

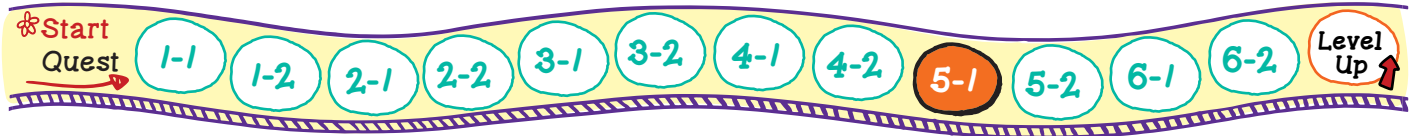


## Challenge 5: Fuel Up!

Quest 1 of 3: Build Our Powers



# Fuel Up!



## Introduction

Let kids receive a superhero health boost with the “Fuel Up!” challenge.

Children will get rich introduction to macronutrients in our foods and the role of each one.

## Lesson Objectives

- ★ Identify the difference between Fats, Carbs, and Proteins.
- ★ Identify which foods are sources of Fats, Carbs, and Protein in the Worksheet.

## Getting Ready

- |                              |               |   |
|------------------------------|---------------|---|
| ★ Worksheet*                 | 1 per student | ★ Tape*   |
| ★ Homework Sheet             | 1 per student | ★ Labeled food posters of Carbohydrates, Fats and Proteins* |
| ★ Rainbow coloring supplies* |               |   |

\*Additional preparation needed



# Lesson Plan

## Class Warm Up

### Review:

Review Proteins and Calcium then share objective that kids will learn about other macronutrients, carbohydrates and fats.

### Discussion Question:

What are some of your favorite foods to eat?

## Vocabulary Preview

1. **Carbohydrate** - The body's favorite source of energy for physical activities
2. **Protein** - What bodies use to fix and build muscles and tissue
3. **Fat** - What bodies use as energy and to protect important organs, but should be eaten in small amounts

## Class Story

Come quick! Sage has got a fun little adventure ready for us today! She's asked us to collect three precious items from the food rainbow— an avocado, an egg, and some brown rice.

"I challenge one of you to sort and place the avocado, egg, and brown rice correctly into the 3 baskets that you see in front of you. Each basket is labeled fats, proteins, or carbs. Think long and hard!"

As Sage says the word 'think', all eyes turn to Kai. Kai suddenly starts sweating. He remembers Sage giving him extra lessons on nutrients and teaching him the difference between fats, proteins, and carbs, but he gets so nervous that he completely blanks out and forgets!

## Helpful Hints

Get the class warmed up for this lesson by asking a discussion question.

**Food Heroes!**  
Everyday we do our part  
to protect our body,  
mind and heart.



*“Think hard, Kai!” says Sage. But he could not remember.*

*Kai plants his feet firmly in the ground and thinks hard. He channels the power of the mushrooms and their network that he had eaten for his lunch earlier. Normally, they make his mind clear. Kai envisions the underground web of these mushrooms stretching far and wide, and suddenly, he perfectly recalls the moment when Sage taught him extra lessons, just like a recording in his brain! The mushrooms had helped him! Kai absorbs the power of the Rainbow Table and jumps up to yell with joy. “Yes! I remember! I can teach you all about carbs, fats, and proteins. It’s easy!”*

*“How is it easy? Please teach us!” Pleads Terra.*

*“It becomes easy if you think of our bodies like a machine— a car,” says Kai quickly. “Carbs are the fuel for the car. Protein builds and repairs the car. Fats are extra tanks of fuel for the car, in case we run out.”*

*“Wow, that is easy!” says Ava. “You do have super memory! But I still have some questions. Let’s learn more about carbs, fats, and proteins so we can place these foods in the right bins!”*

*“Let’s sort these foods and try to remember which one has which nutrient,” says Ava.*

*“Let me see if I got this right. So, carbs are fuel that we can use quickly, proteins helps build our muscles and our bodies, and fat is extra energy that’s stored in our body for later?”*

*“Exactly!” Says Kai.*

*They all face the three baskets. Kai smiles and he runs up to put the avocado in the basket, the egg in the proteins basket and the brown rice in the carbs basket. There’s a moment of silence.*

*Then Sage says, “Great job sorting! You really learned a lot about carbs, fats and proteins, Kai. Let’s teach everyone else.”*

*Thanks for your help!*



## Mini-Lesson

### Carbs, Fats & Proteins:

Overview with students what the different food types are:  
Carbohydrates, Fats and Proteins.

Hold up the labeled food posters and ask the class which types of food they believe they are.

**Carbs** are the “fuel” and “gas” of the car. They provide the major source of energy that we need to live, grow and thrive. Carbs are our bodies’ number one source of energy, so this nutrient should make up a lot of our diet.

They are sometimes Runaway foods - like soda, candy, or white bread. But, carbs also come in the form of Superboost and Sidekick foods! Foods like fruits have carbs and other nutrients and vitamins which your body loves. Apples, bananas, grapes, oatmeal, and brown rice are great, yummy examples of good carbs.

**Proteins** are like the tools and materials used to build and repair the car. Proteins provide our body with the building blocks it needs to grow. It is very important because it builds up your muscles, bones, and blood. It helps repair and replace them too, so that your body can keep on working and so you don’t get sick.

We can get proteins from some Warning and Runaway foods like red meat or fried fatty meat. But Warning and Runaway foods aren’t the best for us. Actually, there is a lot of protein in plants, beans, nuts, and veggies, which are Superboost and Sidekick foods. Eating these can help us to grow up strong. Eggs, yogurt, fish, chicken also have protein.

**Fats** are the extra tank of fuel, the back-up tanks for the car. Fats are how our bodies store energy for later! They also are important to keeping your skin and hair healthy. And just like how you wear a coat on a very cold day, fat acts like your body’s natural coat - it keeps your body warm!

We often think of fats as coming from Runaway and Warning foods such as fast food, potato chips, cookies, or ice cream. But actually, there is also good fat in lots of Superboost and Sidekick foods. We will only focus on the good fats in Superboost and Sidekick foods like avocados, nuts, or olive oil!

## Class Activity

### Find Your Team:

*Give each student one poster of food that is categorized as either carbs, proteins or fats.*

Within 5 minutes, they will have to not just have to guess which





macronutrient their food represents, but have to find everyone else that has food of the same macronutrient! The team that finds everyone first wins!

<b>Carbs</b>	brown rice, white rice, oatmeal, cake, french fries, yams, whole wheat pasta, whole wheat bread
<b>Proteins</b>	egg, meat, lentils, chickpea, peas, spinach, kale, broccoli
<b>Fats</b>	dark chocolate, avocado, mixed nuts, fish, cheese, yogurt, coconut

## Class Activity 2 (Optional)

### Fat Fast, Carb Slow:

One student will stand on the opposite side of the room from all other Food Hero Buddies.

When they say, “Fat!”, Food Hero Buddies will have to do a fast walk towards them.

When they say, “Protein!”, Food Hero Buddies will have to hop towards them.

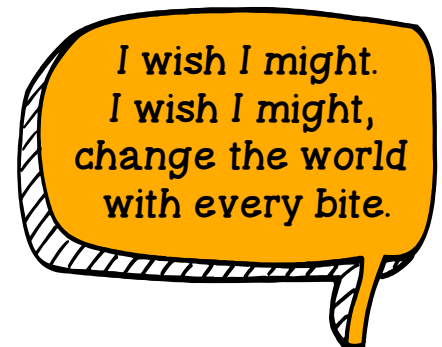
When they say, “Carb!”, Food Hero Buddies will have to walk in slow motion towards them.

## Worksheet

On the “Matching Nutrients” worksheet: Draw a line from each of the foods to the box they belong in (carbs, fats or proteins).

## At-Home Mission (Optional)

On the “Draw a Macronutrient” homework sheet, draw one real food for each of the three food groups we learned today: carbs, fats and proteins.





FAT



# FAT





# FAT



# FAT



**FAT**





# FAT



# FAT



# *PROTEIN*





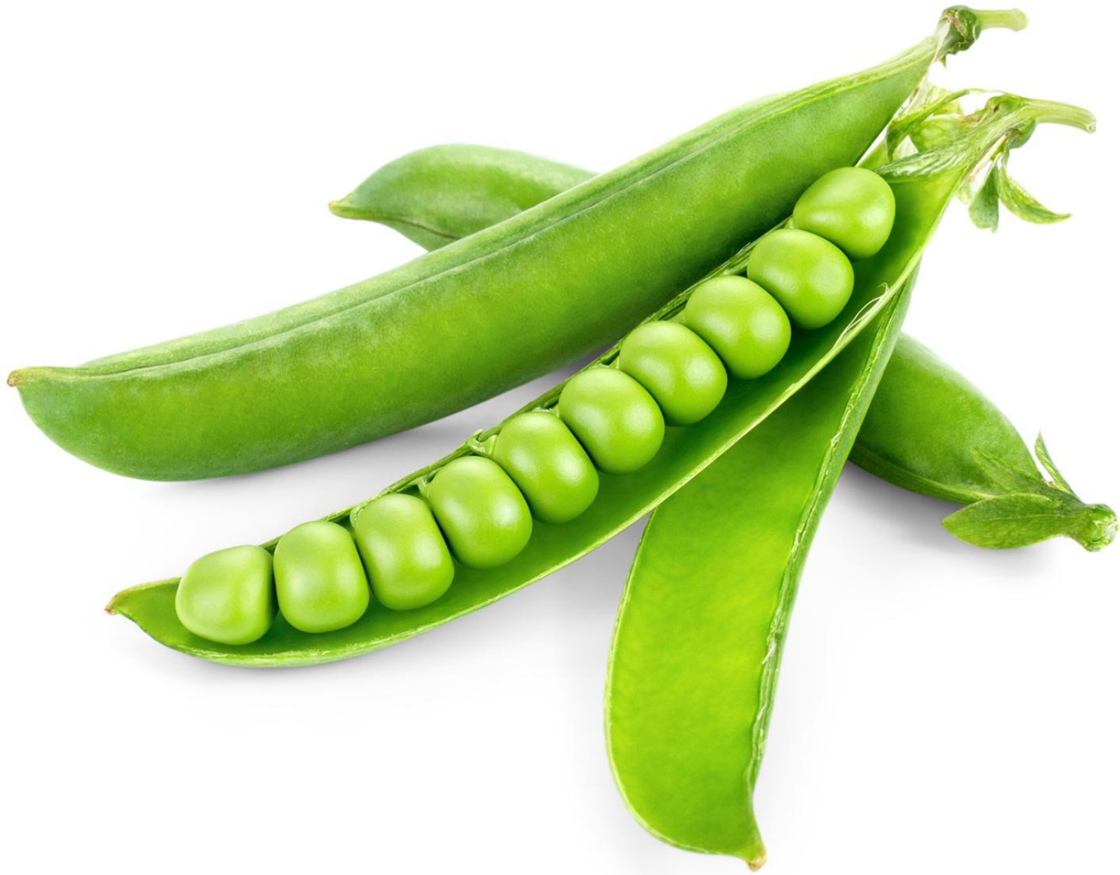
# PROTEIN



# *PROTEIN*



# *PROTEIN*



# PROTEIN





# *PROTEIN*





# *PROTEIN*



# CARB

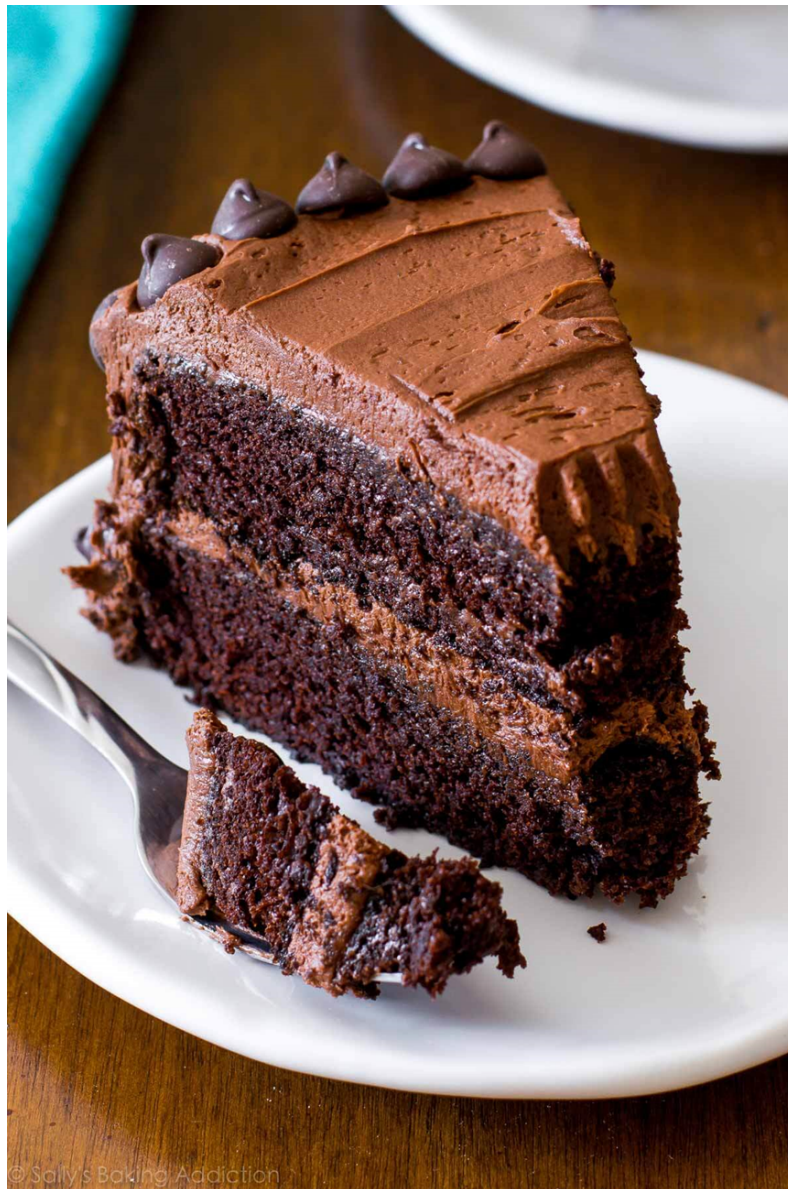


# CARB





# CARB



# CARB





# CARB



# CARB



# CARB

# Activity

Name: \_\_\_\_\_

Draw a line from each food item to the correct box.

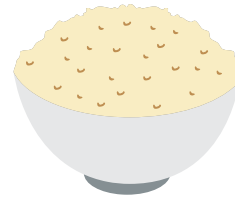


# At-Home Mission

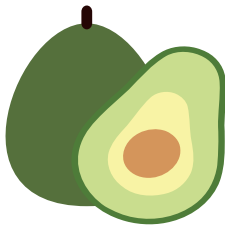
Name: \_\_\_\_\_

Draw one real food for each of the three food groups we learned today: carbohydrate, fat, and, protein.

## 1. Carbohydrate



## 2. Fat

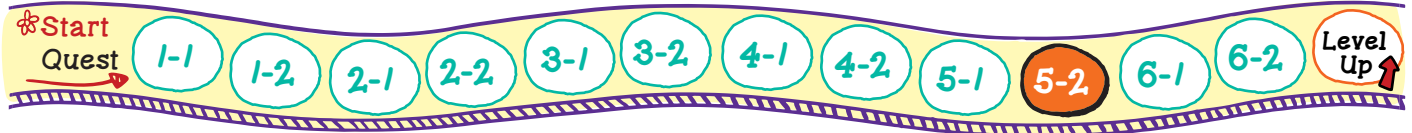


## 3. Protein

Parent's Signature: \_\_\_\_\_



# Fuel Up!



## Introduction

Kids will continue learning about macronutrients with the “Fuel Up!” challenge.

In this class, children will learn that not all carbs and fats are good, and what the differences between them are.

## Lesson Objectives

- ★ Review the difference between fats, carbs, and proteins and their importance.
- ★ Identify the difference between good carbs and bad carbs and good fats and bad fats.

## You Will Need...

- |   |               |                                      |
|---|---------------|--------------------------------------|
| ★ Homework Sheet*   | 1 per student | ★ Unlabeled images of fats and carbs |
| ★ Labeled posters of good fats, bad fats, good carbs, bad carbs |               | ★ Fly swatter (optional)*            |

\*Additional preparation needed

# Lesson Plan

## Class Warm Up

### Review:

Review the different types of foods: carbs, fats and proteins.

Introduce that there are good and bad types of carbs and fats with the class.

### Discussion Question:

Can you remember a food that is a carbohydrate? A fat?

### Vocabulary Preview

1. **Good Carb** - Carbs that take a long time for your body to break down and can keep you full and energized
2. **Bad Carb** - Carbs that break down fast and cause you to lose your energy
3. **Good Fat** - Fats that help your heart and brain be strong
4. **Bad Fat** - Fats that are bad for your heart

## Class Story

Last time, Sage helped the Heroes learn more about carbs, fats, and proteins. "Now that you know all about these categories, I think you can learn the next step." Says Sage. "I planned a lesson with Kai and we are taking a field trip! Kai wants to recruit his grandmother to be a Food Hero with your help."

"Let's go!" Says Kai leading the way.

When the Food Heroes get to Grandma's house, everyone greets Kai's kind Grandmother.

## Helpful Hints

Get the class warmed up for this lesson by asking a discussion question.

**Food Heroes!**  
Everyday we do our part  
to protect our body,  
mind and heart.



They see that her kitchen is full of all kinds of food and the cupboards are full to the brim with snacks. “Oh Kai!” Says his Grandma, “I’m so glad you’re here with your friends! I’ve got lots of crackers and sweets for you to eat, and we can order French fries from the restaurant across the street too if you’re hungry!”

“Thanks Grandma! I’m here with my Food Hero friends. We want to clean out your kitchen so it’s only full of foods good for our bodies and good for the earth. Is that okay?”

“But what about all of these sweets that I bought? I just want you to have a treat when I get to see you! I know that you need to eat carbs, proteins, and fats, so I have those in my kitchen too.” She replies.

“Thanks Grandma, but I want to eat things that will help me grow strong and help me fuel up! I want to build a strong body, and I know that you want that to, but I can’t do that if I eat many sugary snacks,” replies Kai. “Fats, carbs, and proteins are important, but we need to know the difference between good carbs and bad carbs; good fats and bad fats. For example, we should try to avoid bad carbs like sugar, white bread, or cookies. These are all what we call ‘Fake Foods’. Instead, we should get it from brown rice and vegetables! Fries are also deep-fried in bad fat oils, and if you add some avocado sliced to salad, that’s enough good fat for the day!”

Kai’s grandmother hears what Kai is saying, and gives Kai a big hug feeling a tad guilty for buying so many bad fats and bad carbs. “I want you to be healthy more than I want to give you sweet treats. Let’s tell the good nutrients from bad nutrients, and get started cleaning the kitchen with the Food Heroes” She says.

Everyone gathers together and cleans the kitchen of foods with bad nutrients.

The Food Here are just about done cleaning Grandma’s kitchen. Terra finds one last box of sugary cookies and tosses it away. The Food Heroes and Grandma all cheer when the kitchen no longer has Fake Foods.

“Thanks for inviting us into your home, Grandma!” Says Clay.

Grandma smiles and says, “Why don’t you stay? You kids are so busy building your powers and helping each other, let me help you! I can cut up some fruit and make some tea and you can all sit and tell me about your adventures. You’re running around all day long, but something it is good to relax and reflect.”



So, the Food Heroes took a well-deserved rest and shared their adventures with Grandma for the rest of the day. When they finally left, they left feeling grateful and excited for more adventures. Kai realized the wisdom in his Grandmother's advice, and waved goodbye. "Seems like we learned more from you than you did from us, Grandma! Goodbye!"

## Mini-Lesson

### Good and Bad Fats and Carbs::

Overview with students what the different food types are: Carbohydrates, Fats and Proteins.

Brainstorm with students what a good and bad carb and fat is.

Overview the difference between a good and bad carb.

They both give us energy, but for different amounts of time.


**Good carbs** give our brain enough energy to focus and give our body enough energy to play! This energy will last a long time. Good carbs come from Superboost and Sidekick food like whole wheat pasta, vegetables, and brown rice.

**Bad carbs** will only give us energy for a short amount of time before we crash. When we crash, we lose all our energy. Without energy we can't play with our friends and our body can't work properly. Bad carbs are sugars. It is quick and easy for your body to turn them into energy. Good carbs are starches. These take your body longer to turn into energy. Bad carbs are often Runaway foods - like soda, candy, or white bread.


Overview the difference between a good and bad fat.

We need **good fats** to store energy, to keep our hair and skin healthy, and to keep ourselves warm! There are plenty of sources of good fat to eat. These come in the form of Superboost foods.


**Bad fats** are often not in the form of foods but rather of liquids like oil. Often, they are used for deep frying food. They are bad for our bodies, stomach, brain, and skin.



Show labeled posters of good carbs as examples (brown rice, yam, oatmeal).



Show labeled posters of bad carbs as examples (chocolate cake, cookies, cereal).



Hold up labeled posters of good fats and have the students say aloud the name of each food.

## Class Activity

### Blackboard Slap:

Using the good and bad carbs and fats posters, students have to guess which is which with a fly swatter!

**Preparation:** Tape the posters to a board or wall and line Food Hero Buddies into 2 teams in front of them. The first person in each line will have a fly swatter.

When you say: “good carb”, “good fat”, “bad carb”, or “bad fat”, they will have to be quick and be the first one to hit one of those foods with the fly swatter!

### At-Home Mission (Optional)

On the “Bad Carb and Bad Fat” homework sheet, draw an “X” over the bad carbs and bad fats to finish the assignment.







# GOOD FATS



# GOOD FATS



# GOOD FATS



# BAD FATS



# BAD FATS





# BAD FATS



# GOOD CARB



# GOOD CARB



# GOOD CARB



# BAD CARB





**BAD CARB**



# BAD CARB

# At-Home Mission

Name: \_\_\_\_\_

Draw an "X" over the bad carb and bad fat in each row.

