

WHAT'S ON MYPLATE?

- Grades 9-12 ---



Total Anticipated Time: 45 min.

OBJECTIVES

- Describe the daily recommendations for a meal following MyPlate guidelines, given the MyPlate diagram
- Describe the importance of protein for building strength
- Explain the benefits of choosing beef as a protein source
- Plan a week of meals that follow MyPlate guidelines, given a high school student scenario
- Explain methods of incorporating beef into a simple, balanced meal

Texas Essential Knowledge and Skills

- 110.36.c.4.F. Make inferences and use evidence to support understanding
- 110.36.c.4.G. Evaluate details read to determine key ideas
- 110.36.c.5.D. Paraphrase and summarize texts in ways that maintain meaning and logical order
- 110.36.c.5.E. Interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating
- 115.32.b.1.B. Examine the relationship among body composition, diet, and fitness
- 115.32.b.1.C. Explain the relationship between nutrition, quality of life, and disease

Materials

Sticky Notes

(a different colored set for each group of 4-5 students)

Four Pre-Labeled Tear Sheets/Posters

Markers

Pens/Pencils

MyPlate Brainstorming Posters

Masking Tape

(unless located in a gym or on a court)

Beach Ball/Large Exercise Ball

Handouts:

- o Beef on My Plate (one copy per group of 4-5 students)
- o A Day in My Life Activity (one copy per group of 4-5 students)
- o Texas Beef Council Super Foods Poster (one copy per group of 4-5 students)
- o Texas Beef Council Protein Pantry List (https://www.beeflovingtexans.com/wp-content/ uploads/2018/04/Stock-Your-Protein-Pantry_2018-1.pdf) (one copy per group of 4-5 students)
- o MyPlate Self-Assessment (one copy per student)
- o Track It! Take-Home Activity (one copy per student)

Activity Sequence

PREPARE:

- *Optional*: Review these resources for additional content background.
- Hang tear sheets/posters across one wall in the room. Each tear sheet should have one of the following titles written on it:
 - 1) During School
 - 2) After School
 - 3) At Home
 - 4) On the Weekend

Write the following list on the board:
 Complete 10 jumping jacks
 Create a three-part team handshake
 Complete 10 sit-ups
 Identify three items in the room that begin with the same letter
 Complete 10 wall push-ups

Engage:

Divide the class into groups of four-five students. Provide each group with one pad of sticky notes. Each group should have a different color. Students will need writing utensils as well.

Today, in our groups, we are going to brainstorm examples of responsibilities or activities a high school student might have in a typical week. Take a look at the posters on the wall. What categories do you see? Listen for: during school, after school, at home, on the weekend.

Think about the activities that require any amount of energy that take place during school, after school, at home, and on the weekend. How do you spend your time? Let's have a race to see which team can come up with the largest number of ideas. When I say, "brainstorm," work as a team to quickly write as many ideas of activities down as you can, each on a different sticky note, until I say "stop!" What questions are there? Brainstorm!

Monitor group work. Maintain energy by announcing how much time they have left to brainstorm. At the end of a couple of minutes, say: Stop!

Now, when I say, "go," we will have three minutes to get all of our team's sticky notes posted to the correct category poster. However, here are the rules: All team members should be delivering sticky notes at once, but each team member can only carry one sticky note at a time. Before we can deliver a sticky note, we must complete one of the challenges listed on the board as a team. For example, before delivering the first set of notes, the entire team must do 10 jumping jacks, and then each

team member can grab a sticky note run to post it on the poster, run back, and then the team will complete the next challenge on the list to repeat the process. Your team cannot repeat a challenge until you've done all challenges. If you finish, use the remaining time to brainstorm additional activities and continue delivering them to the posters following the rules. How can I clarify? Go!

After three minutes, say: Stop. Use the different colors of sticky notes to determine which team brainstormed the largest number of activities and celebrate the learners' efforts.

What responsibilities and activities do we personally complete each day that require strength, brain power, and creativity? Consider the activities we listed on the sticky notes. Listen for: homework, sports, paying attention in class, chores at home, part-time jobs, other extracurricular activities, etc.

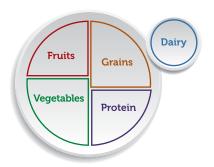
How do we fuel our bodies with the energy, strength, and brain power we need to complete these activities? Listen for: We need healthy, balanced meals to refuel.

Today, we're going to explore how we can create balanced and nutritious meals to help us maintain healthy bodies. A healthy body has strength, which can be explained as anything that gives us the ability to live our lives to the fullest. Let's explore how we build meals that give us the strength we need.

Explore:

Discovering MyPlate

Split the class in half, sending each half to opposite sides of the masking tape or center court line, identified prior to class. Who has heard of MyPlate? Based on what we already know about MyPlate or just by looking at the diagram on the first poster, what do we think MyPlate is? Listen for: MyPlate is a diagram that helps us visualize how to create balanced and nutritious meals.





BEEF LOVING TEXANS

Answer questions and remind the students that they want to work quickly to help their team, because if all teammates are out of the game, they cannot keep the ball in the air. Then, toss the ball into the game to begin. Allow play until the posters appear to have an appropriate number of notes.

Ask for volunteers to read the students' notes on each of the five posters focused on specific food groups (not the full diagram).

Let's see what we can deduce about what MyPlate recommends for us based on what we see on the poster. In a moment, we'll need to pay attention to the images on the poster, the sizes of the plate segments, and anything else we observe that might help us understand what MyPlate recommends for us to eat. Today, we are going to play "Keep It Up." Similar to a game of volleyball, the goal is to keep the ball from hitting the floor on your team's side of the court. If it hits the floor on your team's side, the other team gets a point. There are a few rules, however:

- 1. First, we can tap the ball in any way to keep it in the air; we just can't catch, hold, or throw the ball.
- 2. Second, there are no restrictions on how many times the team can tap the ball on their side of the court before sending it to the other team.
- 3. Third, if the ball goes out of bounds, the last team to touch the ball gives a point to the other team. I will have the final say on who touched the ball last.
- 4. Finally, once a team member has tapped the ball, they must exit the court. The only way to return to the court is to write a quick note on any poster of your choice explaining something you observe about MyPlate. Then, you can return to the court to help your team. For example, if the ball comes to me and I tap it to another teammate to keep it in the air or send it to the other side of the court, I might run to this poster, note that I see fruits with seeds, and then run back on the court to continue play. How can I clarify?

After notes are read from one of the posters, ask, "What do we think this section of the MyPlate diagram represents?" and "Looking at the full MyPlate diagram poster as well, what do we think MyPlate is telling us with regard to consuming this food group?" If the students don't automatically list examples, ask them what food examples they see. After the assigned group shares, ask the rest of the class if they have anything to add. Make sure the following points are addressed, backfilling any content that is missed by the students:

The top left section of the plate represents fruit

- Aim for 1-2 cups of fruit each day
- Eat a variety of colors of fruits
- This group also includes 100% fruit juice
- Fresh, frozen, or dried fruit all count
- Fruit can be whole, cut-up, or pureed
- Examples include apples, bananas, grapefruit, grapes, mangoes, oranges, peaches, plums, raisins, and strawberries

The bottom left section of the plate represents protein

- Aim for at least 25-30g of protein-rich foods at each meal
- Choose lean proteins look for beef cuts with "round" or "loin" in the name
- Examples of proteinrich foods include lean beef, skinless poultry, eggs, fish, beans, nuts, and soy

The top right section of the plate represents grains and starches

- Look for "100% whole grain" or "100% whole wheat" on the food label
- At least half of the grains you eat should be whole grains, which contain the entire grain kernel, including the bran, germ, and endosperm
- Examples of grains and starches include bread, brown rice, oatmeal, breakfast cereals, tortillas, grits, and starchy vegetables like peas, corn, and potatoes

The top right circle represents dairy

- Aim for 2-3 cups of dairy each day
- Choose low-fat or fatfree milk, yogurt, and other milk products
- Dairy and calciumfortified soymilk are rich sources of calcium and other vital nutrients
- Options for lactose intolerance include lactose-free milk, kefir, or fortified soymilk
- Choose products with at least 8g protein per serving

The bottom right section of the plate represents vegetables

- Aim for 1-3 cups of vegetables each day
- Eat more red, orange, and dark green vegetables
- · Eat edible seeds and skins for more nutrients
- Eat non-starchy vegetables (like lettuce, spinach, green beans, broccoli, tomatoes) at least twice per day
- This group also includes 100% vegetable juice
- Raw or cooked vegetables fresh, frozen, canned, or dried/dehydrated vegetables – are all good options
- This includes whole, cut-up, or mashed vegetables
- Examples include broccoli, asparagus, bell pepper, tomato, onions, and carrots

Which food group do we think helps us build strength? Listen for: protein.

Protein is key for supporting strength. What does protein do for our bodies? Listen for: builds muscle, helps us feel full long after eating a meal, supports proper brain function, supports a healthy immune system

For all of the reasons we've discussed, when building a meal, build it around ensuring adequate protein first. Then, add vegetables, whole grains, and other foods. For example, we could decide to eat meatballs and then add canned green beans and brown rice, a glass of milk, and fruit like apple slices or strawberries.

ALTERNATE ACTIVITY

NOTE: If space does not allow for the ball activity, consider this alternate activity.

Combine small groups to create five total groups. Instruct students to each grab a marker and relocate with their group to a food group poster (ignoring the full MyPlate diagram poster).

Who has heard of MyPlate? Based on what we already know about MyPlate or just by looking at the diagram on the poster, what do we think MyPlate is? Listen for: MyPlate is a diagram that helps us visualize how to create balanced and nutritious meals.

In our groups, let's see what we can deduce about what MyPlate recommends for us based on what we see on the poster. Pay attention to the images on the poster, the sizes of the plate segments (refer to the full diagram poster for reference), and anything else we observe that might help us understand what MyPlate recommends for us to eat. Take three minutes and note your group's observations on the note sections of the poster for the MyPlate section your group was assigned to.

As students work, observe the groups and provide clarity or prompts as needed. After three minutes, instruct the groups to rotate clockwise to the next group's poster, and take one minute to add any thoughts to the original group's notes. Repeat the process one more time. Then, instruct the groups to return to their original poster. Follow the steps in the ball activity to discuss each poster, asking the original group from each poster to share the student thoughts written on the poster to begin each discussion.

Beef on My Plate

Instruct the students to return to their original groups of 4-5 (from the sticky note activity). Provide each group with one of the Beef on My Plate handouts, a poster board, and markers. There are four different handouts; each group should receive a different handout.

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BET PROVIDED SAME PARTITIONAL EXPERTING
Interpretation of the Control of th

After 10 minutes, ask each group to share their infographic and explain the content. After a group shares, ask the class for any questions. If there are more than four groups and multiple groups received the same content, ask the other group(s) with the same content to show their poster as well and add any additional thoughts. Summarize the key points for each handout following the group presentations:

Handout #1: What this tells us is that beef provides more nutrients in fewer calories than many other food choices.

Handout #2: A couple reasons beef is a sustainable choice for the environment are that cattle eat plant material people can't eat and convert it to high-quality protein, and they use land that cannot be easily used for other purposes.

...continued

Beef is an example of a protein source that is nutritious for us, while also a sustainable choice for the environment. It will be your groups' responsibilities to teach the rest of us why that's the case. Each group received a handout describing a key point related to why or how we might incorporate beef as a protein source in our meals. Your group will have 10 minutes to draw an infographic on a piece of poster board. The infographic should help you explain the content on your handout. Be prepared to show the rest of the class at the end of 10 minutes. What questions are there? Respond to questions, and then begin. As groups draw, monitor their progress and answer questions they might have about the content.

Note: If students have remaining questions about beef, direct them to write down their questions. If time allows, explore the following resources.

- First three videos on the Raw Truth About Beef experience page (https://rawtruthaboutbeef.com/the-ex perience/)
- The sustainability information on the Raw Truth About Beef resource page (https://rawtruthaboutbeef.com/ beef-resources/).
- https://www.beefresearch.org/sustainability/index.html
- https://beef.widen.net/s/wwrw5hblhp

Handout #3: There are many simple preparation and storage techniques that help us incorporate lean beef into a meal, which we'll have the chance to explore in a few minutes.

Handout #4: A great way to eat a more environmentally sustainable diet is to help prevent food waste. This applies to all food – not just beef or other protein sources.

Preventing Food Waste

While we build nutritious meals to support our bodies, we all have a responsibility to help prevent food waste. Who can guess the percentage of food brought home in America that goes uneaten? Listen for: 40%.

That's enough food to fill the 90,000-seat Rose Bowl stadium every day. As an example, what would be some examples of ways leftover beef or steak could be made into a new meal? Listen to students' examples, and provide additional examples such as: add leftover taco meat to eggs, slice leftover steak onto a salad, etc.

Apply:

Provide each group with one of the A Day in My Life Activity handouts (each group should receive a different scenario), as well as a Texas Beef Council Super Foods Poster and Texas Beef Council Protein Pantry list handouts for each individual student in the group.



Let's apply what we have learned about using MyPlate to fuel our bodies. Each of our groups received a scenario that might sound a bit like one of us or our friends. outlining how a high school student spends their time. Your group's challenge is to create one day's worth of meals and snacks based on MyPlate recommendations that would fuel your example student's strength energy needs. There are a couple of resources you are invited to use. First, feel free to use your devices to search for food ideas at a local grocery store. Second, consider using this "protein pantry" resource for protein source ideas. Remember, aim for 25-30 grams of protein three times per day. Third, the super foods handout can be used as a reminder of MvPlate recommendations to refer to. Show the students the super foods and protein pantry handouts. Respond to questions and say: Please take five minutes as a group to build your student example's meal plan for the day.

After five minutes, ask each group to describe planned meals and briefly explain why they chose the meals they did, based on the scenario.

How many of our groups followed the recommendation to build the meals around protein? Who can provide an example of a meal they built with protein as the anchor? Listen for a couple of learners' examples.

Why is protein important?

Listen for: Protein helps us feel full and build and maintain muscle.

How do we plan to use these tips in the future, when we have opportunities to build our own meals or snacks? Listen and acknowledge learners' thinking. Provide additional examples of protein incorporated into snacks, such as beef jerky and a banana, deli meat and pickle spears, and cheese and crackers.

Process:

Instruct students to return to their seats and provide each student with the MyPlate Self-Assessment. Instruct them to take three minutes to complete the self-assessment. After three minutes, thank the students for their reflective thinking.

Let's think about how well we currently incorporate the MyPlate recommendations into our daily routines.

Evaluate:

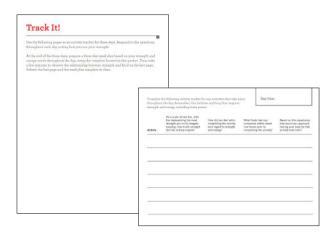
After two minutes, collect the students' MyPlate examples and thank them for their work.

We'll keep our self-assessments for our own knowledge. Now, find a piece of paper, and based on what we learned today, create and complete a MyPlate diagram with a lunch or dinner meal that aligns to the recommendations. Take just two minutes to note a simple meal with foods that you enjoy. Again, use the super foods handout to help you brainstorm!

TRACK IT! TAKE-HOME ACTIVITY

Use this optional take-home activity as an additional method of evaluating students' learning. The activity can be modified as needed. For example, the timeframe of the activity can be modified to fit the course schedule.

Provide each student with the Track It! Take-Home Activity handout. Challenge them to use either an activity tracker they already utilize or the provided handout to track their activity for one week. If they use a different activity tracker, they should still respond to the questions in the packet to process each activity experience. At the end of the three days, they will complete a detailed plan of meals and snacks based on MyPlate recommendations. They should submit the reflection and meal plan pages of the activity sheet at the end of the week as the assignment.



Track It!

Use the following pages as an activity tracker for three days. Respond to the questions throughout each day, noting how you use your strength.

At the end of the three days, prepare a three-day meal plan based on your strength and energy needs throughout the day, using the template located in this packet. Then, take a few minutes to observe the relationship between strength and food on the last page. Submit the last page and the meal plan template in class.

Complete the following activity tracker for any activities that take place throughout the day. Remember, this includes anything that requires strength and energy, including brain power!

Day One:

| Activity | On a scale of one-five, with five representing the most strength you could imagine needing, how much strength did this activity require? | How did you feel while completing the activity with regard to strength and energy? | What foods had you consumed within about four hours prior to completing the activity? | Based on this experience, how would you approach fueling your body for this activity next time? |
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Complete the following activity tracker for any activities that take place throughout the day. Remember, this includes anything that requires strength and energy, including brain power!

Day Two:

| Activity | On a scale of one-five, with five representing the most strength you could imagine needing, how much strength did this activity require? | How did you feel while completing the activity with regard to strength and energy? | What foods had you consumed within about four hours prior to completing the activity? | Based on this experience, how would you approach fueling your body for this activity next time? |
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Complete the following activity tracker for any activities that take place throughout the day. Remember, this includes anything that requires strength and energy, including brain power!

Day Three:

| Activity | On a scale of one-five, with five representing the most strength you could imagine needing, how much strength did this activity require? | How did you feel while completing the activity with regard to strength and energy? | What foods had you consumed within about four hours prior to completing the activity? | Based on this experience, how would you approach fueling your body for this activity next time? |
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Meal Planning

Based on what you observed regarding your personal strength and energy needs throughout the day, create a three-day meal plan to fuel yourself for your activities. Be sure to follow MyPlate recommendations!

| | Protein | Grains | Fruits | Vegetables | Dairy |
|--------------------------------|---------|--------|--------|------------|-------|
| Day One | | | | | |
| Breakfast | | | | | |
| Lunch | | | | | |
| Dinner | | | | | |
| Snacks (throughout the day) | | | | | |
| Day Two | | | | | |
| Breakfast | | | | | |
| Lunch | | | | | |
| Dinner | | | | | |
| Snacks (throughout the day) | | | | | |
| Day Three | | | | | |
| Breakfast | | | | | |
| Lunch | | | | | |
| Dinner | | | | | |
| Snacks (throughout the day) | | | | | |

Track It!

Now, take a few minutes to observe the relationship between strength and food.

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|-----|--|
| 1. | What surprised you about your strength and energy needs? |
| 2. | How did you apply what you observed with regard to your strength and energy needs when meal planning for the following week? |
| 3. | What went well? What was difficult? |
| 4. | What did you learn about healthy strength and activity habits? |
| | |

5. What is one thing you would like to change about your meals after learning this information?

MyPlate | SELF-ASSESSMENT

Complete this self-assessment to guide your personal meal and activity planning for the future. Please be honest! You will not be required to share this self-assessment.

Rate your typical behaviors by circling a number on the provided scale.

| | RARELY | SOMETIMES | USUALLY |
|--|--------|-----------|---------|
| I feel energized after eating breakfast, with strength to support my activities for most of the morning. | 1 | 2 | 3 |
| 2. I feel energized after eating lunch, with strength to support my activities for most of the afternoon. | 1 | 2 | 3 |
| 3. I feel energized after eating dinner, with strength to support my activities for the rest of the day. | 1 | 2 | 3 |
| 4. Snacks I eat between meals leave me feeling strong and energized. | 1 | 2 | 3 |
| I participate in physical activity for at least minutes per day. | 1 | 2 | 3 |
| 6. Half of my plate is filled with fruits and vegetables at most meals. | 1 | 2 | 3 |
| 7. I eat a variety of colors of fruits and vegetables. | 1 | 2 | 3 |
| 8. I eat the edible seeds and skins in fruits and vegetables for more nutrients. | 1 | 2 | 3 |
| 9. At least half of the grains I eat are whole grains, such as 100% whole wheat bread or brown rice. | 1 | 2 | 3 |
| I pair protein foods like beef jerky, deli meat, or milk with other foods when I eat snacks. | 1 | 2 | 3 |
| 11. I generally choose lean proteins. | 1 | 2 | 3 |
| 12. I consume 2-3 cups of dairy per day. | 1 | 2 | 3 |
| 13. I generally choose low-fat or fat-free dairy products. | 1 | 2 | 3 |
| 14. I eat protein at every meal. | 1 | 2 | 3 |

Beef on My Plate | HANDOUT #1

BEEF PROVIDES MANY NUTRITIONAL BENEFITS

Beef provides more nutrients in fewer calories than many other protein choices. Three ounces of beef contributes over 50% of the daily value of protein, 10 essential nutrients, and 175 calories. In fact, the 25 grams of protein in three ounces of beef (i.e. a burger patty the size of a hockey puck, or a steak the size of the deck of cards) is equivalent to:

- 6 tablespoons of peanut butter (564 calories)
- 1 ³/₄ cups black beans (382 calories)

Beef on My Plate | HANDOUT #2

CHOOSING BEEF AS A PROTEIN SOURCE IS ALSO A SUSTAINABLE CHOICE FOR THE ENVIRONMENT

The U.S. produces the same amount of beef today with 33% fewer cattle compared to 1977, and 18% of the world's beef with only 8% of the world's cattle. This is the result of better animal health and welfare, nutrition, and genetics.

All cattle eat grass for most of their lives, with some eating grains for the later part of their life. Ninety percent of what cattle eat is forage and plant leftovers people can't eat. This includes the stalk, leaf, cob, and husk of corn, as an example. Once the cattle eat the forage and plant leftovers, they convert it to a high-quality protein. More than 40% of the land in the contiguous U.S. is pasture and rangeland, much of which is too rocky, steep, and/or arid to support cultivated agriculture, but can support cattle and protein upcycling. The cattle leave behind a nitrogen-rich, organic fertilizer that provides the land with nutrients for the next year.

Beef on My Plate | HANDOUT #3

CONSIDER THE FOLLOWING GUIDANCE TO INCORPORATE LEAN BEEF INTO AN EASY MEAL

Storage

- Refrigeration Beef can be stored at 35-40 degrees Fahrenheit for 1-4 days after purchase.
- Freezing Beef should be frozen as soon as possible after purchase in airtight packaging at 0 degrees Fahrenheit or lower. Leftover cooked beef can also be frozen in airtight packaging to be used at a later date, which is a great way to prevent food waste and prepare for easy meals.

Cooking method

- The suggested method depends on the cut of meat to get the most tenderness and flavor.
- Cook steaks and roasts to 145 degrees Fahrenheit to destroy surface bacteria. This is important for food safety.
- Thoroughly cook ground beef, as harmful surface bacteria could be mixed throughout the meat. This is important for food safety.

Beef on My Plate | HANDOUT #4

A GREAT WAY TO EAT A MORE ENVIRONMENTALLY SUSTAINABLE DIET IS TO HELP PREVENT FOOD WASTE

The average American family wastes \$2,500-worth of food annually. When we waste less food, it doesn't have to go to a landfill where greenhouse gases would be emitted as a result. Instead of wasting food, re-create leftovers into another meal.

