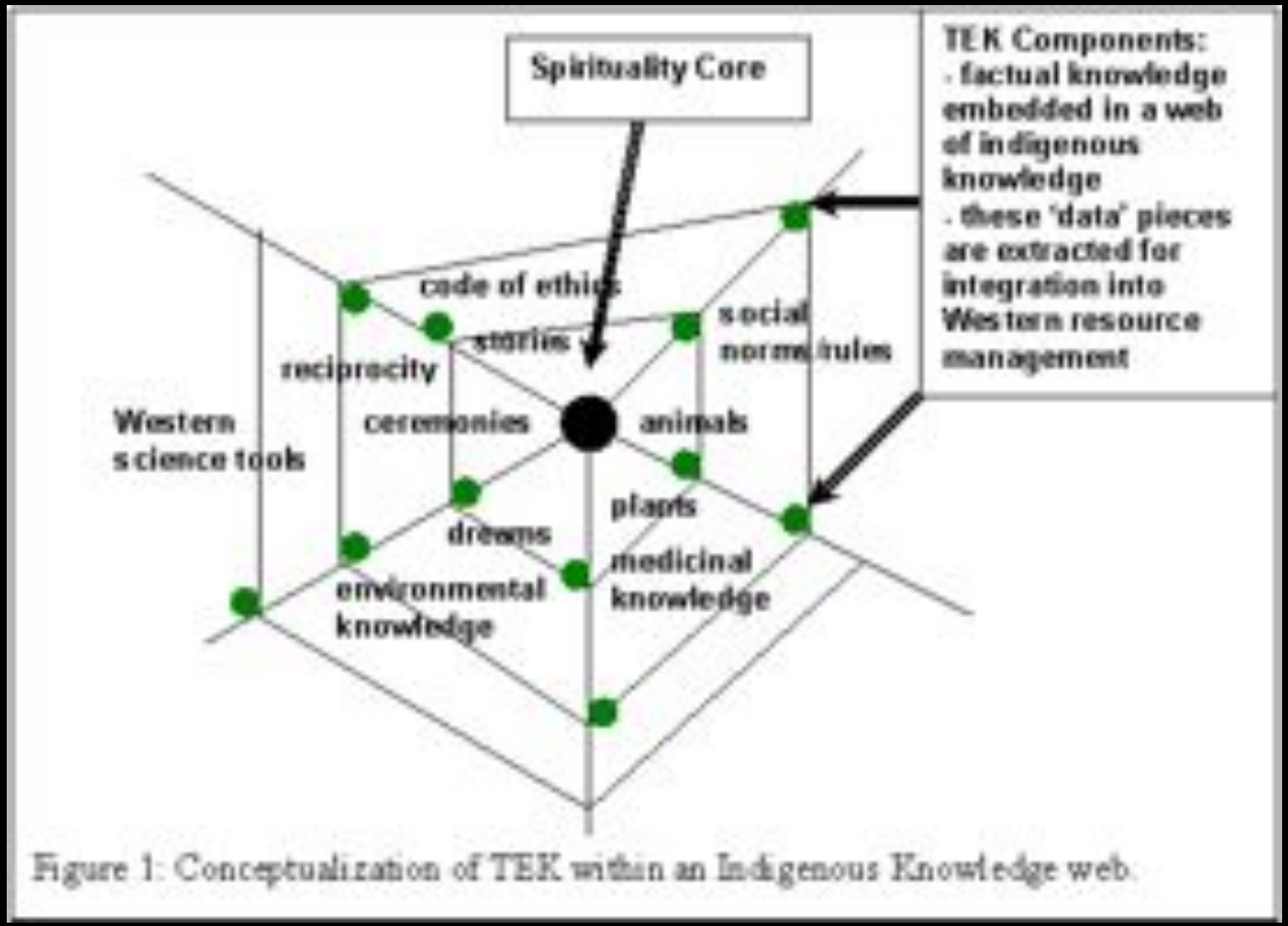
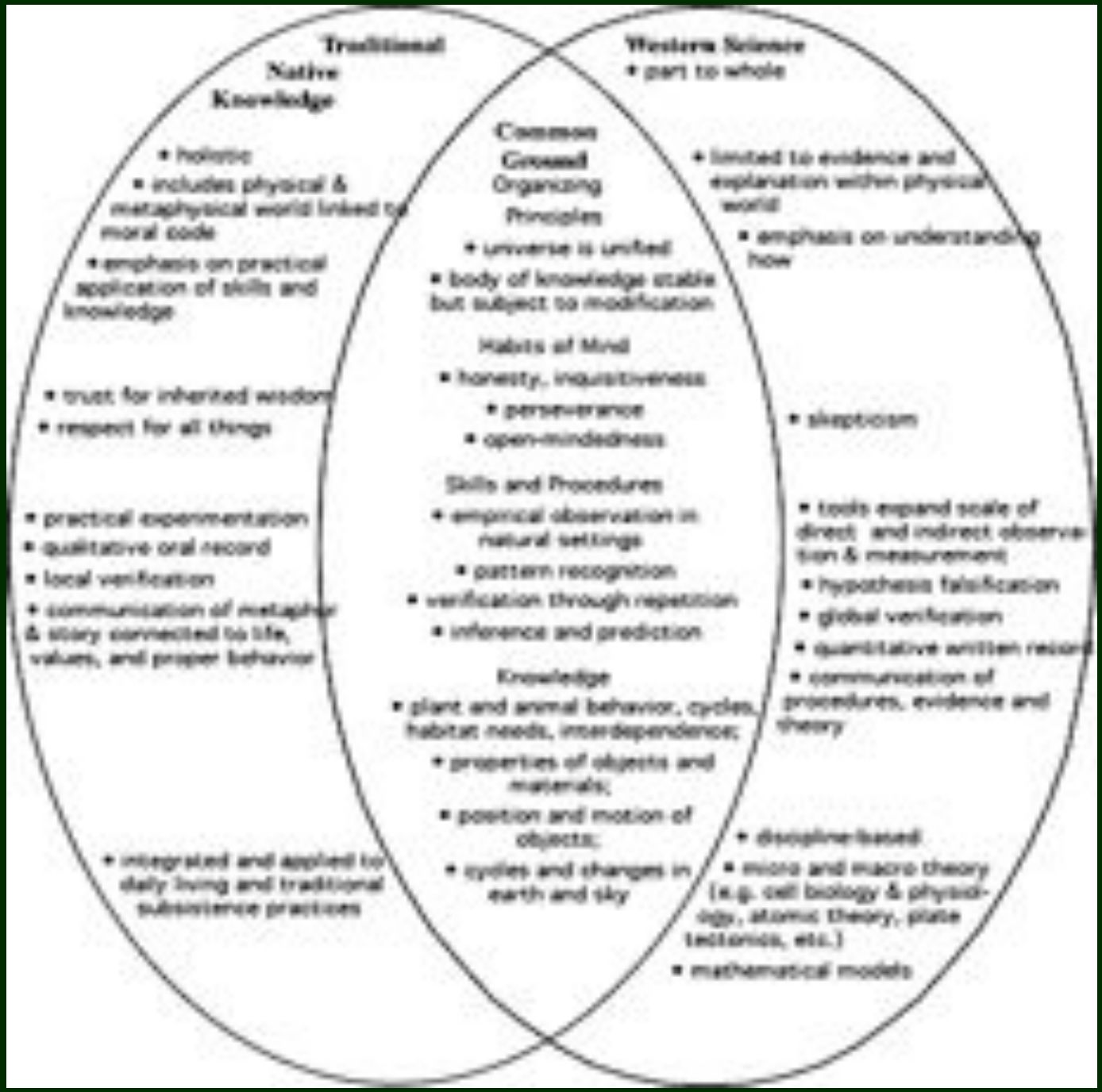


Figure 1: Conceptualization of TEK within an Indigenous Knowledge web

- Traditional Ecological Knowledge (TEK) describes indigenous form of traditional knowledge regarding sustainability of local resources. TEK refers to a cumulative body of knowledge, belief, and practice, evolving by the accumulation of TEK and is handed down through generations through traditional songs, stories, beliefs. This includes knowledge about agriculture, harvesting techniques, gathering and growing food and food practices. TEK involves the relationship of living beings with their traditional groups with their environment.


Traditional Native Knowledge
• holistic
• includes physical & metaphysical world linked to moral code
• emphasis on practical application of skills and knowledge
• trust for inherited wisdom
• respect for all things
• practical experimentation
• qualitative oral record
• local verification
• communication of metaphor & story connected to life, values, and proper behavior
• integrated and applied to daily living and traditional subsistence practices
Common Ground
Organizing Principles
• universe is unified
• body of knowledge stable but subject to modification
Habits of Mind
• honesty, inquisitiveness
• perseverance
• open-mindedness
Skills and Procedures
• empirical observation in natural settings
• pattern recognition
• verification through repetition
• inference and prediction
Knowledge
• plant and animal behavior, cycles, habitat needs, interdependence;
• properties of objects and materials;
• position and motion of objects;
• cycles and changes in earth and sky
Western Science
• part to whole
• limited to evidence and explanation within physical world
• emphasis on understanding how
• skepticism
• tools expand scale of direct and indirect observation & measurement
• hypothesis falsification
• global verification
• quantitative written record
• communication of procedures, evidence and theory
• discipline-based
• micro and macro theory (e.g. cell biology & physiology, atomic theory, plate tectonics, etc.)
• mathematical models

Indigenous Foods of the past are the foods that existed in the Americas before European contact, which I call Pre-Contact Foods.

Domesticated Crops –
Including Corn, Beans, Squash, Chiles, Tomatoes, Potatoes, Cassava, and many others.

Wild Foods Included:

Wild Vegetables – Including Carrots, Celery, Onions, Garlic, Turnips, all types of Salad Greens, Wild Spinach, Wild Mache Lettuce, Fiddlehead Ferns, Purslane Greens, a variety of root vegetables, all kinds of Cacti including Cholla Buds, Nopal Cactus leaves and Prickly Pear fruits, Saguaro Fruits and Seeds, Ocotillo Cactus, Agave, different types of Seaweed, Sea Beans, Wild Mushrooms, all types of Medicinal Plants and many more.

All Types of Fruits - Wild Strawberries, Wild Blackberries, Red and Blue Huckleberries, Blueberries, American Red Raspberry, Chokecherry, Wild Cherry, Wild Currents, Wild Grapes, Saguaro Cactus Fruits, Banana Yucca Fruits, Avocados, Bananas, Mangos, Coconuts, and many more.

Grains and Nuts – Wild Rice, Sunflower Seeds, Piñon Nuts, Acorns, Pecans, Mesquite Beans, Cattails, Amaranth, Quinoa and many more.

Medicinal Plants – Arnica, Barberry, Chia, Common Mullin, Creosote Bush, Desert Sumac, Epazote, Four-o'clock, Globe Mallow, Golden Rabbit brush, Horehound, Navajo Tea/Cota, Osha, Rocky Mountain Bee plant, Sagebrush Sand Verbena, Three leaf Sumac, Wolfberry, Wormwood, and many more.


Seeds of Health: Native American ancestral staples such as Corn, Beans, and Squash may be a key to solving contemporary health problems

High in protein and nutrients and low in sugar and fat, corn, beans, and squash also known as the Three Sisters, are considered by many tribal communities to be sacred gifts from the Great Spirit. The way these vegetables grow in the garden exemplifies this notion of interconnectedness, as do the complementary nutrients they provide.

Native peoples have grown corn, beans, and squash for thousands of years; even today, the technique of planting the three types of vegetables in the same row or mound is found in many Native communities and on some smaller family farms. This sophisticated, sustainable system cares for both the people and the earth, providing a healthy diet and long-term soil fertility.

Native American traditional crop garden featuring Indian corn, variety of pole beans, several types of squash, chilies and tomatoes.

Corn, Squash, and Melons growing.

Corn has many layers of meaning to Native American Communities throughout the Americas and is considered to be the essence of life by many. It is one of the most important ingredients in Native American cuisine and many Indigenous peoples of the Americas found time to develop around it a great culture of art, science, literature, and religion.

Hopi farmer, Wilmer Kavena from Polacca, Arizona thinning young corn plants near Low Mountain. Kavena uses a dry farming method for growing his corn.

Cassandra Lyn Begay and Tiffany Georgenia Morgan, Diné from Pinon, Arizona, harvesting corn grown using the dry farming method in Cassandra's grandfather Thomas Mike's cornfield.

Thomas Mike, Maggie Begay, and Christopher Begay, Diné from Pinon, Arizona
roasting corn in an earthen pit to be dried for later use.

Strands of freshly harvested corn drying for winter use.

Within the Native American cuisine movement, both Native cooks and Native chefs are working with traditional ingredients to revitalize their ancestral foods.

Sustenance in a pod: Beans, Nut, and Seeds were relatively easy to grow, gather, and store and became an important part of the daily Native American diet providing high quantities of protein, carbohydrates, minerals, and vitamins. Between 4800 and 3500 B.C., the common bean (*Phaseolus vulgaris)* was the first to be cultivated. Later tepary beans, desert flood plain beans, (*Phaseolus acutifolius)* were being cultivated with varieties of pumpkins and summer squashes. Today beans play a crucial role in health as one of the major ingredients in a traditional plant based diet.

Many different kinds of beans are used in Native communities all throughout North America.

The tepary bean (*Phaseolus acutifolius*) is a native bean that has been grown in the desert for millennia and one of the most heat and drought tolerant annual legume crops in the Southwest, if not the world, making them perfectly suited for the desert environment. These little beans are a perfect food for people prone to diabetes, and a great energy food for athletes and dieters, as they help to regulate blood sugar levels because they are a "slow-release food," that are full of fiber, and have a delicious rich and nutty flavor. Tepary beans have a higher protein content (23-30%) than pinto, kidney, and navy beans, have higher levels of oil, calcium, magnesium, zinc, phosphorus, and potassium, yet are lower in polyunsaturated fat.

Mexican Squash

Baby Yellow Zucchini with
Female Squash Blossom

American Pumpkin
Pie Squash

Grown from the vine, squash are harvested in the late summer and throughout the fall. They are roasted, dried, and stored for later use. With the advent of freezers, squash purée can be frozen for months if not the whole winter season.

Tiffany and Cassandra harvest squash which grows side by side with the corn.

Pumpkin corn soup with lime cream served in small pumpkin bowls, fried stuffed squash blossoms with wild celery sauce and below squash blossom soup. Only the male squash blossom are harvested for food, while the female blossoms are left on the vine to become mature squashes.

Variety of New Mexico Chiles

Hungarian Paprika Peppers

Sunset Cayenne Chiles

Hot Banana Chile Plant

Illustrated here is a variety of chiles, an important ingredient in traditional Native American cooking, often referred to as the spice of life. This fruit, which grows on plants of the genus (*Capsicum)* is a member of the *Solanaceae family* as are the tomato and potato. While chiles originated in the Americas they have since spread all over the world.

Chiles considered to be the spice of life in the Southwest have both been cultivated and harvested in the wild. Migrating upward from South America, chiles were introduced into the Pueblos and have become a major ingredient into the traditional foods of the Southwest region.

New Mexico chiles come in a variety of colors and types, which are harvested fresh and hung to dry in ristras from the exterior of homes to be used throughout the year in whole or powder form.

New Mexico Jalapeños

Fresh New Mexico Red Chiles

Fresh New Mexico Green Chiles

Santa Fe farmer's market heirloom tomatoes

Fall harvest bounty from the farmer's market.

Tomatoes which may refer to the plant *(Solanum lycopersicum)* were being eaten by the Aztec people of central Mexico at the time of first contact. The word t*omatl* in Nahuatl means something round and plump and was used to refer to many fruits. Tomatoes are another example of a food indigenous to the Americas that is now widely used by many other world cultures.

The Importance of Wild Foods in the Native American Diet

The Mesquite is a leguminous plant of the *Prosopis* genus that is a perfectly suited to the desert environment. The plant produces an edible bean which is an important desert food. The bean pods are dried and usually ground into a flour and made into a meal adding a sweet and nutty taste to breads. This ground meal helps to regulate blood sugar and is a perfect food for diabetics.

Deborah Conrad, harvesting prickly pear fruits, the most popular edible cactus. The prickly pear (*Opuntia phaeacantha and Opuntia engelmannii)* produces a reddish-magenta fruit that is harvested in the late summer to early fall depending on the region. The tangy pulp is used for juices, jellies, preserves, and fruit ices.

Calandra Willie harvesting Navajo Tea, the Indigenous beverage pre-contact at her grandmother Alice Willie's house in Seba Dalkai, Arizona.

Indian tea ice made from wild tea, prickly pear sorbet made from ripened prickly pears and bizcochito cookies, a favorite Southwest dessert.

The Saguaro (*Carnegiea gigantea*) cactus produces a fruit that is an important Native food harvested during the summer months that is used as a food and a medicine.

The ripened fruits are harvested and then processed.

The Saguaro fruit is processed into a juice, then a syrup and made into a variety of traditional Native dishes.

Chokecherries *(Prunus virginiana)* are eaten fresh, ground, formed into cakes, and dried. Dried fruits are stored for later use. The purple berries are also used to make dyes.

Fresh wolfberries (*Lycium pallidum)* can be eaten right from the shrub. They are also ground, cooked to make a jam, stewed, sweetened, and eaten as a delicacy. The berries can be made into syrup as well as boiled, dried and stored for winter use.

Purslane (*Portlaca Oleracea)* once a vital ingredient of prehistoric Puebloan diets, is an extremely rich source of omega-3 fatty acids and is high in Vitamins A and C. It is one of a number of wild plants that were traditionally collected for food and are now known to have medicinal benefits. The greens can be eaten raw like spinach or cooked and eaten with green chile, mean, or a broth made from animal bones. It is also dried, stored, and used as greens in the winter.

When the Spanish entered the Southwest region from Mexico they changed the traditional native way of life and altered ancestral food history that would never be the same again. Pueblo villages and tribal communities throughout New Mexico and Arizona were altered with the introduction of new foods, new religion and a new way of being in the world.

The Spanish forced the Diné (Navajo) who were traditionally nomadic and more of a hunter/gather culture then a sedentary one, to farm Europeans crops, completely transforming their diet and way of life. Sheep were introduced to the Diné and they would become sheepherders.

First Contact Foods of the Southwest

These Foods Included: Sheep, Pork, Beef, Wheat, Watermelons, the Wine Grape, and Stone Fruits including: Apples, Peaches, Pears, Apricots all of which are now very important Traditional Foods to the Native Diet in the Southwest as well as in other Native communities all over the United States.

Traditional locally grown cultivated and wild harvested foods from both the pre-contact period and the first contact period. Illustrated here are some heirloom foods, including cultivated crops and shearings from Navajo Churro Sheep that were introduced by the Spanish upon contact.

Peaches became an important part of the Navajo diet once introduced by the Spanish.

Illustrated here is a contemporary Navajo peach pudding and freshly whipped cream.

Government Issue Foods or Commodity Foods

After forced relocation onto reservations, Native communities lost their agricultural and hunting bases for food. The U.S. Government issued commodity foods to these communities. According to the USDA Commodity Foods website, it states,

"Our mission is to strengthen the nutrition safety net through commodity distribution and other nutrition assistance to low-income families, emergency feeding programs, Indian Reservations, and the elderly."

Foods Originally Distributed on reservations included:

White Flour, Lard, Blocks of Cheese, Dry Beans, Canned Meats, Instant Non-Fat Dry Milk, Coffee and other items.

It is only in recent history, within approximately the last 150 years or so, by foods forcibly introduced and distributed on reservations, that the health and wellness within these same communities has been drastically changed.

Pueblo adobe oven baked goods combine introduced foods, such as white flour, sugar, cinnamon, and fruit. Many of these foods are fine in moderation but should not be eaten everyday.

Versions of the Indian Taco, a Native American contemporary dish featuring frybread, some type of meat, usually ground beef or bison, beans, cheddar cheese, lettuce, tomato, and green chile.

Contemporary Versions of the Indian Taco today feature organic meats, farmer's market baby salad greens, heirloom tomatoes, goat's cheese, guacamole, and sprouts. Using No Fry frybread with healthier ingredients these can now be used to make this dish more nutritious.

The Native American Foods Movement

- Native American communities around the world are actively maintaining, renewing, and revitalizing their traditional foodways through a variety of ways.
- These Include:
  - land restoration and access for community members
  - heirloom seed saving and Native plant propagation
  - traditional farming practices and wild food gathering
  - cooking and nutrition classes on traditional foods
  - revitalizing the cultural, spiritual, and physical connections between the environment and community for health and wellness

Abiquiu farm growing crops from the Pre-Contact and First Contact Periods

Emigdio Ballon (Quechua) and Gailey Morgan (Tesuque) in the field at Tesuque Pueblo Farms which cultivates crops including: peaches, apricots, plums, pears, cherries, grapes, apples, asparagus, bee hives, medicinal herbs, and many other edible crops to feed the Tesuque Pueblo community.

Institute of American Indian Arts (IAIA) students Janessa Chinana, Terrance Clifford, Alice Hergenrader work with Emigdio Ballon at Tesuque Farms transplanting medicinal plants in between fruit tree rows as part of their Indigenous food class curriculum.

Tesuque Pueblo farm newly built seed storage building for preserving seeds from their farm

Food drying racks for drying fruits grown at the farm.

Genevieve Kaursgowva, Hopi from Hotevilla, Arizona, making blue corn *piki* bread, an ancient paper thin tissue cornbread on a *piki* stone using the traditional method.

Juanita and Maria Kavena,
Hopi from First Mesa, Arizona
eating yellow and red *Piki*
bread given to them by the Kachinas.

Stacks of freshly made
yellow *Piki* bread, one of the
oldest traditional Native
American cornbreads in the
United States.

Diné Grandmother from Ramah, New Mexico preparing traditional blue cornmeal pancakes on an outdoor fire.

Corn used in a variety of dishes as illustrated here.

Roasted corn from the earthen oven pit, Blue corn cob breads, *Someviki* meaning tied bread in Hopi, a boiled blue corn meal dumpling served with red chile sauce, Spicy fresh corn soup with red pepper purée and *Chicos.*

Education in Native American communities on Ancestral Foods and the Culinary Arts

Objectives:

•Reclaim ancestral foods

•Revitalize traditional cooking techniques and recipes associated with them

•Educate and teach children, teens, college students and adults of the importance and role of traditional foods in health and wellness

•Develop well-rounded culinary professionals in both the theory and technique of cuisine

•Develop specialized workshops tailored toward individual and groups needs that include and are not limited to health, nutrition, teambuilding, youth development, and technical skill enhancement.

•Create an overall awareness of traditional and contemporary Native American culinary customs and technologies that include concepts of sustainable agriculture, health and nutrition

Norma Naranjo, a native cook from Ohkay Owingeh Pueblo, *(San Juan Pueblo)*, teaches students how to make Pueblo oven bread and a variety of other Pueblo dishes. For lunch on this day, Norma served a whole wheat tortilla bread with posole, a bean and chicos dish, cucumber salad, and enchiladas.

Norma and her husband, Hutch preparing oven bread for the Ohkay Owingeh Pueblo Feast day.

Norma preparing the dough for a traditional Pueblo prune pie and canned items from her garden and fruit trees.

A specialized corn used for making chicos, a dried sweet corn shown here growing in Truchas, New Mexico at almost 8,000 feet

Drying corn to be used for chicos. Chicos are corn kernels that swell up and taste like freshly smoked corn. A specialized field corn is dried by roasting the cobs overnight in an adobe oven.

Processing chicos corn by rubbing two dried cobs together to remove kernels for storage and later use. This process has been used for centuries by both the Native American and the Hispano cultures from the Northern New Mexico region.

Chef Walter Whitewater (Diné) teaches students about Native American foods and indigenous culinary techniques as part of the Santa Fe Public School Indian Education Program.

Native American students Jude Bermudez, (Cochiti Pueblo) and Larissa Scott, (Winnebago/Navajo) both 10 years old preparing whole wheat dough for no fry frybread, a healthier version of the traditional Indian frybread.

Native American student Jude Bermudez (Cochiti Pueblo) cooking the no fry frybread, also called tortilla bread on a mesh grill over an open flame to be served with a healthy high protein low fat traditional stew.

From Left: Isabella Davis, (Turtle Mountain Chippewa) 6 years old with Amy Casados (Isleta Pueblo/Navajo) and Memphis Singer (Navajo) 8 years old cutting farmer's market produce for a traditional stew (pictured).

Ashley Hall being hugged by her mother after receiving her certificate for the Healthy Native American Cooking Program at the Institute of American Indian Arts Public Program sponsored by the Physicians Committee for Responsible Medicine (PCRM).

Travis Miller at the Institute of American Indian Arts in the Indigenous Food Class grinding corn by hand

For Travis Miller, a member of the Stockbridge-Munsee Band of Mohicans, the class positively changed his perspective on food and brought awareness of food's tremendous importance as medicine. "Although I was already conscious of the adverse side effects our contemporary diets have on our health, Dr. Frank's class gave me the tools to better understand how to incorporate a healthier, more traditional diet into my modern lifestyle for me and my family."

A variety of blue corn mush food presentations where the students took the corn they ground by hand and added indigenous fruits, nuts, cacao (dark chocolate) to make versions of what they called a Native American parfait.

Jamelyn Ebelacker, a graduating senior from Santa Clara Pueblo, who originally took the Indigenous Concepts of Native Food class at the Institute of American Indian Arts, (IAIA) to merely fulfill her science credit stated, “This class quickly turned into an eye-opening experience, a part of Native Cuisine that I had never explored before including Native foods, Native food history, and food history in general. This class taught me about food. But it also taught me that food is much more than what you put into your mouth, that food is also medicine. I learned how my culture and other Native Cultures utilized food in the past and its importance to different Native communities in the present tense. This class was a vessel of important knowledge that everyone should have, especially at Tribal Colleges and Universities, because everything from the past, from how we gathered food and what we ate as Native People is applicable to life in a present day sense.”

Students at IAIA working on preparing healthy desserts using no sugar and indigenous ingredients

Jamelyn also applied what she learned from the class to help address health issues in her own community. She stated,

"After I took the class, I noticed a lot of changes in my personal eating habits (lifestyle habits) and I haven't gone to eat fast food since the class. My taste buds have basically changed. For me, this class was much more than a Native Foods history class. It was more than just information for me. I now have the tools to lead a healthier life, to not have diabetes like some members of my community. This class is more than just a science class. It is really a lifestyle class. And as far as real world applications go, I was able to take away TEK, which is much different than other kinds of academic knowledge. It's knowledge that I can apply to my own Pueblo. I gained a set of tools that I could go back into my community with and help people on my Pueblo to make some small changes, little things that could make a huge difference in my community. The application here is very real, it's very powerful and is definitely has a place in Native education today."

Students with their plated versions of a flourless dark chocolate, pine nut, and blue cornmeal torte with a prickly pear syrup and peach honey sauce

Different versions of the same dessert by the students

Native American Diné (Navajo) Chef Walter Whitewater works with White Mountain Apache/ Diné (Navajo) Chef Nephi Craig and Potawatomi Chef Loretta Barrett Oden on plating a contemporary Native American dinner for the Tohono O'odham Community Action (TOCA) annual fundraiser based on ancestral traditional foods of the past.

Chef Franco Lee, Apache/Diné, (top left) helps Chef Whitewater with ancestral foods for the Tohono O'odham Native American Benefit Dinner.

Chefs from Kai Restaurant at the Wild Horse Pass Sheraton on the Gila River Indian Reservation prepare a traditional Bean dish for a Native American Dinner.

Chef Bertina Cadman *(Diné)* from Classic Cooking Academy, prepares a Tasting of Indian Corn three ways: Consommé of Indian Market steamed corn, Tamaya blue corn and Piñon puree, and mixed corn kernel confetti.

Native American culinary student Latisha Wilson prepares a traditional white corn mush with sumac berries at The Classic Cooking Academy in Scottsdale, Arizona. Latisha uses a traditional Navajo set of stirring sticks, passed down from mother to daughter for this dish.

Native American Diné (Navajo) Chef Bertina Cadman plates a dish of three different kinds of traditional corn mush.

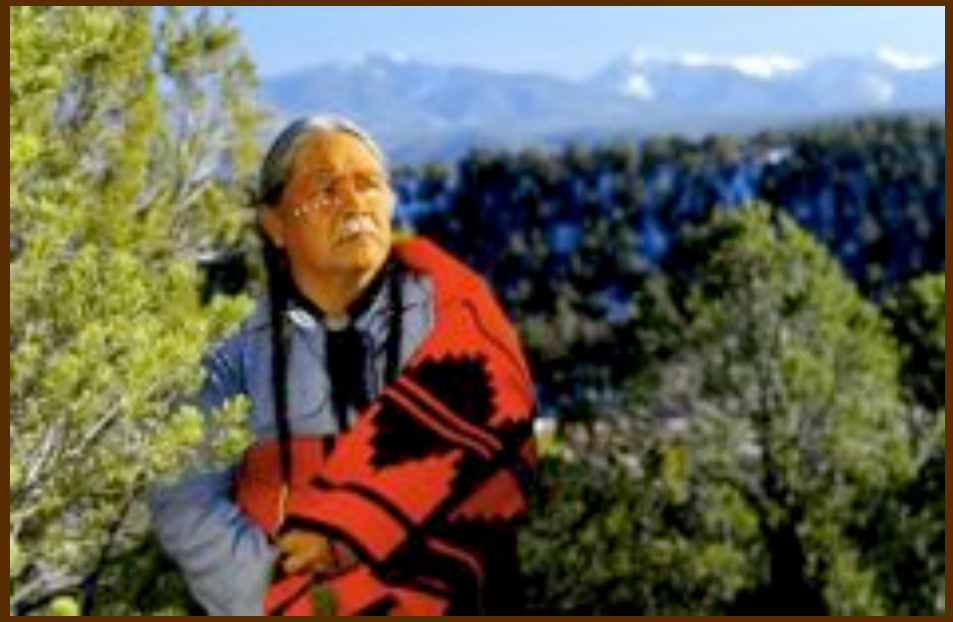
Chef Loretta Barrett Oden *(Potawatomi)* plates an Achiote marinated quail on a Quinoa Pilaf Nest with Avocado Salsa and Sautéed Cholla Cactus Buds for her dish at KAI Restaurant for the TOCA fundraiser dinner.

Chef O'Dowd plating quail at KAI.

Nephi Craig and Franco Wayne Lee's Rabbit Three Ways featuring a "stew" of leg meat, a "dumpling" of a Navajo white corn rabbit tortellini, and "roast" rack of rabbit.

New Paradigm:

- Activate ancestral knowledge utilizing Indigenous ways of knowing (Traditional Ecological Knowledge/TEK) and understand the interactions with land and culture to inform practice
- Create and embed Indigenous cultural links into standards of Indigenous cuisine
- Transition from a Western or Euro modern culinary methodology to one that reclaims Native traditional values for food, food practice, and food presentation
- Recover social values through Indigenous foods
- Use teaching methods and strategies that inform on the history of Native American foods, including agricultural practices, wild food harvesting techniques, food as medicine, and methods to prepare Native foods that inform decisions on health and wellness for community members
- Strengthen community partnerships with local, tribal, state, and federal programs and services that support food systems for health and wellness with an outcome of social recovery in the area of Native American foods and cuisine
- Identify resources that assure accessibility to safe, fresh, and healthy foods, both a physical access and a financial access.



Traditional foods are an integral part of Native life ways. Governor Richard Mermejo of Picuris Pueblo with Truchas Peaks in background and Tiffany Georgeina Morgan with one of her grandmother's sunflowers. The elders have much knowledge about our traditional way of life which must be passed down to our younger generation.

Definitions

Indigenous Partnerships: Short and long-term reciprocal alliances between Indigenous groups, Native American tribes, communities, and organizations and other ethnic or Euro-American groups, organizations, institutions, and individuals where indigenous agenda(s) take priority.

The Cultural Conservancy, Melissa Nelson, Ph.D., Associate Professor, American Indian Studies, San Francisco State University.

Essential Ingredients for Indigenous Partnerships

- Listen – what does the community really want and need; how do they want to work together?
- Self-knowledge – Each partner is rooted in an ethnic background, cultural identity, and useful position
- Acknowledge Positions of Power – there is explicit acknowledgement about differential positions of power and privilege
- Respect – for indigenous cultural traditions and diverse worldviews including cultural privacy and intellectual property rights

Essential Ingredients

- Time – to commit to collaborative process, to build trust; to making a real difference; to both short and long-term goals

- Reciprocity – mutual respect and shared decision-making process; all partners are learners and teachers

- Benefit-sharing – tangible and intangible benefits are outlined and a system for equity and sharing is outlined

The connection between Native People and their foods are inseparable. It is with the human touch of hands that ties together the traditional cultivation and growing of food to the preparation of these same foods.

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