

Clinical

Introduction to Food Groups and Nutrition Labels

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Hands-on learning: food groups, serving size and label interpretation.

Evidence-based

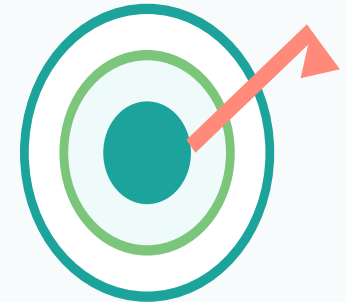
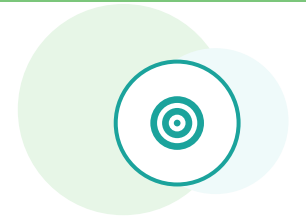
Applied learning

Skin • Hair • Body

Learning Objectives

By the end of this session, students will be able to:

- 1 Identify the main food groups in a mixed meal.
- 2 Locate serving size, calories and macronutrients on a nutrition label.
- 3 Use % Daily Value as a quick guide when available.
- 4 Interpret a simple label without confusing serving size with package size.



Define • Explain • Differentiate

Level



Apply → calculate → interpret
→ communicate

Background

Apply the theory

- Food-group classification helps students see dietary variety and balance.
- Nutrition labels report serving size and nutrient amounts; they do not label a food as simply “good” or “bad.”
- Always check serving size and servings per container first.
- Compare similar products on the same serving or weight basis.



Required Materials / Information



Food models/photos



Examples from grains, vegetables, fruits, protein foods and dairy/alternatives.

Food packages



2–3 packaged foods with readable labels.

Worksheet



Columns for serving, calories, carbohydrate, protein, fat and %DV.

Calculator



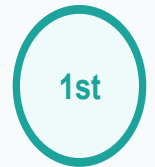
For multiple-serving calculations.

Step-by-Step Procedure: Overview



- 1 Classify** Place each food into its main food group(s).
- 2 Locate** Find serving size and servings per container.
- 3 Read** Record calories and major macronutrients.
- 4 Interpret** Use %DV and ingredient context when available.
- 5 Compare** Compare two similar products on a consistent basis.

Nutrition Facts	
Serving size 1 cup (200 g)	
Calories 180	
Carbohydrate 30 g	
Protein 8 g	
Fat 4 g	



Serving size first
Then calories, nutrients
and % Daily Value

Procedure Step 1

- ❖ Start with serving size: all listed nutrient amounts refer to that amount.
- ❖ Check servings per container—one package may contain more than one serving.
- ❖ Identify the unit: grams, milliliters, pieces, cups or another measure.
- ❖ Do not compare labels using different serving sizes without adjustment.



Start with serving size and servings per container.

Procedure Step 2

- ❖ Record calories per serving.
- ❖ Locate total carbohydrate, protein and total fat.
- ❖ Note saturated fat, fiber, added sugars and sodium when relevant.
- ❖ When %DV is provided, about 5% DV is low and 20% DV is high as a general FDA label rule of thumb.



Record calories and macronutrients before interpreting the product.

Procedure Step 3

- ❖ Multiply nutrients by the number of servings actually consumed.
- ❖ Compare similar foods using the same serving basis.
- ❖ Use the ingredient list to add context, especially for added sugars or fat sources.
- ❖ Make a balanced judgment rather than focusing on one nutrient only.



Adjust the numbers to match the amount actually eaten.



Worked example



A snack label lists 150 kcal, 20 g carbohydrate, 5 g fat and 4 g protein per serving. The package contains 2 servings and the student eats the whole package.



Think through the case

- 1 Calculate total calories eaten.
- 2 Calculate total carbohydrate.
- 3 Calculate total fat.
- 4 Calculate total protein.

Answer: 300 kcal • 40 g carbohydrate • 10 g fat • 8 g protein.

Student Activity



Activity

-  In groups, classify 10 food pictures into main food groups, then choose one packaged food and complete the label worksheet.



Think through the case

- 1 Name the main food group(s).
- 2 Record serving size and servings/container.
- 3 Record calories and macronutrients.
- 4 Write one evidence-based interpretation.

Use neutral language: describe the food; do not label people or foods morally.

Case Study



Case study

-  Two yogurts look similar. Yogurt A lists values per 100 g, while Yogurt B lists values per 150 g cup. A student says B has more sugar because the label number is larger.



Think through the case

- 1 Why is the comparison invalid?
- 2 Convert or compare on a common basis.
- 3 What other label information should be checked?
- 4 Which food-group role does yogurt usually play?

Compare equal amounts before deciding which product is higher.

Observation / Assessment

Identification

- ✓ Correct food-group classification.

Extraction

- 🏷️ Accurate label values recorded.

Calculation

- 📊 Correct adjustment for servings.

Interpretation

- 🧠 Balanced conclusion using more than one data point.

Interpretation

- ❑ A higher calorie value may simply reflect a larger serving.
- ❑ Foods can belong to mixed dishes with more than one group.
- ❑ %DV helps contextualize a nutrient but does not replace individual assessment.
- ❑ Ingredient lists are ordered by weight and can clarify product composition.



Product A

Per 100 g

Sugar 8 g

Protein 6 g

Product B

Per 150 g

Sugar 10 g

Protein 9 g

Compare on the same basis

Why it matters



Link the concept to food choices, health assessment, and safe aesthetic practice.

Common Mistakes

- Ignoring servings per container.
- Comparing unequal serving sizes.
- Reading “per package” as “per serving,” or vice versa.
- Judging a food by calories alone.
- Assuming a marketing front label is the same as the Nutrition Facts panel.



Nutrition Facts

Serving size 1 cup (200 g)

Calories 180

Carbohydrate 30 g

Protein 8 g

Fat 4 g

1st

Serving size first

Then calories, nutrients
and % Daily Value

Fix the error



Ask students to state how each mistake could change the conclusion.

Important Precautions

- ❑ Use labels from intact products and check the local label format.
- ❑ Labels differ across countries, so teach the principle, not just one design.
- ❑ Pay special attention to allergen information in food-allergic people.
- ❑ Do not use label exercises to prescribe medical diets without supervision.



Label formats vary by country; the interpretation principles remain the same.

Short Discussion

Discuss

-  A cereal says “high in vitamins” on the front but is also high in added sugar. How should the class interpret it?



Think through the case

- 1 Which panel gives quantitative nutrient data?
- 2 Can fortification make a product nutritionally complete?
- 3 What would you compare with a less-sweet cereal?

Front-of-pack claims and the Nutrition Facts panel serve different purposes.



Practical Summary

Remember these five points:

- ✓ Classify foods by their main group contribution.
- ✓ Read serving size before calories or nutrients.
- ✓ Adjust all numbers for the amount actually eaten.
- ✓ Use %DV and ingredient lists as context.
- ✓ Compare similar products on the same basis.



Recall • Calculate • Interpret

One-line takeaway



Serving size first; interpretation second.

References: *Learning Resources*



- ✓ Understanding Nutrition by Whitney & Rolfes
- ✓ Nutrition for Healthy Skin by Jean Krutmann
- ✓ Dietary Guidelines (WHO, FAO, USDA)

