

Lesson 4: Planning Recipes

Let's choose some recipes for a restaurant.

4.1: A Recipe for Your Restaurant

Imagine you could open a restaurant.

1. Select a recipe for a main dish you would like to serve at your restaurant.
2. Record the amount of each ingredient from your recipe in the first two columns of the table. You may not need to use every row.

ingredient	amount	amount per serving	calories per serving

3. How many servings does this recipe make? Determine the amount of each ingredient in one serving, and record it in the third column of the table.

4. Restaurants are asked to label how many calories are in each meal on their menu.
 - a. Use the nutrition information to calculate the amount of calories from each ingredient in your meal, and record it in the last column of the table.

 - b. Next, find the total calories in one serving of your meal.

5. If a person wants to eat 2,000 calories per day, what percentage of their daily calorie intake would one serving of your meal be?

Grains

	mass (g)	calories	fat (g)	sodium (mg)
biscuits, refrigerated dough (1)	58	178	6.14	567
bread crumbs (1 oz)	28.35	112	1.5	208
cornmeal (1 c)	157	581	2.75	11
egg noodles (1 c)	38	146	1.69	8
hamburger or hotdog buns (1)	44	123	1.72	217
oats (1 c)	81	307	5.28	5
pasta (1 c)	91	338	1.37	5
pie crust, refrigerated (1)	229	1019	58.3	937
pita bread (1 oz)	28.35	8	0.34	152
quinoa (1 c)	170	626	10.32	8
ramen noodles (1 pkg)	81	356	14.25	1503
rice flour (1 c)	158	578	2.24	0
rice, brown (1 c)	185	679	5.92	9
rice, white (1 c)	185	675	1.22	9
saltine crackers (5)	14.9	62	1.29	140
taco shells (1)	12.9	61	2.81	42
tortillas (1)	49	146	3.71	364
wheat bread (1 slice)	29	79	1.31	137
wheat flour (1 c)	125	455	1.22	2
white bread (1 slice)	29	77	0.97	142

Vegetables

	mass (g)	calories	fat (g)	sodium (mg)
asparagus (1 c)	134	27	0.16	3
avocados (1 c)	150	240	22	10
bell peppers (1 c)	149	46	0.45	6
broccoli (1 c)	91	31	0.34	30
carrots (1 c)	128	52	0.31	88
cauliflower (1 c)	107	27	0.3	32
celery (1 c)	101	16	0.17	81
chives (1 tbsp)	3	1	0.02	0
corn (1 c)	145	125	1.96	22
cucumber (1 c)	133	16	0.21	3
green beans (1 c)	100	31	0.22	6
lettuce (1 c)	47	8	0.14	7
mushrooms (1 c)	70	15	0.24	4
onions (1 c)	160	64	0.16	6
peas, frozen (1 c)	134	103	0.54	145
potatoes ($\frac{1}{2}$ c)	75	59	0.11	14
spinach (1 c)	30	7	0.12	24
squash (1 c)	113	18	0.2	2
sweet potatoes (1 c)	133	114	0.07	73
tomatoes (1 c)	149	27	0.3	7

Fruit

	mass (g)	calories	fat (g)	sodium (mg)
apple juice (1 c)	248	114	0.32	10
apples (1 c)	110	53	0.14	0
bananas (1 c)	225	200	0.74	2
blueberries (1 c)	148	84	0.49	1
cantaloupe (1 c)	177	60	0.34	28
cherries (1 c)	138	87	0.28	0
cranberries, dried ($\frac{1}{4}$ c)	40	123	0.44	2
grapes (1 c)	151	104	0.24	3
lemon juice (1 c)	244	54	0.59	2
Mandarin oranges (1 c)	252	154	0.25	15
mangoes (1 c)	165	99	0.63	2
orange juice (1 c)	249	122	0.3	5
oranges (1 c)	180	85	0.22	0
peaches (1 c)	154	60	0.38	0
pears (1 c)	140	80	0.2	1
pineapple, canned (1 c)	181	109	0.2	2
pomegranate juice (1 c)	1249	134	0.72	22
raisins (1 c)	165	493	0.76	18
raspberries (1 c)	123	64	0.8	1
strawberries (1 c)	152	49	0.46	2

Meat

	mass (g)	calories	fat (g)	sodium (mg)
bacon (1 slice)	26	106	10.21	122
chicken thigh (1)	193	427	32.06	156
chicken, light meat (3 oz)	85	100	1.45	60
cob (3 oz)	85	61	0.17	93
crab (3 oz)	85	73	0.82	251
ground beef (4 oz)	113	375	33.9	75
ground turkey (4 oz)	113	172	9.44	80
halibut (3 oz)	85	77	1.13	58
ham (1 oz)	28.35	38	1.53	319
hot dogs (1)	51	141	12.33	498
lobster (1)	150	116	1.12	634
pepperoni (3 oz)	85	428	39.34	1345
pork sausage (1)	25	72	6.2	185
pork tenderloin (3 oz)	85	102	3	44
salmon (1 fillet)	108	373	12.34	55
shrimp (3 oz)	85	72	0.43	101
tofu ($\frac{1}{2}$ c)	126	98	5.25	15
trout (1 fillet)	79	111	4.88	40
tuna, canned (1 oz)	28.35	24	0.27	70
turkey (3 oz)	85	92	2.12	105

Nuts, Beans, and Seeds

	mass (g)	calories	fat (g)	sodium (mg)
almonds (1 c)	143	828	71.4	1
black beans (1 c)	240	218	0.7	331
cashews (1 oz)	28.35	157	12.43	3
chickpeas (1 c)	240	211	4.68	667
coconut (1 c)	80	283	26.8	16
fava beans (1 c)	256	182	0.56	1160
flaxseed (1 tbsp)	10.3	55	4.34	3
white beans (1 c)	262	299	1.02	969
kidney beans (1 c)	256	215	1.54	758
lentils (1 c)	192	676	2.04	12
lima beans (1 c)	164	216	0.72	85
macadamia nuts (1 c)	134	962	101.53	7
peanut butter (2 tbsp)	32	191	16.22	136
peanuts (1 oz)	28.35	166	14.08	116
pecans (1 c)	109	753	78.45	0
pinto beans (1 c)	240	197	1.34	643
pistachios (1 c)	123	689	55.74	1
pumpkin seeds (1 c)	129	721	63.27	9
sesame seeds (1 c)	144	825	71.52	16
sunflower seeds (1 c)	46	269	23.67	4

Dairy

	mass (g)	calories	fat (g)	sodium (mg)
almond milk (1 c)	262	39	2.88	186
blue cheese (1 oz)	28.35	100	8.15	325
butter (1 pat)	5	36	4.06	1
cheddar cheese (1 c)	132	533	43.97	862
coconut milk (1 c)	226	445	48.21	29
cream cheese (1 tbsp)	14.5	51	4.99	46
egg white (1)	33	17	0.06	55
egg yolk (1)	17	55	4.51	8
eggs (1)	50	72	4.76	71
evaporated milk (1 c)	252	270	5.04	252
whipping cream (1 c)	120	408	43.3	32
margarine (1 tbsp)	14.2	101	11.38	4
milk, skim (1 c)	245	83	0.2	103
milk, whole (1 c)	244	149	7.93	105
mozzarella cheese (1 c)	132	389	26.11	879
Parmesan cheese (1 c)	100	420	27.84	1804
sour cream (1 tbsp)	12	16	1.27	10
soy milk (1 c)	243	80	3.91	90
Swiss cheese (1 c)	132	519	40.91	247
yogurt (6 oz)	170	107	2.64	119

Sauces and Other Liquids

	mass (g)	calories	fat (g)	sodium (mg)
barbecue sauce (1 tbsp)	17	29	0.11	175
chicken broth (1 c)	249	15	0.52	924
cream of chicken soup ($\frac{1}{2}$ c)	126	113	7.27	885
gravy (1 c)	233	1	5.5	1305
honey (1 c)	339	25	0	14
Italian dressing (1 tbsp)	14.7	35	3.1	146
jams and jellies (1 tbsp)	20	56	0.01	6
ketchup (1 tbsp)	17	17	0.02	154
mayonnaise (1 tbsp)	15	103	11.67	73
mustard (1 tsp)	5	3	0.17	55
pasta sauce ($\frac{1}{2}$ c)	132	66	2.13	577
ranch dressing (1 tbsp)	15	64	6.68	135
salsa (2 tbsp)	36	10	0.06	256
soy sauce (1 tbsp)	16	8	0.09	879
vanilla extract (1 tsp)	4.2	12	0	0
vegetable broth (1 c)	221	11	0.15	654
vegetable oil (1 tbsp)	14	124	14	0
vinegar (1 tbsp)	15	3	0	0
water (1 fl oz)	29.6	0	0	1
Worcestershire sauce (1 tbsp)	17	13	0	167

Spices and Other Powders

	mass (g)	calories	fat (g)	sodium (mg)
baking powder (1 tsp)	4.6	2	0	488
baking soda (1 tsp)	4.6	0	0	1259
black pepper (1 tsp)	2.3	6	0.07	0
chicken bouillon (1 cube)	4.8	10	0.23	1152
chili powder (1 tsp)	2.7	8	0.39	77
cinnamon (1 tsp)	2.6	6	0.03	0
cocoa powder (1 c)	86	196	11.78	18
cornstarch (1 c)	128	488	0.06	12
cumin (1 tsp)	2.1	8	0.47	4
garlic (1 clove)	3	4	0.01	0.5
garlic powder (1 tsp)	3.1	10	0.02	2
onion powder (1 tsp)	2.4	8	0.02	2
onion soup mix (1 tbsp)	7.5	22	0.03	602
oregano (1 tsp)	1	3	0.04	0
paprika (1 tsp)	2.3	6	0.3	2
parsley (1 tsp)	0.5	1	0.03	2
powdered sugar (1 c)	120	467	0	2
salt (1 tsp)	6	0	0	2325
sugar (1 tsp)	2.8	11	0	0
taco seasoning (2 tsp)	5.7	18	0	411

Are you ready for more?

The labels on packaged foods tell how much of different nutrients they contain. Here is what some different food labels say about their sodium content.

- cheese crackers, 351 mg, 14% daily value
- apple chips, 15 mg, <1% daily value
- granola bar, 82 mg, 3% daily value

Estimate the maximum recommended amount of sodium intake per day (100% daily value). Explain your reasoning.

4.2: Health Claims

For a meal to be considered:

- “low calorie”—it must have 120 calories or less per 100 grams of food.
- “low fat”—it must have 3 grams of fat or less per 100 grams of food.
- “low sodium”—it must have 140 milligrams of sodium or less per 100 grams of food.

1. Does the meal you chose in the previous activity meet the requirements to be considered:

a. low calorie?

b. low fat?

c. low sodium?

Be prepared to explain your reasoning.

2. Select or invent another recipe you would like to serve at your restaurant that does meet the requirements to be considered either low calorie, low fat, or low sodium. Show that your recipe meets that requirement. Organize your thinking so it can be followed by others.

ingredient	amount per serving	calories per serving	fat per serving	sodium per serving