



## THINK ABOUT IT

### When is the last time you thought about the snacks you eat?

- Where did your favorite snack come from?
- Who invented it?
- What is it made of?
- What else are the ingredients used for?
- Is your favorite snack good for you?
- Is it fresh, healthy, and safe to eat?

Did you know that ancient Roman soldiers ate crackers? Did you know that ancient Egyptians liked honey? Archeologists found both. The 6,000-year-old honey was still good to eat! The crackers were not.

Did you know that people have been making popcorn for more than 600 years? In those days, South American people heated sand in a fire. When the sand was hot enough, they stirred corn into the sand and kept stirring until it popped. What do you think popcorn cooked in sand tasted like?

Did you know that in medieval times rich people made their lollipops at home? Did you know that in the 1800s people used pencils for lollipop sticks? Do you know where the name lollipop came from? More than 100 years ago, a candy maker named his candy on a stick after his favorite horse, Lolly Pop!

**The SNACK ATTACK Jr.FLL Challenge is all about food. It's about what your team can learn about your favorite snacks. It's about what your team can do to keep the food you eat fresh and safe.**

Think about it. How many times a day do you hear these words? "Wash your hands!" A million? That is because washing your hands is the first step to keeping your food safe. Skin is a magnet for bacteria, germs, mold, and other tiny attackers. Most of these are perfectly safe on your skin. But when you eat them, you're asking for a stomach ache or worse!

Long ago, people ate the food they found on the day they found it. They knew it was fresh. Sometimes you do that now at an orchard, or garden, or farm. But most people get their food from the market.

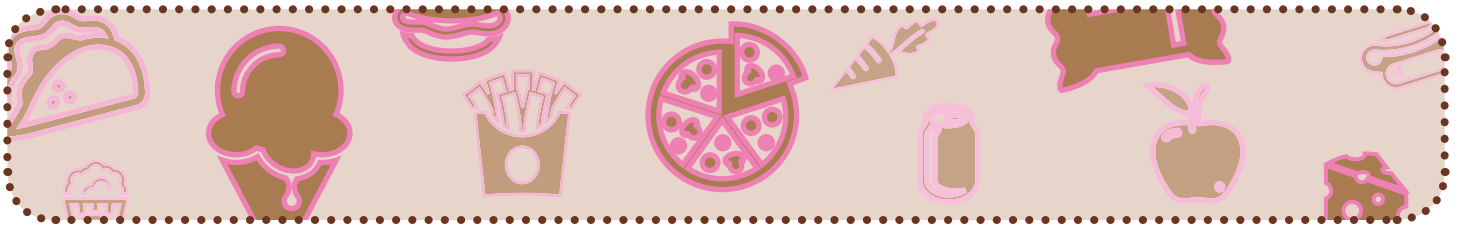
You might never see the farm where it was grown. You might never see the factory where the food was mixed, or baked, or fried, or frozen. You might never see the warehouse where it was stored. You might never see the boat, truck, plane, or train that carried your food to the store. How do you know that your food is safe?

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Lots of people work to keep your food fresh and safe in those places. They do many of the things that you and your family do at home to keep your food fresh and safe.

- It is their job to make sure that cold food stays cold.
- It is their job to make sure that cooked foods are cooked all the way.
- It is their job to make sure that right ingredients are mixed together.
- It is their job to make sure that everything your food touches is clean.
- It is their job to keep bacteria, dirt, mold, and all those other tiny attackers away from your food.

### **So, where does YOUR food safety job begin?**

Sometimes, your job begins with picking fruit or vegetables. Maybe you help the adults can or freeze the things you picked. Maybe you help get them ready to eat that very day. But most of the time:

- It begins at the market when you shop.
- It begins when you put the food away in your cupboard or refrigerator.
- It begins when you wash your dishes, counters, and cooking utensils.
- It begins when you open the cupboard or refrigerator.
- It begins when you make your snack.
- It begins when you wash your hands before you handle or eat food.

## **LEARN ABOUT IT**

**Each team member Begin by making a list of your favorite snacks.**

**As a team** — From the favorites, pick one snack that has at least two ingredients and make this snack as a team.

Find out about your team's snack. What is it made of? Where has it been? Learn about the ingredients. Some of the most boring things come from some of the most interesting places—in the most interesting ways. Think about the last time you ate that snack.

### **Where has your snack been?**

- A garden, farm, or fishery
- A warehouse
- A factory
- A market
- A car, truck, airplane, or boat
- A refrigerator, freezer, or cupboard
- A plate or bowl

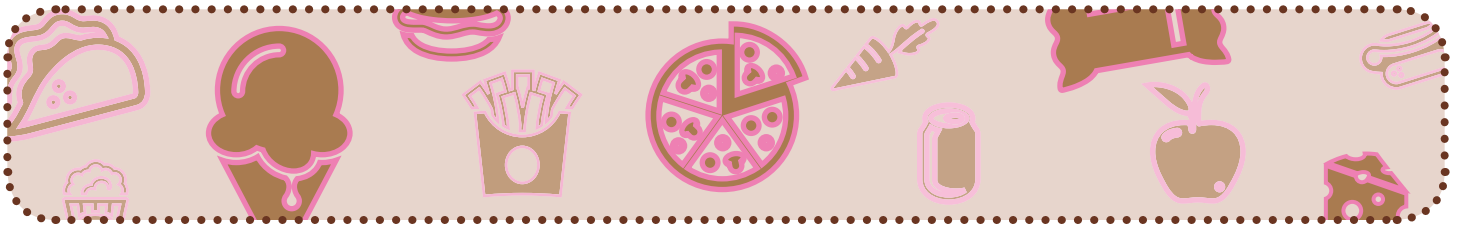
### **Where did you eat it?**

- A day care center
- A park or campground
- A school
- A restaurant
- A family home
- A kitchen
- A dining room

How did it stay clean and fresh in all those places?

Now, think about who helped keep your snack fresh and safe to eat.

- A farmer or fisherman
- A veterinarian
- A truck driver, a pilot, a ship's captain
- A warehouse or factory worker
- An inspector
- A store clerk
- A doctor
- A scientist
- An engineer
- A cook
- A waiter or waitress
- Friends or members of your family



What do you think each one did? What did you do?

Now, find out how to make your snack and keep it fresh and safe for your team. Hunt for the answers.

- What do you need to make your snack? Remember you need to choose a snack with two or more ingredients.
- Where can you get them? How will your team get there?
- How will you store the ingredients until you are ready to make it?
- What will you have to do to protect your snack from dirt, germs, bacteria, mold, and other tiny attackers?

Ask everybody you know—your family, teachers, and friends. Read books. Look at Web sites. Ask people who work at the grocery store or market. Go on a field trip. Write letters. Ask the people who work in restaurants, school kitchens, or hospitals. Ask farmers who grow your ingredients. What can they tell you? Be ready to share where you hunted and what you learned.

## **BUILD IT**

Time to build your model. Can you show where and how you made your snack? Can you show where and how you got your ingredients? Make something in your model move. Here are the rules:

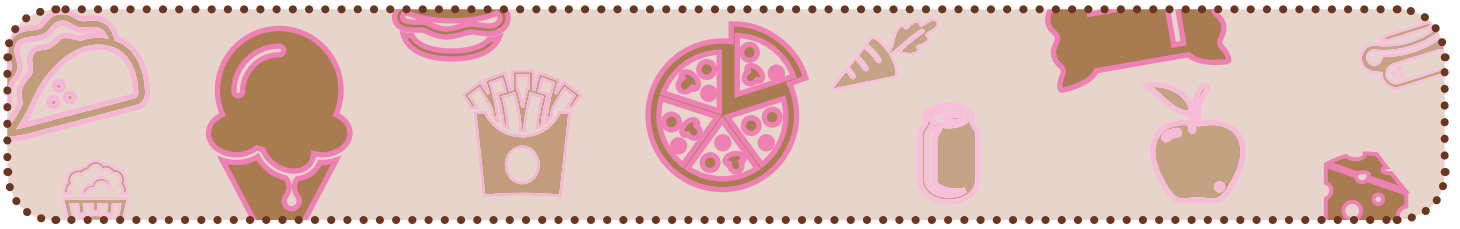
- Design your own model. Be creative! Be original! Don't just put together a kit that anyone could buy in a store or on the web.
- The model must be no bigger than 15-inches x 15-inches—a LEGO baseplate or other premeasured footprint makes it easier to keep the model the right size.
- The model should be made of LEGO parts—you can use any LEGO bricks, figures, or moving parts you need.
- The model should have at least one motorized, moveable part. You can use any LEGO motor to make your part move. There is a LEGO motor included with the optional Jr.FLL Base Kit that your team can purchase (USA and Canada only) after registering.
- The model should include one simple machine—you can build it using any LEGO ramps, levers, pulleys, gears, wheels and axles, screws, or wedges; you can find many of the pieces to make these items in the optional Jr. FLL Base Kit.
- You cannot paint or decorate the LEGO parts; you cannot use other art or craft materials in your model.

## **SHOW IT**

Make a Show Me! poster. Show your team and tell something nice about each member. Show the snack your team made. Show how you got your ingredients. Show how you learned about it. Show what you did to keep it fresh and safe. Show how others can learn more. Here are the rules:

- Use a 22-inch x 28-inch flat poster board or a 36-inch x 48-inch tri-fold presentation board—no bigger!
- You can use words, drawings, photos, and small objects attached to the poster to tell about what your team learned.
- Tell about your team—your team name, your team members (remember to make space to share something special about each one), and your coach.
- Tell about the places you hunted for answers, the people you asked.
- Tell about your snack and show how you made it—what it is, how you got your ingredients, and how you kept it fresh and safe each step of the way.
- Tell about your model and your machine—what is moving, where, and how.

And remember, the most important thing is to have fun while you show how you prevented a Snack Attack.



## SHARE IT

Now, share what you learned. You decide how to share what you've learned. Invite parents, teachers, people who helped you find answers, team sponsors, and other kids to see your poster and your model. Get permission and put your poster up at school, the library, or another public building. Tell the story. Answer questions. Sing a song. Put on a play. Be serious. Be funny. But find a way to share what you know! If you attend a Jr.FLL event, reviewers will visit with you for 5 to 10 minutes. Be prepared to:

- Listen to the reviewers and answer their questions
- Tell the reviewers about your team
- Tell the reviewers about the snack you made and your hunt for answers
- Tell the reviewers about your poster
- Show the reviewers how your model works
- Tell the reviewers about how you shared what you learned
- Be sure you have lots to share; the reviewers are looking forward to learning from you!

## NEED HELP GETTING STARTED?

This season's Jr. FLL Challenge builds an understanding of food we eat and the complex network of food growers, transporters, processors, and sellers. The sheer scope can be mind-boggling, even for adults, but the SNACK ATTACK Challenge lays the groundwork for understanding the roles that all kinds of careers play in keeping our food safe, fresh, and healthy. It brings awareness of real world food safety issues to team members in a nonthreatening, practical way. The Junior FLL Coaches' Guide contains more information about Junior FIRST LEGO League, community events and awards, along with hints for a successful season, as well as scheduling and activity suggestions. The SNACK ATTACK 2011 Coaches' Resources contains discussion topic ideas, a glossary, and a wide variety of age-appropriate resources, both print and online.

Information and resources are also available online.

- At [www.jrfirstlegoleague.org](http://www.jrfirstlegoleague.org) you will find general information.
- At <http://usfirst.org/jr.fll> you will find the Event Guide and other helpful information.

If you have more questions, e-mail [jrflteams@usfirst.org](mailto:jrflteams@usfirst.org) for support.