Chefs' Garden Bovey
Green House

Plant Based @UofG

Hospitality Services

Butternut Squash Arancini, Tomato Chutney, Organic Garden Salad

Motivation

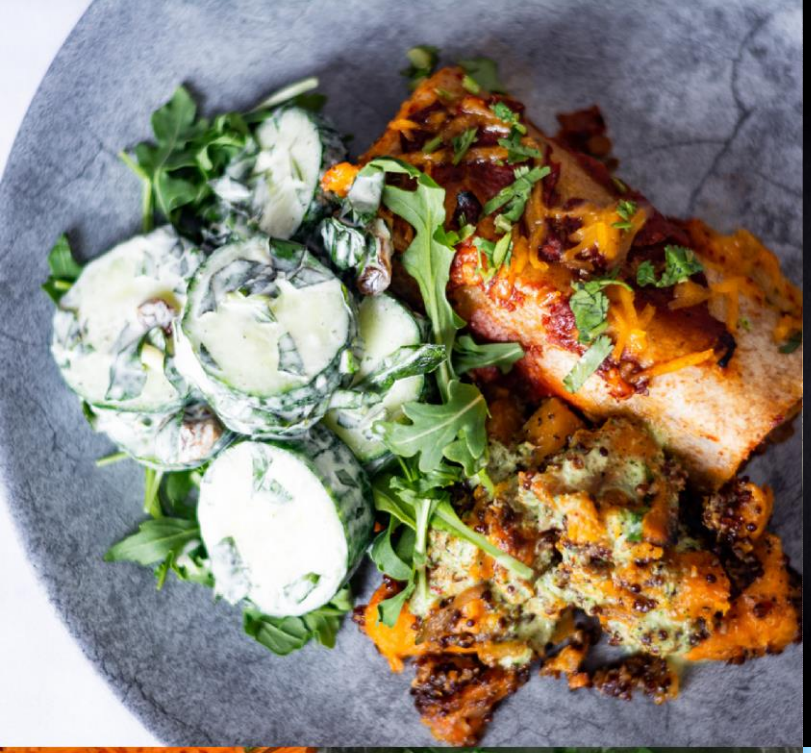
- Environmental Sustainability
- Healthy Eating, Canada Food Guide
- Student Wellness
- Menus of Change - CIA & Harvard
- Contribute to food and nutrition security
- Biodiversity and future of our ecosystems
- Cost Savings

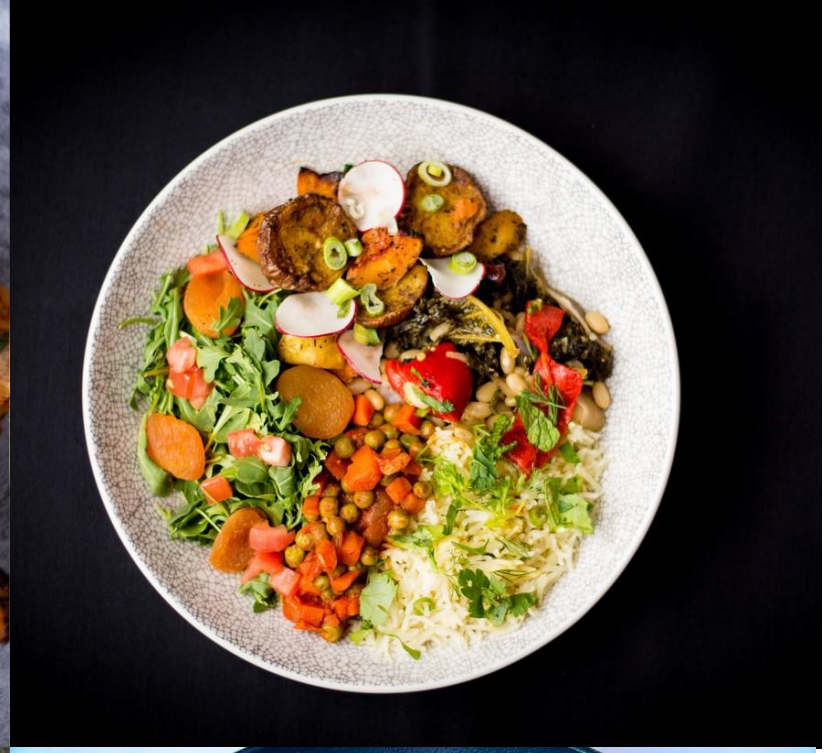
What have we done

- MENUS
  #internationalflavourslocalingredients
- Ethnic vegetarian food has more appeal - research good choices from around the world, offer them consistently
- Produce grown oncampus
- Cooking Styles (more cooked to order stations with variety of vegetables)
- Nosh & Nourish - plant based dishes only
- Training
- Continuous Improvement
- Social Media









Nosh & Nourish

as an example

- Plant based
- Pay By Weight
- Volume in Sep 22 - 4 X 2" pans (30 ltrs)
- Volume in Mar 23 - 18 X 2" pans (135 ltrs)

Nosh & Nourish

4 Hot Entrees
2 Salads
3 Greens
12 Toppings

N + N : Mar 13 - Mar 17

	COLD PASTA	CHIPS	HOT PASTA	BEANS	HOT CAKES	HOT VEG
Mon 13-Mar	**Penne of the Sun**	**Fried Pita**	**Rotini Arrabbiata**	**Chickpeas**	**Beet Falafel**	**Roasted Potato**
	Sun Dried Tomato, Olive Oil, Garlic, Oregano, Red Wine Vinegar	Pita Chips, Oregano and Chillies Seasoning	Pasta, Tomato Sauce, Garlic, Chili Flakes, Pepper, Parsley	Chickpeas, Garlic, Shallot, Cherry Tomato, Olive Oil, Thyme, Rosemary, Red Wine Vinegar	Chickpeas, Beets, Brown Rice, Spice with Diablo Sauce	Potato, Lemon Juice, Ch Flakes, Oregano, Olive C Salt, Pepper
Tue 14-Mar	**Lentil Penne**	**Tortilla Chips**	**Roasted Corn and Mushroom**	**Hoppin John**	**Mixed Rice Cakes**	**Roasted Sweet Potat**
	Noodles, Roast Red Pepper Puree, Hot Sauce, Cilantro	Tortilla chips, Tex-Mex Seasoning	Corn, Mushroom, Tajin, The Very Good Butcher Ribs	Black-Eyed Peas, Brown Rice, Onion, Garlic, Spice Rub, Peppers, Celery	Quinoa, White Rice, Onion, Carrot, Celery, Butternut Squash, Roasted Garlic, Thyme, Salt, Pepper	Sweet Potato, Agave, C Flakes, Lime Juice
Wed 15-Mar	**Marinated Chickpeas**	**Fried Pita**	**Bulghur**	**Kidney Beans**	**BBQ Jackfruit**	**Braised Onions**
	Chickpeas, Garlic, Shallot, Cherry Tomato, Olive Oil, Thyme, Rosemary, Red Wine Vinegar	Pita Chips, Lemon Pepper Seasoning	Bulghur, Preserved Lemon, Parsley, Cumin	Kidney Beans, Harissa, Onion, Garlic, Vegetable Stock, Parsley	Jackfruit, Onion, Peppers, BBQ Sauce, Ribs (The Very Good Butcher Ribs)	Berbere spice
Thurs 16-Mar	**Du Puy Lentils**	**Fried Pita Triangles**	**Quinoa**	**White Beans And Kale**	**Spring Rolls**	**Roasted Root Vegetables**
	Du Puy Lentils, Tomato, Olive Oil, Garlic, Red Wine Vinegar	Pita, Curry Seasoning	Quinoa, Tempeh, Green Peas, Maple, Balsamic, Soy	Navy Beans, Onion, Garlic, Vegetable Stock, Cavolo Nero	Per Package w/ Plum Sauce	Carrots, Parsnip, Swee Potato, Maple, Salt, Pepper, Canola Oil, Parsl
Fri 17-Mar	**Shanghai Noodles**	**Fried Zingers**	**Ketchup Brown Rice**	**Chickpeas**	**Mushroom Grain Cakes**	**Roasted Brussel Sprou**
	Noodles, Tamari, Scallion, Ginger, Mirin, Pickled Shiitake	Per Package	Brown Rice, White Onion, Carrot, Broccoli, Green Peas, Garlic, Ketchup, Tamari, Salt, Pepper, Scallion, Sesame Seeds, Just Egg	Chickpea, Chilis, Cumin, Lemon, Chili Flakes	Mushroom, 7 Grains, Ginger, Soujok Spice, Kale, Red Lentils, Salt, Pepper, Thyme	Brussel Sprouts, Gochuja Olive Oil, Salt Pepper

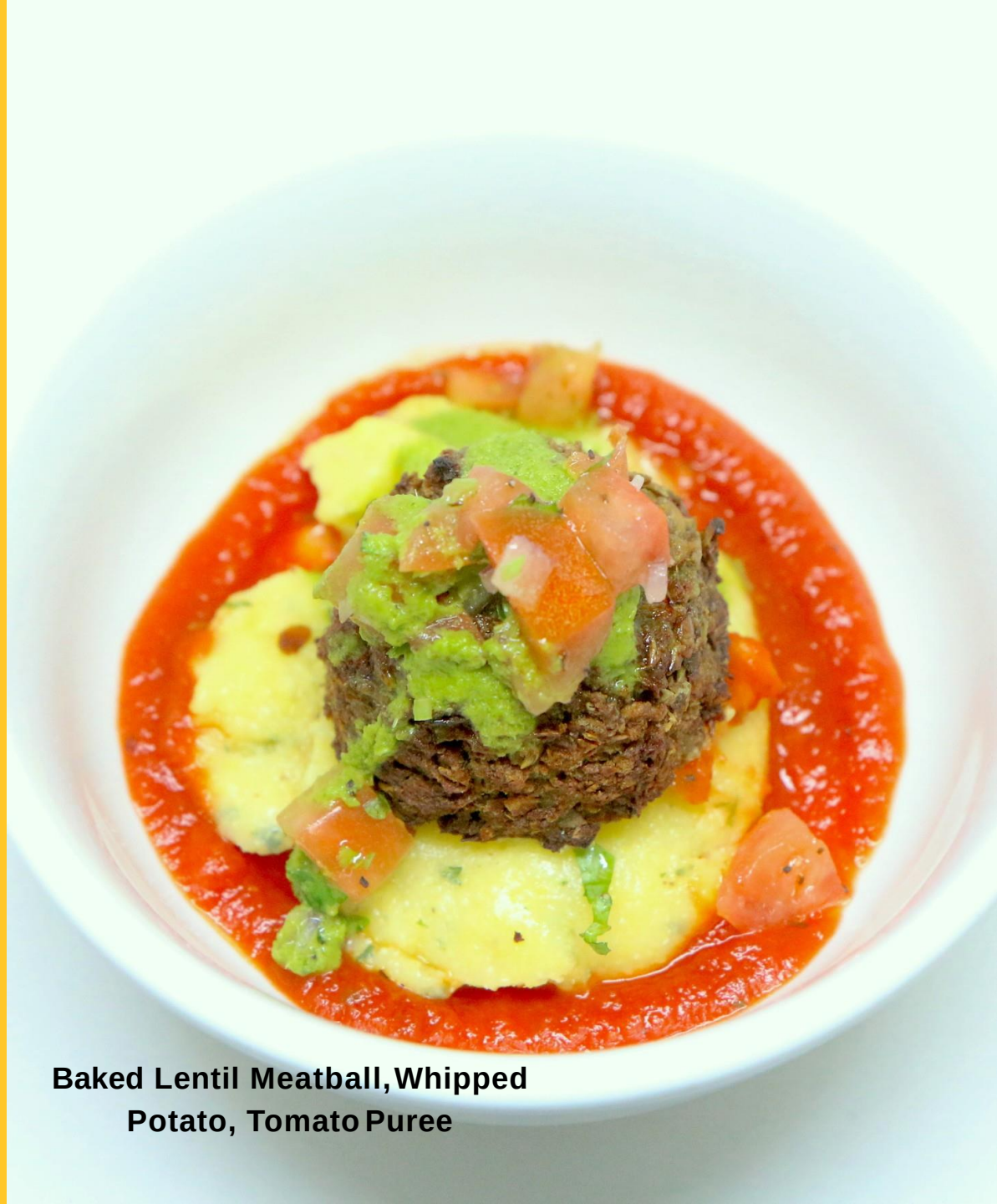
Cauliflower Steak, Lentils, Carrot Puree

Next Steps

- Better educate and train our teams
- Create more awareness amongst our customers
- Recipe consolidation
- Calculate GHG emissions
- More Plant Forward dishes
- Persistence
- Let food do the talking
- Social Media

Challenges & path forward

- Cultural preferences
- Societal shift
- Food Literacy and teaching children when they are young
- Tracking progress
- Agricultural University
- Supply and availability



Baked Lentil Meatball, Whipped Potato, Tomato Puree

we have barely scratched the surface...

Chana Masala

Aloo Kofta, Beet Ketchup,
Cauliflower Puree




The Case for a Plant-Based Menu in Child Care: Efficiency, Safety, Nutrition, Inclusion, and Cost

Valerie Trew, MA, RECE

Director, University of Guelph Child Care & Learning Centre

THE CASE FOR PLANT-BASED

HEALTH

Reduced Risk Of

- Cardiovascular Disease
- Type II Diabetes
- Hypertension
- Obesity
- Certain Cancers
- Mortality
- All Chronic Diseases

PLANET

18% of GHG from animal agriculture

1/3 of the world's water use is for animal agriculture

A plant-based food system would reduce global land use for agriculture by 75% - from 4 billion to 1 billion hectares

ETHICS

Over 73 billion land animals slaughtered annually

100 million tons live fish

71 billion chickens

600 million sheep

1.5 billion pigs

300 million cows

THE CASE FOR A PLANT-BASED MENU IN CHILD CARE

Dietary habits formed in childhood affect lifelong health

62% OF 1-3 YR OLDS ATTEND SOME FORM OF CHILD CARE

72% OF 4-5 YR OLDS ATTEND SOME FORM OF CHILD CARE

While there, children have two snacks and one meal daily

Efficiency

Fewer tailored meals to accommodate vegans, vegetarians, halal, and fish, dairy and egg allergies.

Safety

Eliminates key allergens and reduces risk of food borne illness

Inclusion

Anaphylactic children can sit with their peers; all children have the same meal

Cost

↓$

Nutrition

More nutritionally dense

Caring for children by caring for their health and the health of their planet

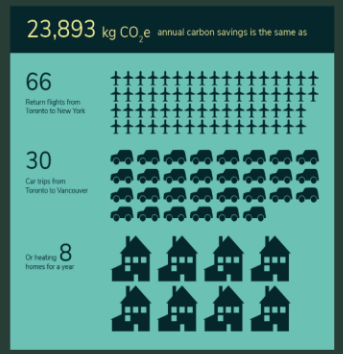
THE CASE FOR A PLANT-BASED MENU IN LAB SCHOOLS

Research-Based

Food production accounts for approximately one third of global anthropogenic greenhouse gas emissions, and animal-based products are estimated to be responsible for around 57% of food-related emissions.

Evidence-informed

65% REDUCTION IN MONTHLY CARBON FOOTPRINT

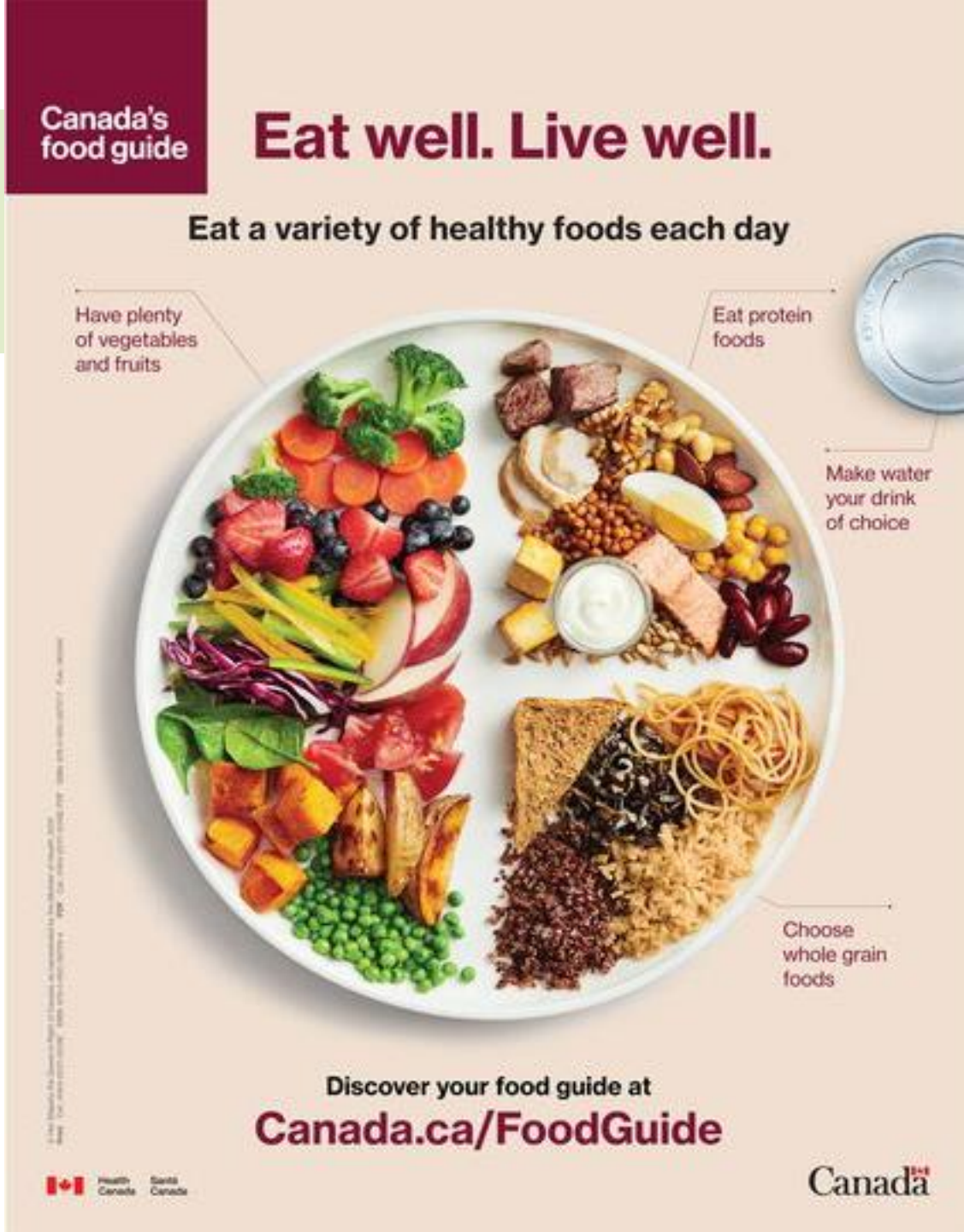


Lab Schools as Leaders

Leading the way to a kinder, healthier, more just and sustainable world for children.

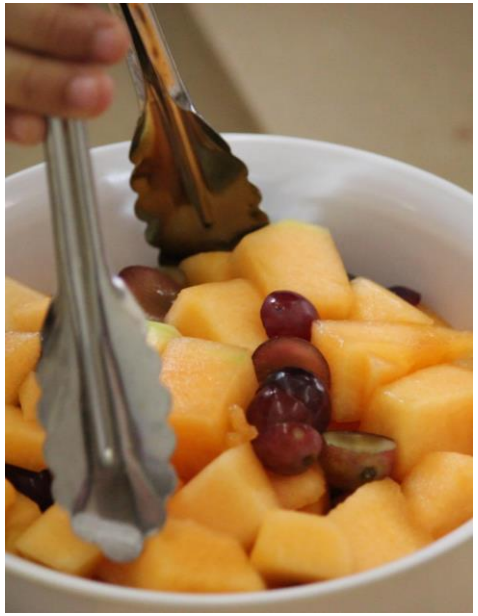
The Food Guide

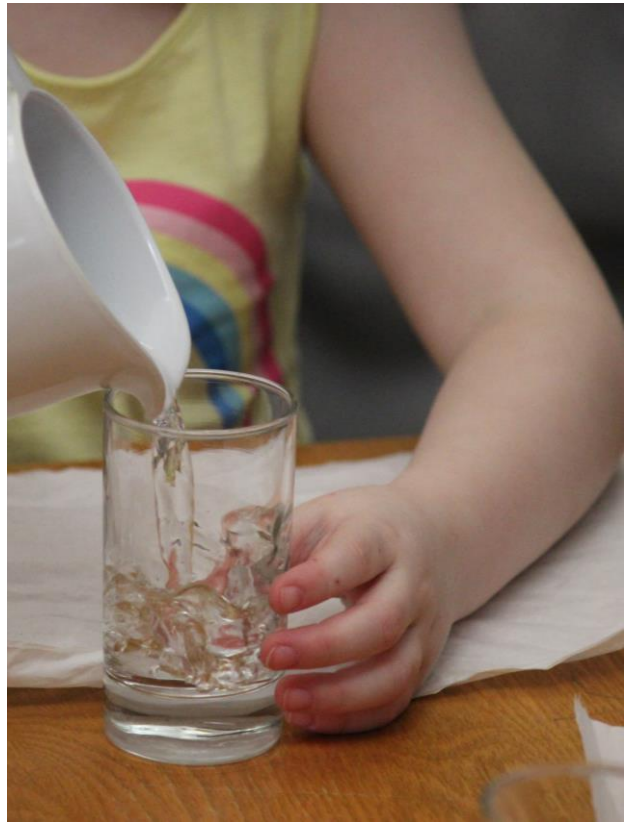
- Canada Food Guide 2019
- Most science-based food guide in the world
- Removed lobby groups and industry influence from the process
- Used research that was supported by other research and not paid for or completed by any specific industries.



Nutrients vs. Ingredients

- Proposed nutrient rather than ingredient approach
- Nutrition Practicum student
- One meal and two snacks
- ODPH Practical Guide – 50% of children's daily nutrition
- Nutrient approach far superior when planning a menu for vulnerable populations





Menus

UNIVERSITY of GUELPH
CHILD CARE & LEARNING CENTRE
STUDENT AFFAIRS

Menu 1

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
AM SNACK	**Oatmeal** Fresh Fruit and almond milk	**Whole Wheat Soft Apple Breakfast Cookies** Fresh Fruit and almond milk	**Savoury Whole Wheat Biscuits** Fresh Fruit and almond milk	**Chia Seed and Coconut Milk Pudding** Whole Wheat Toast, Fresh Fruit and almond milk	**Fruit and Coconut Yogurt Smoothie** Whole Wheat Toast
LUNCH	**Crispy Tofu** *with sweet potato tomato sauce* Brown Rice Seasonal Vegetables Fresh Fruit and almond milk	**Southwest Black Bean Wraps** *with whole-wheat tortilla, shredded carrots, cucumber* Vegetable Soup Fresh Fruit and almond milk	**Red Lentil Dal** *with fire-roasted tomatoes and potatoes* Seasonal Vegetables Brown Rice Fresh Fruit and almond milk	**Rainbow Quinoa Bowl** *with roasted carrots, shredded purple cabbage, turmeric spiced chickpeas, pickled red onions and green dressing* Fresh Fruit and almond milk	**Rotini Pasta Bake** *with whole wheat rotini, lentils, spinach and roasted vegetable tomato sauce* Peas Fresh Fruit and almond milk
PM SNACK	**Whole Wheat Zucchini Bread** Fresh Fruit	**Fresh Fruit and Cocoa Avocado Dip** Whole-wheat Bagel Crisps	**Whole wheat Sweet Potato Muffins** Fresh Fruit	**Hummus and Vegetable Platter** Whole-wheat Pita	**Pumpkin Seed Granola Bars** Fresh Fruit

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Menu 2

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
AM SNACK	**Cheerios** Fresh Fruit and almond milk	**Whole-wheat Bagels** *with sunflower seed butter and chia jam* Fresh Fruit and almond milk	**Whole-wheat Muffins** Fresh Fruit and almond milk	**Coconut Yogurt and Hemp Heart Granola** Fresh Fruit and almond milk	**Whole-wheat Wow Butter and Chia Jam Sandwiches** Fresh Fruit and almond milk
LUNCH	**Garlic Ginger Fried Rice** *with tofu, broccoli, carrots, and peppers* Fresh Fruit and almond milk	**Navy Bean Pizza** *With smooth navy bean sauce, plant-based cheese and whole-wheat pizza crust* Hummus and Veggies Fresh Fruit and almond milk	**Tempeh & Black Bean Burgers** *With whole bean buns, spinach, and avocado spread* Sweet Potato Wedges Fresh Fruit and almond milk	**Herb Stew** *With Kidney Beans, mush-rooms and spinach* Sesame Flat Bread and coconut yogurt dip Fresh Fruit and almond milk	**Baked Falafel** *with whole wheat pita, garlic coconut yogurt dip* Tahini cucumber kale salad Fresh Fruit and almond milk
PM SNACK	**Whole wheat Tortilla Chips** Avocado Hummus Fresh Fruit	**Toasted coconut and Strawberry Granola Bars** Fresh Fruit	**Tropical Smoothie** Toasted Edamame	**Whole-wheat Tea Biscuits** Chia Jam and Fresh Fruit	**Cocoa banana oat power balls** Fresh fruit

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Menu 3

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
AM SNACK	**Chia Seed and Coconut Milk Pudding** Whole Wheat Toast, Fresh Fruit and almond milk	**Savory Whole Wheat Biscuits** Fresh Fruit and almond milk	**Whole Wheat Soft Apple Breakfast Cookies** Fresh Fruit and almond milk	**Fruit and Coconut Yogurt Smoothie** Whole Wheat Toast	**Whole wheat Banana Muffins** Fresh Fruit and almond milk
LUNCH	**Chickpea Stew** *with sweet potato, carrots, cauliflower* Brown Rice Fresh Fruit and almond milk	**Lentil Shepherd's Pie** *with mashed potatoes* Whole Wheat Rolls Seasonal Veggies Fresh Fruit and almond milk	**Quinoa Salad** *with marinated tofu, grated carrots, cucumber and pepper* Fresh Fruit and almond milk	**Black bean Chili** Seasonal Veggies Whole-wheat Corn Bread Fresh Fruit and almond milk	**Chickpea Salad Wraps** *with whole-wheat tortilla, shredded carrots, cucumber* Vegetable Soup Fresh Fruit and almond milk
PM SNACK	**Pumpkin Seed Granola Bars** Fresh Fruit	**Whole Wheat Black Bean Brownies** Fresh Fruit	**Whole wheat Baked Tortilla Chips** Salsa Fresh Fruit	**Hummus and Vegetable Platter** Whole-wheat Pita	**Toasted coconut, date and oat power balls** Fresh Fruit

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Menu 4

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
AM SNACK	**Whole-wheat Bagels** *with sunflower seed butter and chia jam* Fresh Fruit and almond	**Oatmeal** Fresh Fruit and almond milk	**Coconut Yogurt and Hemp Heart Granola**	**Cheerios** Fresh fruit and almond milk	**Whole-wheat Wow Butter and Jam Sandwiches** Fresh fruit and almond milk
LUNCH	**Three Sisters Stew** *with pinto beans, corn and butternut squash* Baked Whole Wheat Bannock Fresh Fruit and almond milk	**White Bean Mac and Cheese** *with whole-wheat macaroni and blended white beans sauce* Peas and Spinach Fresh Fruit and almond milk	**Creamy Tomato Coconut milk Curry** *with tofu* Brown Rice Seasonal Veggies Fresh Fruit and almond milk	**Red Lentil Pizza** *with whole wheat pizza crust and plant-based mozzarella cheese* Hummus and Veggies Fresh Fruit and almond milk	**Black Bean Burrito Bake** *with brown rice, corn, peppers and kidney beans* Seasonal Vegetables Fresh Fruit and almond milk
PM SNACK	**Blueberry Kale Smoothie** Toasted Edamame	**Hummus and Vegetable Platter** Whole wheat Pita	**Fresh Fruit and Cocoa Avocado Dip** Whole-wheat Bagel Crisps	**Apricot, oat and toasted coconut granola bars** Fresh Fruit	**Cinnamon Whole Wheat Baked Tortilla Chips** Chocolate Hummus Fresh Fruit

Nutritional Analysis

- Food group approach won't work
- Public Health Dietitian
- List of Nutrients
- DRIs – Dietary Reference Intakes
- Goal = 50% DRI
- ESHA Food Processor
- Canadian Nutrient File

- ✓ Calories
- ✓ Fat
- ✓ Carbohydrates
- ✓ Protein
- ✓ Vitamin A
- ✓ Niacin
- ✓ Thiamin
- ✓ Riboflavin
- ✓ Vitamin B_6
- ✓ Vitamin B_{12}
- ✓ Vitamin C
- ✓ Vitamin D
- ✓ Calcium
- ✓ Iron
- ✓ Zinc
- ✓ Iodine

Extended Nutritional Analysis

Menu 3 - THURSDAY																			
Item Name	Quantity	Measur	Wgt (g)	Cals (kcal)	Prot (g)	Carb (g)	Fat (g)	Vit A-IU (IU	Vit B1 (mg)	Vit B2 (mg)	Vit B3 (mg)	Vit B6 (mg)	Vit B12 (mc	Vit C (mg)	Vit D-mcg (	Calc (mg)	Iodine (r	Iron (m	Zinc (mg)
Day 18 (1/24/2021)			721.87	806.76	22.74	115.62	29.89	8700.68	0.5	0.52	3.44	0.55	3	82.96	9	496.32	55.46	9.12	2.9
Morning Snack			**192.87**	**102.69**	**2.7**	**17.1**	**2.87**	**774.61**	**0.03**	**0.02**	**1.08**	**0.11**	**1.5**	**16.12**	**4.5**	**183.78**	**--**	**2.66**	**0.53**
cereal, Cheerios	0.5	Cup	11.36	45.08	1.46	8.26	0.72	--	0.01	0	0.72	0.08	0	0	0	18.4	--	1.87	0.27
raspberries, fresh	0.5	Cup	61.51	32.6	0.74	7.34	0.4	24.61	0.02	0.02	0.37	0.03	0	16.12	0	15.38	--	0.42	0.26
almond milk, original, enriched	0.5	Cup	120	25	0.5	1.5	1.75	750	--	--	--	--	1.5	0	4.5	150	--	0.36	--
Lunch			**421.99**	**559.74**	**16.17**	**74.96**	**22.83**	**7732.67**	**0.31**	**0.14**	**1.67**	**0.39**	**1.5**	**53.13**	**4.5**	**289.41**	**55.46**	**5.24**	**1.48**
Lentil Pizza Sauce	1	Serving	33.54	38.07	2.4	7.05	0.26	58.53	0.06	0.02	0.42	0.07	0	2.35	0	13.53	45.33	0.97	0.37
garlic, minced	0.008333	Tbsp	0.13	0.38	0	0	0.01	--	--	--	--	--	--	--	--	--	--	--	--
oregano, ground	0.008333	Tbsp	0.04	0.1	0	0.03	0	0.63	0	0	0	0	0	0	0	0.59	--	0.01	0
basil, dried	0.008333	Tbsp	0.03	0.08	0.01	0.02	0	0.26	0	0	0	0	0	0	0	0.77	--	0.03	0
tomatoes, crushed, canned	0.023667	Liter	24.01	7.68	0.39	1.75	0.07	52.82	0.02	0.01	0.29	0.04	0	2.21	0	8.16	--	0.31	0.06
lentils, red, dry	0.008333	Kg	8.33	29.83	1.99	5.26	0.18	4.83	0.04	0.01	0.12	0.03	0	0.14	0	4	--	0.62	0.3
salt, table, iodized	0.166667	Tsp	1	0	0	0	0	--	--	--	--	--	0	--	--	--	45.33	--	--
pizza crust, thin, 100% whole wheat	35	Gram	35	89.36	3.72	16.38	1.86	0	--	--	--	--	--	0	--	29.79	--	0.8	--
cheese substitute, mozzarella, shreds	0.5	Cup	56	180	2	14	12	0	--	--	--	--	--	0	--	40	--	0.72	--
Hummus	45	Gram	45	167.76	6.79	20.77	6.8	24.14	0.17	0.07	0.56	0.17	0	2.98	0	29.37	10.13	1.71	0.92
chickpeas, dry	0.037231	Liter	31.46	118.92	6.44	19.8	1.9	18.88	0.15	0.07	0.48	0.17	0	1.26	0	17.93	--	1.36	0.87
lemon juice	0.027924	Cup	6.87	1.44	0.03	0.45	0.02	1.37	0	0	0.01	0	0	1.7	0	0.76	--	0.01	0
oil, canola	0.018616	Cup	4.06	35.9	0	0	4.06	--	0	0	0	0	0	0	0	0	--	0	0
salt, table, iodized	0.037231	Tsp	0.22	0	0	0	0	--	--	--	--	--	0	--	--	--	10.13	--	--
cumin seeds, ground	0.009308	Cup	0.71	3.18	0.14	0.29	0.17	3.22	--	--	--	--	0	0.01	--	5.93	--	0.24	--
garlic, minced	0.037231	Tbsp	0.56	1.68	0	0	0.06	--	--	--	--	--	--	--	--	--	--	--	--
tahini, roasted & toasted kernels	0.074463	Tbsp	1.12	6.64	0.19	0.24	0.6	0.67	0.01	0.01	0.06	0	0	0	0	4.75	--	0.1	0.05
carrots, baby, fresh	5	Small	50	17.5	0.32	4.12	0.06	6900	0.01	0.02	0.28	0.05	0	1.3	0	16	--	0.45	0.08
pineapple, extra sweet, fresh, diced	0.5	Cup	82.45	42.05	0.44	11.13	0.09	--	0.07	0.03	0.41	0.09	--	46.5	0	10.72	--	0.23	0.1
almond milk, original, enriched	0.5	Cup	120	25	0.5	1.5	1.75	750	--	--	--	--	1.5	0	4.5	150	--	0.36	--
Afternoon Snack			**107.02**	**144.33**	**3.87**	**23.55**	**4.19**	**193.4**	**0.17**	**0.35**	**0.69**	**0.05**	**0**	**13.71**	**0**	**23.14**	**--**	**1.22**	**0.89**
Apricot, Oat and Coconut Granola Bars	35	Gram	35	100.4	2.99	14.69	3.64	106.98	0.13	0.06	0.26	0.03	0	0.53	0	13.78	--	0.95	0.74
apricot, canned, halves	0.008005	Liter	8.36	4.1	0.05	1.04	0.01	106.98	0	0	0.05	0	0	0.33	0	0.84	--	0.03	0.01
coconut milk, fresh	0.005604	Liter	5.68	13.07	0.13	0.31	1.36	--	0	0	0.04	0	0	0.16	0	0.91	--	0.09	0.04
extract, vanilla	0.004003	Tbsp	0.05	0.15	0	0.01	0	--	0	0	0	0	0	0	0	0.01	--	0	0
syrup, maple, bulk	0.008005	Cup	2.58	6.7	0	1.72	0.01	--	0	0.03	0	0	0	0	0	2.8	--	0	0.02
oats	0.024016	Liter	15.83	61.57	2.67	10.49	1.09	--	0.12	0.02	0.15	0.02	0	0	0	8.55	--	0.75	0.63
coconut, toasted, desiccated	0.008005	Liter	2.5	14.82	0.13	1.11	1.18	--	0	0	0.02	0.01	0	0.04	0	0.68	--	0.08	0.05
blueberries, wild, fresh	0.5	Cup	72.02	43.93	0.88	8.87	0.55	86.42	0.04	0.3	0.42	0.01	0	13.18	0	9.36	--	0.27	0.14
TOTALS			721.87	806.76	22.74	115.62	29.89	8700.68	0.5	0.52	3.44	0.55	3	82.96	9	496.32	55.46	9.12	2.9
Recommendation (50% DRI)				**564**	**7.5**	**65**	**20**	**500**	**0.25**	**0.25**	**3**	**0.25**	**0.45**	**7.5**	**7.5**	**350**	**45**	**3.5**	**1.5**
% Recommendation (50%DRI)				143.04255	303.2	177.87692	149.45	1740.136	200	208	114.66666	220	666.66666	1106.133	120	141.80571	123.244	260.57	193.33333

Main Nutritional Analysis

		Cals (kcal)	Prot (g)	Carb (g)	Fat (g)	Vit A-IU (IU)	Vit B1 (mg)	Vit B2 (mg)	Vit B3 (mg)	Vit B6 (mg)	Vit B12 (mcg	Vit C (mg)	Vit D-mcg (m	Calc (mg)	Iodine (mcg)	Iron (mg)	Zinc (mg)
GOAL (50% DRI)		564	7.5	65	20	500	0.25	0.25	3	0.25	0.45	7.5	7.5	350	45	3.5	1.5
TOTALS																	
MENU 1																	
Monday		848.05	36.81	118.02	28.4	3639.13	0.99	0.34	4.25	0.53	4.5	101.43	9	1280.03	46.15	9.35	4.4
Tuesday		747.42	21.73	125.14	20.78	8324.23	0.84	0.89	8.53	1.1	3.53	72.31	9.41	555.88	58.67	6.47	3.26
Wednesday		734.22	17.97	125.67	20.83	6794.25	0.58	0.33	6.28	1.02	4.6	75.25	7.16	613.39	63.41	6.04	2.94
Thursday		1032.67	36.19	169.61	28.02	13995.61	0.73	0.48	5.48	1.24	3.05	61.77	9.11	556.95	68.28	11.76	5.78
Friday		969.25	29.51	175.23	20.55	4254.68	0.91	0.57	7.87	0.93	4.03	60.98	10.72	772.25	55.3	9.05	5.04
MENU 2																	
Monday		646.79	24.9	91.03	22.09	3315.77	0.64	0.58	4.99	0.69	3	58.14	9	777.62	58.09	7.58	2.62
Tuesday		1178.75	32.71	170.78	43.74	9179.25	1.57	1.12	8.64	1.28	4.17	111.45	9	550.42	64.71	9.46	4.07
Wednesday		680.75	20.68	102.25	23.23	12324.86	0.56	0.43	4.92	0.67	3.36	25.12	9.47	552.01	68.61	5.54	2.84
Thursday		732.73	17.13	115.55	24.87	3418.55	0.3	0.26	2.74	0.24	5.4	22.77	11.82	722.75	77.26	6.98	1.84
Friday		805.95	23.39	124.97	28.47	4246.72	0.54	0.35	5.27	0.79	3.52	71	9.73	560.92	50.05	6.92	4.04
MENU 3																	
Monday		696.5	17.99	104.32	25.94	5796.46	0.46	0.23	4.04	0.51	3.03	121.64	9.05	461.39	46.51	5.34	3.09
Tuesday		724.76	19.81	119.56	20.12	4926.25	0.72	0.7	5.82	0.56	3.17	70.88	9.56	539.94	59.67	7.27	2.94
Wednesday		631.91	24.64	87.05	23.36	4644.16	0.62	0.42	4.19	0.63	3.09	71.28	9.16	997.35	55.17	6.31	2.43
Thursday		730.42	21.61	119.7	21.91	5278.47	0.58	0.34	4.07	0.63	3.21	78.09	9.35	516.65	60.58	6.26	2.63
Friday		675.36	19.86	104.69	22.46	3082.94	0.63	0.4	3.88	0.82	3.1	23.16	9.12	447.96	60.38	5.46	2.75
MENU 4																	
Monday		784.83	24.35	134.1	20.01	3248.07	0.6	0.41	6.42	0.62	3	122.26	9	653.68	80.05	6.96	3.51
Tuesday		837.4	30.92	139.2	19.99	5316.23	1.67	1.34	7.91	1.27	4.17	33.79	9	449.4	66.93	9.03	5.11
Wednesday		911.67	29.93	141.68	30.29	2593.07	0.79	0.58	6.48	1.06	4.63	176.44	11.1	1026.22	57.82	8.45	3.09
Thursday		806.76	22.74	115.62	29.89	8700.68	0.5	0.52	3.44	0.55	3	82.96	9	496.32	55.46	9.12	2.9
Friday		862.85	27.69	146.42	21.36	5063.35	0.85	0.59	7.75	1.02	3.1	75.5	9.24	520.99	51.65	7.37	4.41

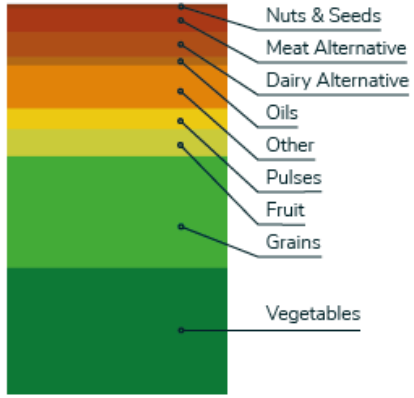
Carbon Footprint
kg CO_2e per month

Old Menu
3,203 kg CO_2e

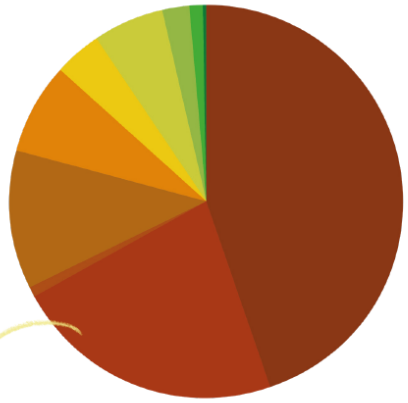
This graph shows that emissions are more evenly distributed across different food groups in the new plant-based menu. Vegetables are the highest footprint category in the new menu, and contribute a much smaller 32.7% of emissions. In fact, minced beef alone contributed more to the overall emissions from the old menu, at 36.4%.

This can be compared to the highest emitting ingredient in the new menu, tinned tomatoes, which make up 14.2% of total emissions. Perhaps surprisingly, tomatoes can be a relatively carbon-intensive vegetable product due to the significant energy requirements for greenhouse growing, and further processing into pastes and purées.

New Menu
1,058 kg CO_2e



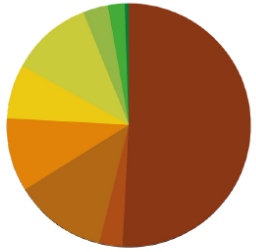
Old Menu
3,034 kg CO_2e per month



Farm	45%
Feed	22%
Land Use Changes	1%
Losses	11%
Processing	7%
Transport	4%
Packaging	6%
Retail	2.%
Cooking	1%
End-of-Life	<1%

65% Reduction in emissions

New Menu
1,072 kg CO_2e per month



Farm	51%
Feed	0%
Land Use Changes	3%
Losses	12%
Processing	10%
Transport	7%
Packaging	11%
Retail	3%
Cooking	2%
End-of-Life	<1%

[1] Transport information is modelled using average data, and therefore may not accurately represent the University of Guelph's hyper local sourcing (see Appendix for more detailed methodology).

23,893 kg CO_2e annual carbon savings is the same as

66

Return flights from
Toronto to New York

30

Car trips from
Toronto to Vancouver

Or heating 8
homes for a year

Reduced Cost

- Expected to increase costs
- Sept-Dec 2019 compared to Sept-Dec 2020
  - 9.5% savings
- Overall trend in reduced costs as animal products were reduced
- Savings likely even greater as the analysis:
  - Did not account for rising food costs
  - Did not account for large initial purchase

Questions?

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