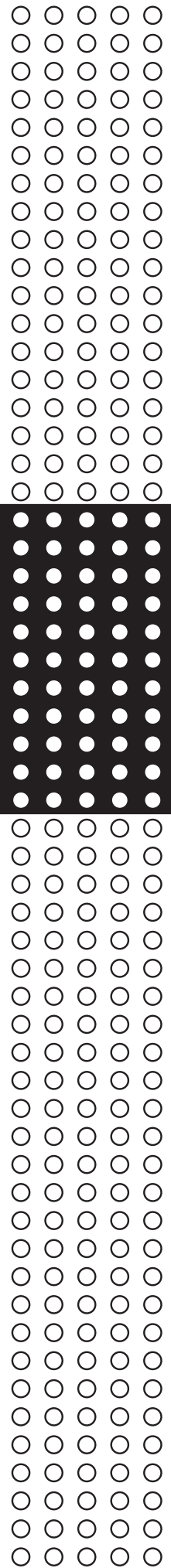


Imagination
STATION

pure science. pure fun.



Eat It Up!

Grades 6-8

Exhibit Guide

Eat It Up!
Presented by:



imaginationstationtoledo.org

Dear Educator,

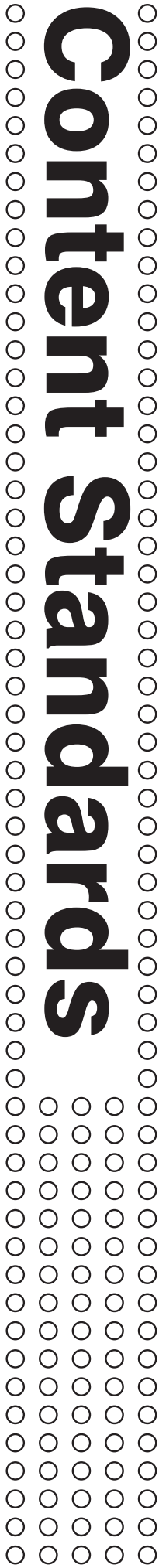
Welcome to Imagination Station's field trip resource! With the assistance of area K-12 educators, Imagination Station has created learning guides to help structure a field trip that aligns directly to the concepts you are teaching in the classroom.

Your Eat It Up! Exhibit Guide contains:

- Introduction- suggestions for using the guide including key concepts
- Alignment to the National Health Standards
- Chaperone Pages give tips for facilitating exhibit explorations with students
- Student Data Recording Pages guide your students through exhibit-based explorations
- Extension Activities to do back in the classroom

How to Use This Guide:

- Review the guide.
- Customize the guide for your needs. You can have your students complete the entire guide or just a particular component, depending on your field trip objectives.
- Print off sufficient copies of the Student Data Recording Pages for each student.
- Print off copies of the Chaperone Pages for each of the chaperones. Divide your class into groups of 5-7 students and assign a chaperone to each group.
- Review the guide and your expectations with your students and prepare for a day of fun science learning at Imagination Station!
- **Science Suggestion:** Use this guide in combination with a science notebook so students can record observations and data throughout the day.
- **Teacher Tip:** Divide the guide into sections and have different groups complete different components. Each group can then report their findings to the class back at school.



Content Standards

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National Health Standards

Grades 6-8:

Standard 1

- 1.8.1 Analyze the relationship between healthy behaviors and personal health.
- 1.8.3 Analyze how environment affects personal health.
- 1.8.8 Examine the likelihood of injury or illness if engaging in unhealthy behaviors.
- 1.8.9 Examine the potential seriousness of injury or illness if engaging in unhealthy behaviors.

Standard 2

- 2.8.2 Describe how the influence of culture on health beliefs, practices, and behaviors.
- 2.8.5 Analyze how messages from media influence health behaviors.

Standard 5

- 5.8.4 Distinguish between healthy and unhealthy alternatives to health-related issues or problems.
- 5.8.6 Choose healthy alternatives over unhealthy alternatives when making a decision.
- 5.8.7 Analyze the outcomes of a health-related decision.

Standard 6

- 6.8.1 Assess personal health practices.
- 6.8.2 Develop a goal to adopt, maintain, or improve a personal health practice.
- 6.8.3 Apply strategies and skills needed to attain a personal health goal.

Food Myths

This activity will help your students recognize the motivation behind advertisements that food companies produce. Students will then be tasked with creating an advertisement for a healthy food.

Have each student come to class with an advertisement about food that he and she found in a newspaper or magazine. (Or you can provide several examples yourself).

Have your class work in small groups to list what information the ad is communicating to get you to purchase the food. Examples would include 'You'll be happy when you eat this food', 'You'll have lots of friends', 'You'll be strong/famous/attractive like a certain celebrity', etc.

As a large group, discuss some of the main messages the advertisers are trying to communicate.

Points for Discussion:

- The average kid is exposed to 40,000 commercials per year and half of these are about food. Are the majority of the ads for healthy or unhealthy foods?
- How often does the food in an advertisement look better than the actual food when you purchase it?
- What makes an ad memorable? Does it include a catchy phrase?
- Why do advertisers use cartoon characters or famous people to sell food?

Procedure:

Have each student create an advertisement for his or her favorite healthy food. The ad should communicate 3 health benefits of the food. Each student can present his or her ad to the class after they are completed.



Presented by:



I'm committed to making a change today!

After visiting Eat It Up! at Imagination Station,
I commit to treating my body well! I understand that the decisions I make
everyday affect my health and well-being. I will work to keep my body healthy
– one choice at a time!

Below are three choices I can make everyday to be healthier.

1. _____

One way I can reach this goal:

1. _____

2. _____

One way I can reach this goal:

1. _____

3. _____

One way I can reach this goal:

1. _____

Signature

Date



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Eat It Up!

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Find the answer

Cut out the following questions and hand them out to your students. Have your students look for the answers in Eat It Up! Once your students are back in the classroom, have each student report what they learned to the class. Several students can answer the same question.

How many calories do you burn raking leaves?

What is the starting life expectancy for the social dining table?

How many calories does an 8 year old boy need if he is a couch potato?

What is a better food choice: a kid's cheeseburger or 4 chicken nuggets?

What is your resting heart rate?

What are some common names for sugar on a food label?

What is your active heart rate?

How many calories does a 12 year old girl need on average if she is very active?

What are three effects of sugar on the body?

What are three benefits of exercising?

What are three healthy foods that you want in your pantry?

Which is the healthier food option: string cheese or fruit snacks?

How much sugar, salt and oil are in an ice cream sundae?

Name two easy activities that you can do to burn extra calories?

What are some benefits of eating strong foods? Name two strong foods.

What are some effects of eating lazy foods? Name two lazy foods.

What does it mean to shop the perimeter?

How many calories do you burn playing soccer?

How does sun exposure affect how you will look in the future?

How many pounds would you gain in one year if you added an energy drink to your daily diet?

What is a calorie? How many unused calories must you consume to gain one pound?

What are two tips to eating healthier meals?

Look at the four healthy meals on the table. What are the ingredients in one of the meals?

What are three tips to shop smarter when you go to the grocery store?

Which is a better choice at the ballpark: an ice cream sandwich or soft serve ice cream? Why?

How many more calories do you burn playing soccer than watching television for 1 hour?

Chocolate milk contains as much sugar as how many doughnuts?

Eat It Up!

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Heart Rate Rally

1. Measure and record your **Resting Heart Rate:** _____
2. Complete the Heart Rate Rally.
3. Measure and record your **Active Heart Rate:** _____
4. What happened to your heart rate after doing the Heart Rate Rally?
Why is it important to keep your heart active?

Your heart rate is the number of times that your heart beats in one minute. Your resting heart rate is slower because your body needs less oxygen. When you're active, your heart beats faster to get oxygen-rich blood to all parts of your body.

Wheel of Fire

1. Complete the Wheel of Fire.
2. Record how fast were you able to get the Wheel of Fire to spin. _____ m/sec
3. Record how many calories you burned on the Wheel of Fire. _____
4. Look at the table to the left of the Wheel of Fire titled 'How Many Calories Do You Need?' Record the approximate number of calories that you need to maintain a healthy weight.

Number of calories I need: _____

Eat It Up!

Grades 6-8

Burn, Baby, Burn

1. Identify three activities that you enjoy doing and how many calories each activity burns.

| Activity | Calories Burned |
|----------|-----------------|
| | |
| | |
| | |

Social Dining Table

1. Play the game against your friends or other visitors. Your starting life expectancy is 77 years.
2. Record one of the choices that you made. What effect did it have on your life expectancy?

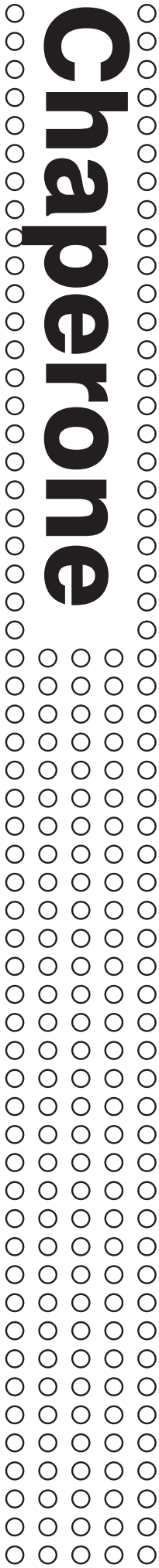
Why did this choice have a positive or negative effect on your life expectancy?

Food Smasher

1. Select a food to smash. Record your choice: _____
2. Record the following amounts for the food:

| | Predicted amount | Actual amount |
|-------|------------------|---------------|
| Sugar | | |
| Salt | | |
| Oil | | |

Is the amount of sugar, salt and oil in this food surprising to you? Why or why not?



Chaperone

Eat It Up!

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Dear Chaperone,

We're glad you're here! Thank you for volunteering to be a chaperone on your school's visit to Imagination Station. This page explains field trip procedures and offers tips on how to facilitate an Imagination Station Exhibit Guide.

Imagination Station requires students and chaperones to remain together at all times. Group size should be seven students or less per one adult.

Student Names:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Schedule for the day:

Lunch Time:

Demonstration Time(s):

Departure Time:

Imagination Station Exhibit Guides:

- Students should fill out the their Data Recording pages while at the science center. It should take about 1 hour to complete the activities.
- Have fun! A field trip is a great chance to interact with young people and see the wonder of science through their eyes.
- Ask open-ended questions that will elicit more than 'yes' or 'no' responses. Ask questions that begin "Tell me about...", "What..." or "Why do you think...".
- Encourage exploration! Students may ask "What will happen if....". Encourage them to experiment and find out!
- Don't worry about completing the guide in order! You can visit the different exhibits in a manner that is most convenient for your group.

Visitor Guide

Attractions

High Wire Cycle – This thrill ride hovers over 18 feet above the ground, suspended on a 1-inch cable with a 275 pound counterweight that enables any person to defy gravity.

- You must be 54" to ride

Simulator Theater – Over The Edge!

Experience every turn, jolt, twist and drop. With HD visuals, surround sound and a responsive platform, you have an adventure without leaving your seat!

- Imagination Station members ride FREE! You must have a token to ride. Tokens are \$2 and available at Simulator entrance or Visitor Service.
- You must be 42" to ride.
- Elevator available. Please contact a team member.

Demonstrations

Extreme Science Theater

Interactive demonstrations with an exciting EXTREME twist! Check monitors located at Visitor Service or at elevators for times.

Learning Worlds

Eat It Up! – This Learning World is focused on nutrition and exercise and tells the story of how the choices you make affect your body. Eat Smart. Play Hard. Have Fun.

Energy Factory – Get a glimpse into the abstract world of oil refining and solar energy.

Flex Space – This ever-changing space features some of the best exhibitions from North America and great experiences that we've created right here at Imagination Station.

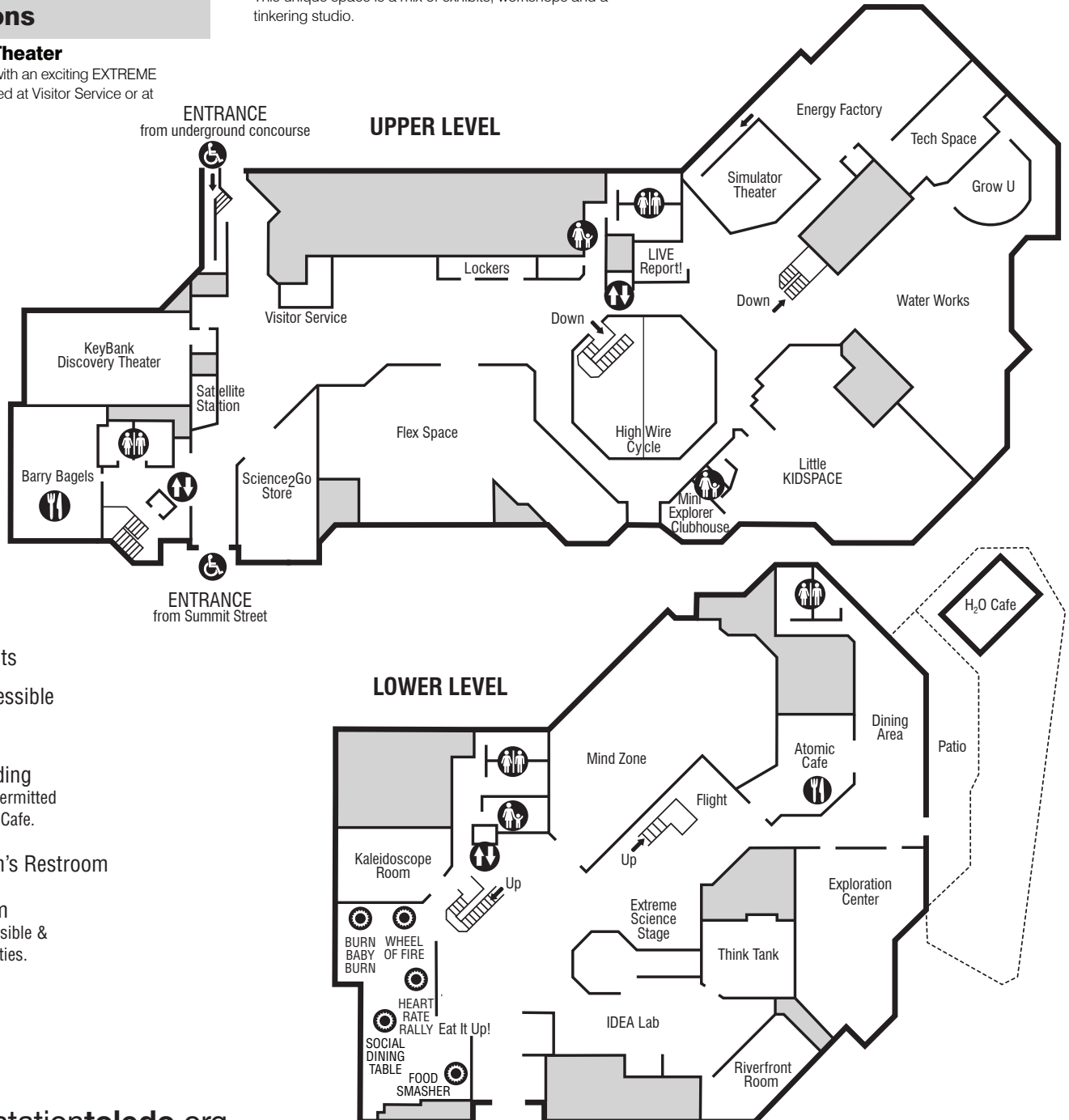
Grow U – Let Mother Nature be your guide as you take on FARM 101: Know It to Grow It.

IDEA Lab – This Learning World combines science, art, engineering and design to allow for open-ended exploration. This unique space is a mix of exhibits, workshops and a tinkering studio.

Little KIDSPACE™ – Our littlest adventurers (kindergarten and under) can hop aboard our fire truck, shop in the grocery store or climb on our favorite tree house while learning science fundamentals.

Mind Zone – Home to the Distorted Gravity Room, discover how the mind processes, interprets and creates illusions and perceptions.

Water Works – Discover the slippery science of water and explore nature's most powerful resource.



- Eat It Up! Exhibits
- Wheelchair Accessible
- Elevator
- Restaurant/Vending
Food & beverages permitted only in Atomic/H2O Cafe.
- Men's & Women's Restroom
- Family Restroom
Special needs accessible & baby changing facilities.

Heart Rate Rally

1. Measure and record your **Resting Heart Rate:** _____
2. Complete the Heart Rate Rally.
3. Measure and record your **Active Heart Rate:** _____
4. What happened to your heart rate after doing the Heart Rate Rally?
Why is it important to keep your heart active?

Your heart rate is the number of times that your heart beats in one minute. Your resting heart rate is slower because your body needs less oxygen. When you're active, your heart beats faster to get oxygen-rich blood to all parts of your body.

Most students will see an increase in their heart rate as a result of completing the Heart Rate Rally. Your heart rate is the number of times that your heart beats in one minute. Your resting heart rate is slower because your body needs less oxygen. When you're active, your heart beats faster to get oxygen-rich blood to all parts of your body.

By keeping your heart strong, it is able to pump more efficiently and deliver oxygen-rich blood to all parts of your body. Your heart beats 100,000 times per day so you want it to be as strong as possible.

Wheel of Fire

1. Complete the Wheel of Fire.
2. Record how fast were you able to get the Wheel of Fire to spin. _____ m/sec
3. Record how many calories you burned on the Wheel of Fire. _____
4. Look at the table to the left of the Wheel of Fire titled 'How Many Calories Do You Need?' Record the approximate number of calories that you need to maintain a healthy weight.

Number of calories I need: This number will depend upon the age, sex and activity level of each child in your group.

Burn, Baby, Burn

1. Identify three activities that you enjoy doing and how many calories each activity burns.

| Activity | Calories Burned |
|------------------------------|------------------------|
| <i>i.e. Frisbee</i> | <i>177 calories/hr</i> |
| <i>i.e. Shooting baskets</i> | <i>266 calories/hr</i> |
| <i>i.e. Juggling</i> | <i>118 calories/hr</i> |

Social Dining Table

1. Play the game against your friends or other visitors. Your starting life expectancy is 77 years.
2. Record one of the choices that you made. What effect did it have on your life expectancy?

Why did this choice have a positive or negative effect on your life expectancy?

Each response will depend on the choice that each student made.

Food Smasher

1. Select food to smash. Record your choice: *i.e. cupcake*
2. Record the following amounts for the food:

| | Predicted amount | Actual amount |
|-------|------------------|---------------|
| Sugar | | <u>9</u> |
| Salt | | <u>3</u> |
| Oil | | <u>10</u> |

Is the amount of sugar, salt and oil in this food surprising to you? Why or why not?

Most students will be surprised by the amount of sugar, salt and oil that are in the foods that they enjoy. The Food Smasher compares these values to the daily amounts that you should have.

Discuss possible healthier food options with your group.