



# The Missing Food Mystery

What can we do to reduce food waste?

This Workshop was funded in part by a WRRED grant from the Department of Ecology

# Missing Food Mystery Workshop

## Activity 1: What's the missing food mystery?

Why do we care?



# Did You Know:

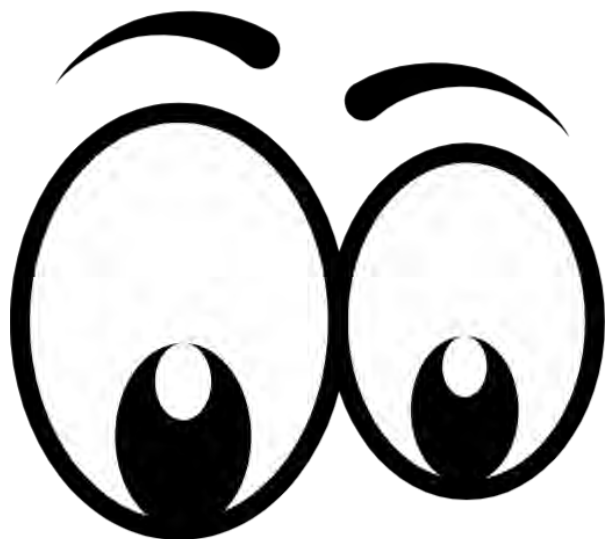
In the USA, 1 out of 4 bags of food goes missing every week!



Where does it go?



To solve the Missing Food Mystery,  
we need to warm up our  
Investigator Senses and record our  
ideas in our Mystery Data Log.



To solve the Missing Food Mystery,  
we need to think like scientists and record our data.

Seven (7) things scientists do to investigate an issue.



Ask Questions  
Observe  
Experiment  
Gather data  
Test Ideas  
Read Research  
Draw Conclusions





Why does  
missing food  
matter in the  
world?



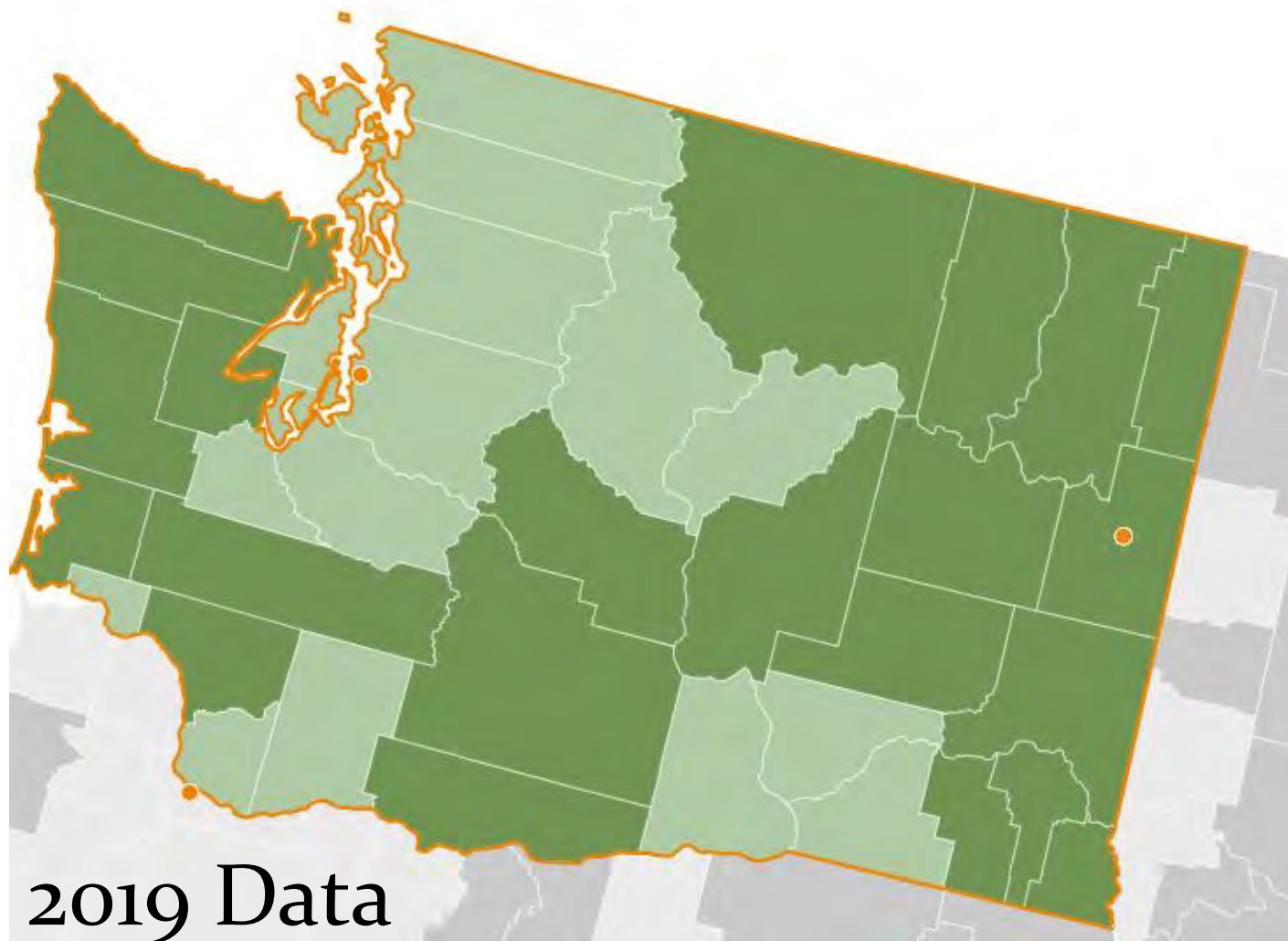
Of the 7.9 billion people on the planet, an estimated 770 million faced hunger in 2020 according to the United Nations.

Why does  
missing food  
matter in the  
USA?



Of the 330 million people in the United States, an estimated 38.3 million were food insecure in 2020, according to the USDA.

# Why does it matter in Washington State?



- One million Washington residents visited a food bank in the past year.
- 1 in 10 people in Washington regularly struggle with hunger.
- 1 in 6 Washington kids live in a household that struggles to have enough food for the family.

Food Insecurity Rates ⓘ

No Data

0-11.8%

11.9-23.6%

23.7-35.4%

35.5-47.2%

47.3-59.0%

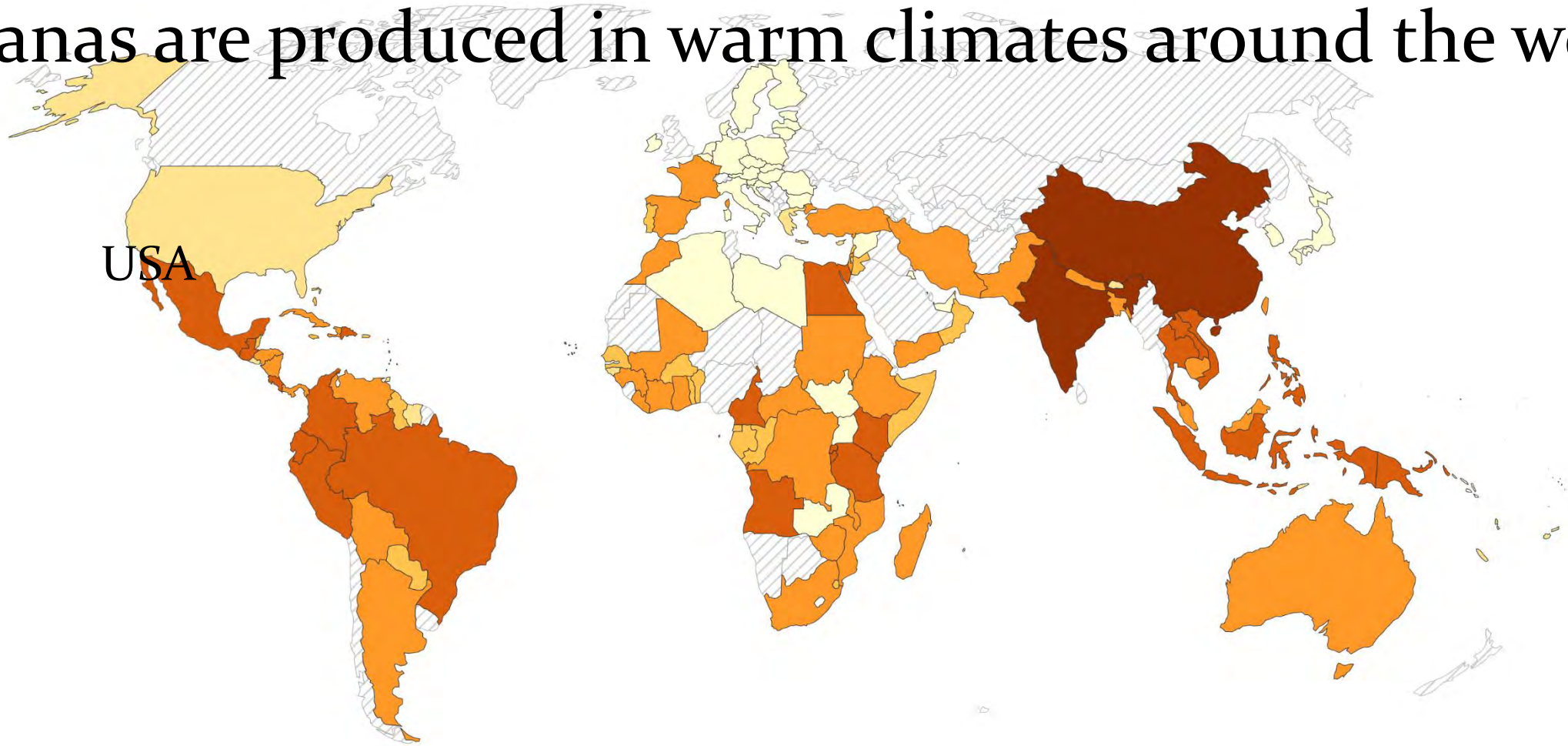


# Missing Food Mystery Workshop

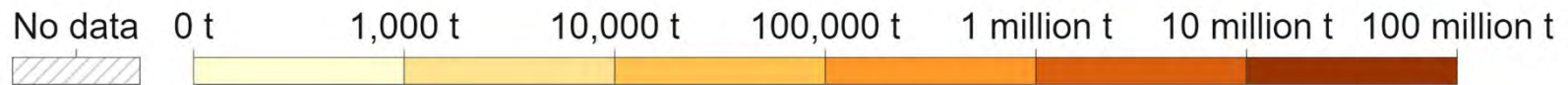
## Activity 2: What happens so we can eat bananas?



Bananas are produced in warm climates around the world.



The darker the color, the more bananas are grown.







Most of the bananas we buy come from Central America



# Banana Plantation

A person is seen from behind, carrying a large, conical bundle of green bananas on their back. The bundle is wrapped in a light-colored, textured material, possibly a sack or a large piece of paper. The person is wearing a dark, long-sleeved shirt and dark pants. They are walking through a banana plantation, with large green leaves and bunches of bananas visible in the background. The ground is covered with brown mulch or soil.

**The Life Cycle of Bananas**



# The Life Cycle of Bananas

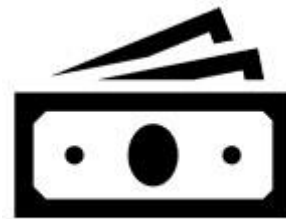
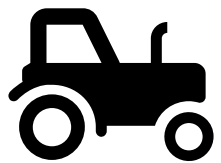
1. Cut apart the pictures of the resources used to grow, transport, and sell bananas.
2. Put the pictures in the order that they happen.
3. Tape or glue them in your MYSTERY DATA LOG
4. Add icons of resources that are needed for each step in the banana's life cycle.





Sun, soil, and water are needed to produce banana plants and flowers.





Machinery and workers are needed to produce bananas. <sup>15</sup>



Bananas are harvested and washed by workers. The blue bags and wash water are filled with chemicals to protect bananas from pests and spoiling.



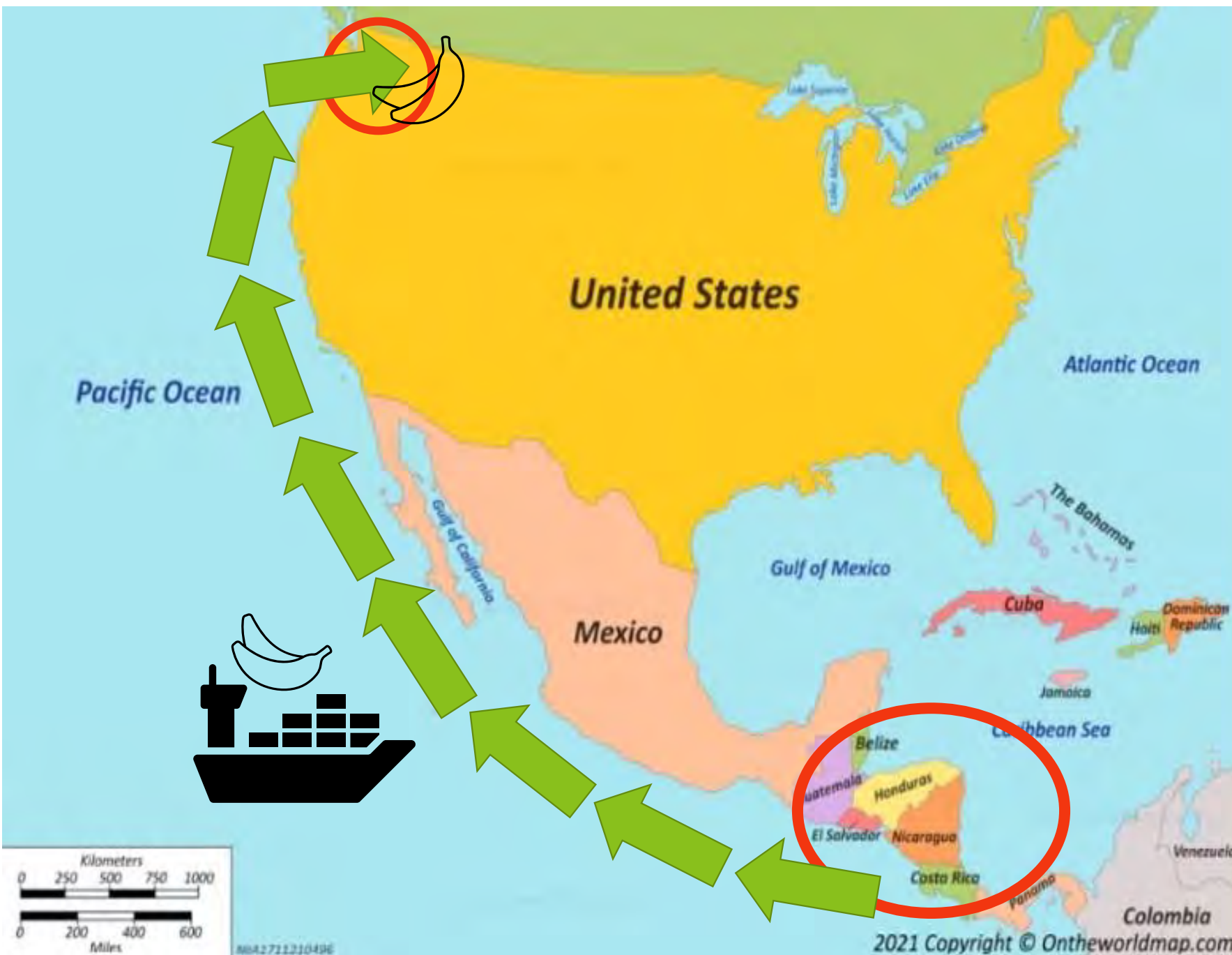


Bananas are boxed and transported by trucks and cargo ships.



Banana Shipping





How far do bananas travel from Central America to get to my home?

The green arrows are approximately 600 miles each.



# What does it take so we can eat bananas?

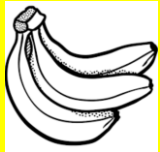


- Soil
- Water
- Sun
- Chemicals
- Workers
- Machinery
- Trucks
- Cargo Ships
- Gas
- Money

# Americans throw away 5 billion bananas every year!



It takes 270 days to grow bananas.



About 5-gallons of water is required every day for one banana plant.

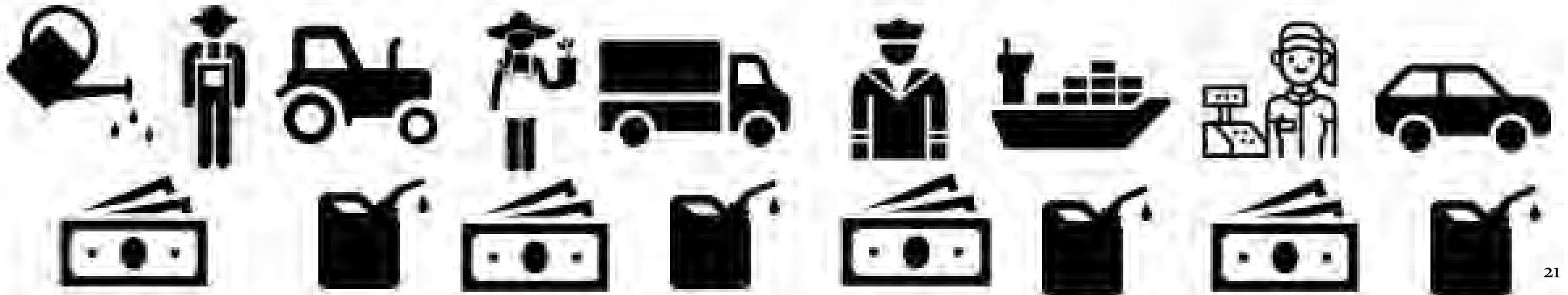


5 gallons x 270 days to grow = 1,350 gallons of water.

# REVIEW: Why is missing food a problem?



Some of the resources used so we can eat bananas.

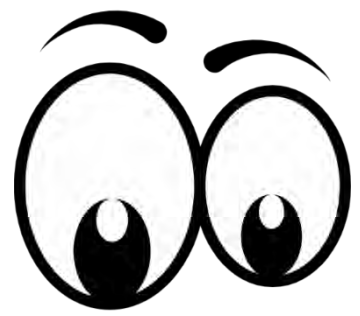




# Missing Food Mystery Workshop

## Activity 3: Why is food wasted?





# Why is food wasted?



Food Spoils



# Why is food wasted?

1. Putting more food on your plate than you can eat.
2. Throwing away food you don't like.



3. Buying or cooking more food than is needed.





# Why is food wasted?

Storing food improperly.





Which party foods can stay out the longest and still be safe to eat?





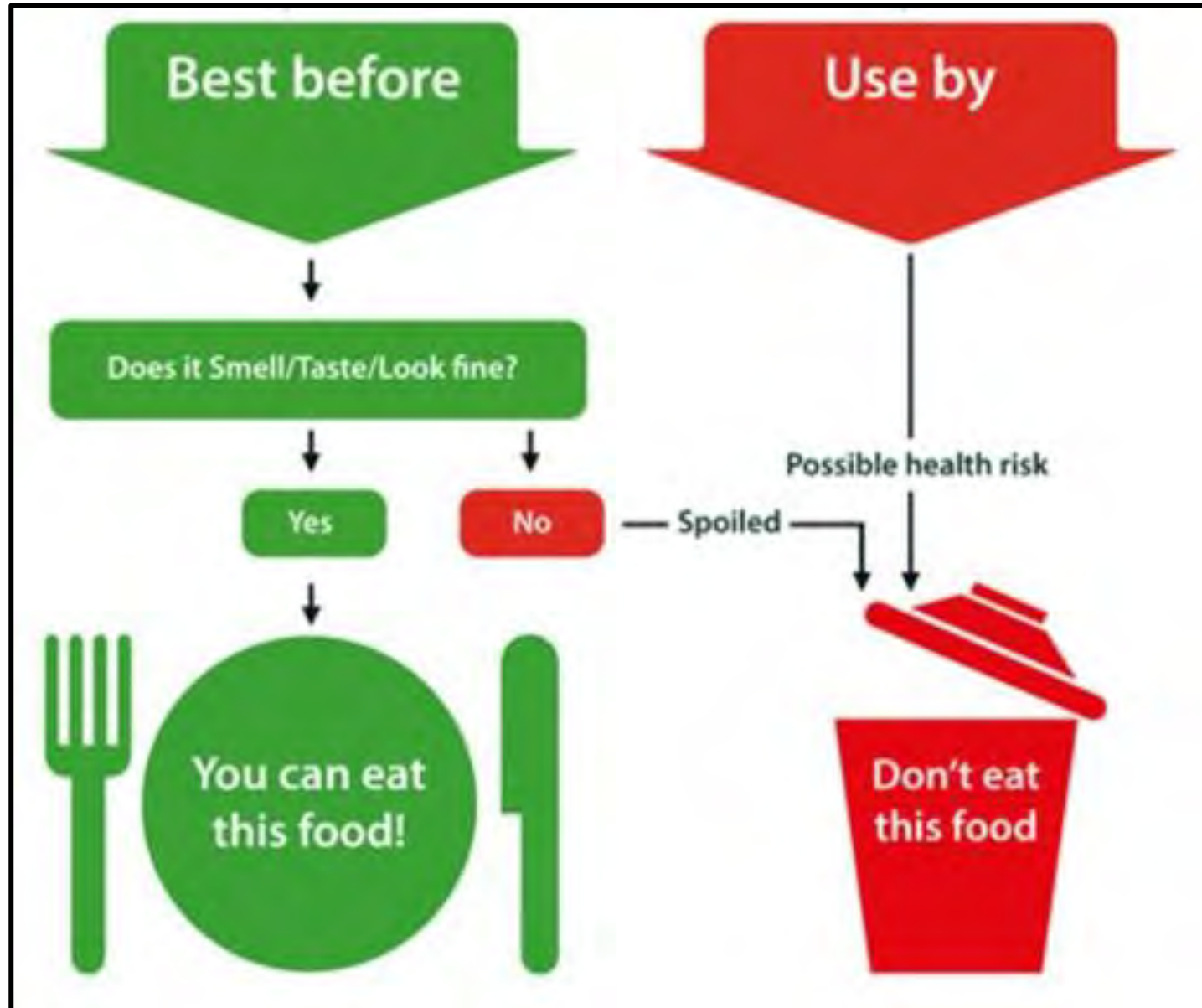
# Why is food wasted?

## Confusing Expiration Dates

- Best before ...
- Best if used by ...
- Use by ...
- Sell by ...



# What do we do if the date has passed?





Keep these foods in your pantry. They have a long shelf life.

### 0-1 YEARS

Dried Fruits

### 1-3 YEARS

Bouillon  
Dark Chocolate  
Dried Pasta  
Jerky  
Oats  
Oils  
Ramen Noodles  
Tea  
Tomato Sauce  
Jams and Jellies (unopened)

### 3-5 YEARS

Canned Tuna  
Pickles (unopened)  
Spices

### 5-10 YEARS

Canned Fruit  
Grains  
Molasses

### 10+ years

Instant Coffee  
Powdered Milk  
Rice

### FOREVER

Corn Starch  
Dried Beans, Lentils & Legumes  
Liquor  
Maple Syrup (unopened)  
Popcorn  
Powdered Jell-O  
Raw Honey  
Salt  
Soy Sauce (unopened)  
Sugar  
Vanilla Extract  
Vinegar



# Missing Food Mystery Workshop

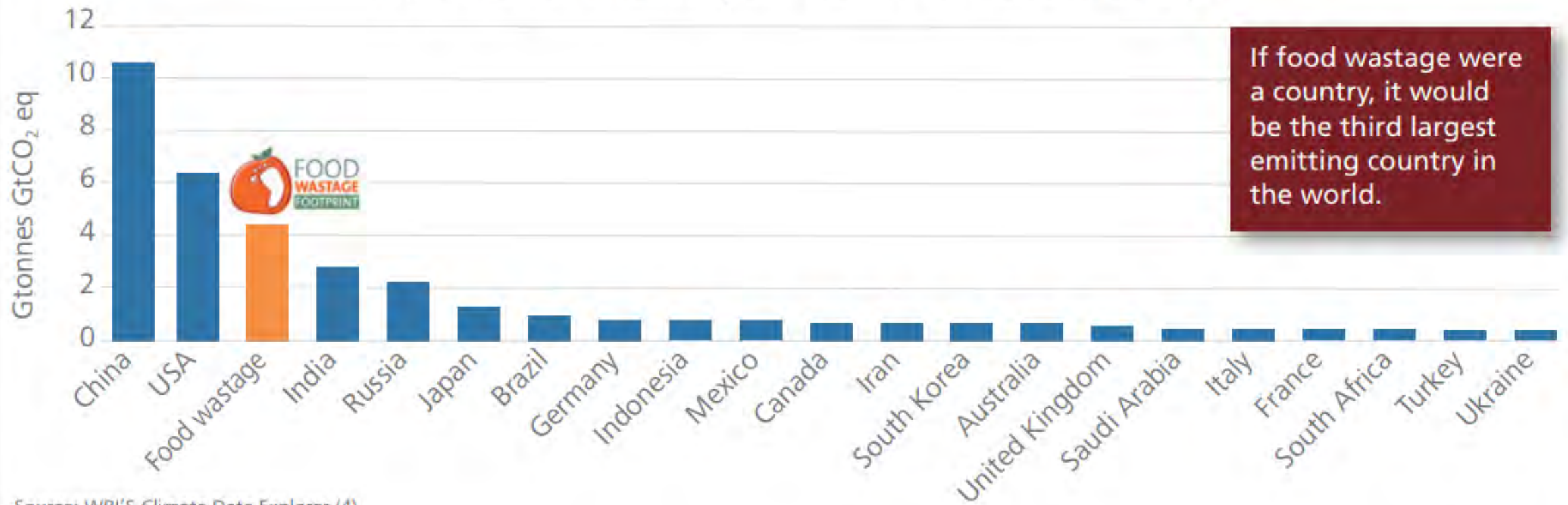
## Activity 4: Where is away?





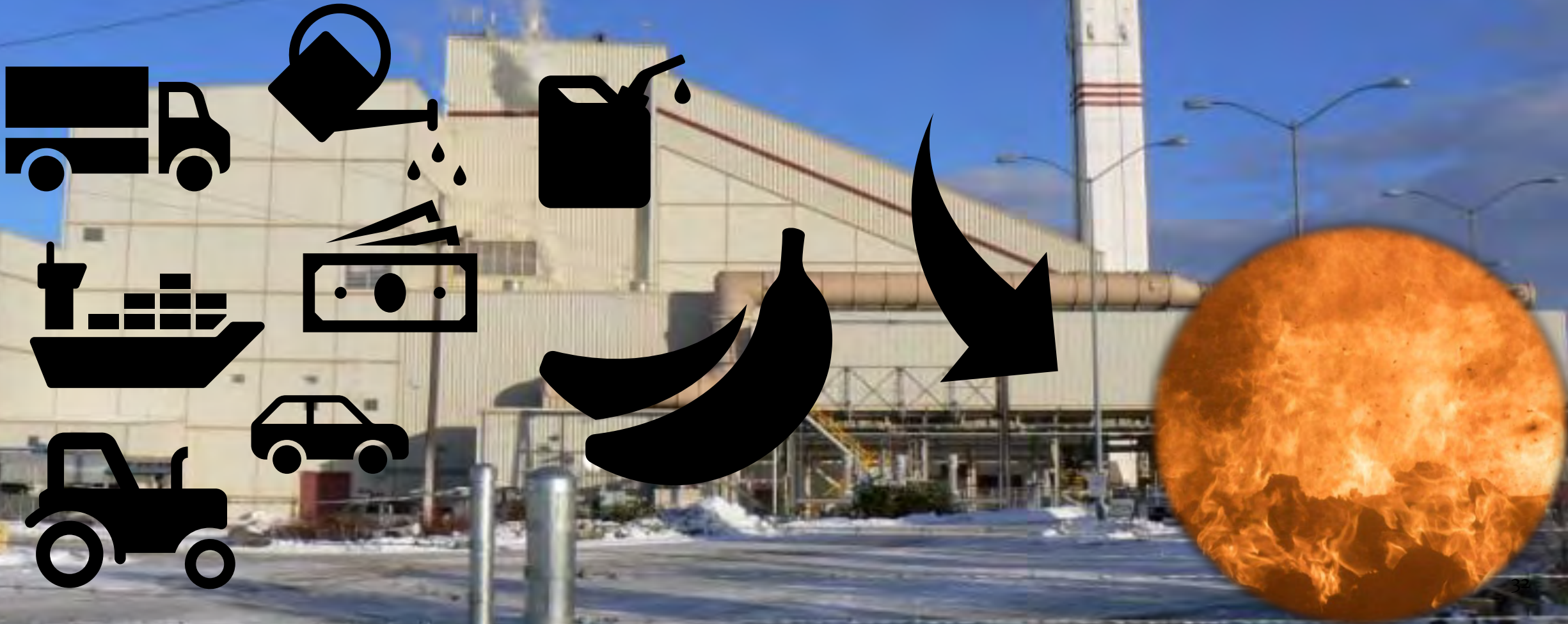
# Rotting food in landfills creates a gas called methane which is 26 times more damaging than carbon dioxide.

Total Greenhouse Gas (GHG) Emissions  
Top 20 of countries (year 2011) vs. Food wastage



Source: WRI'S Climate Data Explorer (4)

# The Spokane Waste to Energy Facility





# Commercial Composting

The City of Spokane and Waste Management take yard and food waste to Barr-Tech for composting.





There are many way to compost at home.



including feeding  
red wiggler worms  
that love to eat your  
leftovers.



# Got Waste? Want to Recycle?

Put it in the  
right place!

**VISIT**

Spokane / Kootenai  
Waste & Recycle  
Directory

Not sure where it goes?

The Waste and  
Recycle Directory  
will help you put  
your waste in the  
right place. So much  
better for our world  
than just  
throwing it “away”.

[spokanewastedirectory.org](http://spokanewastedirectory.org)



# Missing Food Mystery Workshop Activity 5: Solving the Mystery



What can we do to solve the missing food mystery at home or in the school lunchroom?



# How can we rescue food?



# Investigate the Missing Food Mystery at home

USE THIS WASTE AUDIT SHEET IN YOUR MYSTERY DATA LOG.



Can You Solve the Missing Food Mystery?  
Food Waste - Home Audit.

Use your Investigator Eyes, Ears, and Nose



Date:	What food did I throw away at home?	Why?
Sample	<input checked="" type="checkbox"/> Meat <input type="checkbox"/> Vegetable <input checked="" type="checkbox"/> Fruit <input checked="" type="checkbox"/> Breads /Grains <input checked="" type="checkbox"/> Beverage (milk, fruit juice, soda) <input type="checkbox"/> Other _____	I saw mold. My banana was black. The milk smelled sour. I heard my mom say it was expired. I was full. I didn't like the taste.
Day 1	<input type="checkbox"/> Meat <input type="checkbox"/> Vegetable <input type="checkbox"/> Fruit <input type="checkbox"/> Breads /Grains <input type="checkbox"/> Beverage (milk, fruit juice, soda) <input type="checkbox"/> Other _____	
Day 2	<input type="checkbox"/> Meat <input type="checkbox"/> Vegetable <input type="checkbox"/> Fruit <input type="checkbox"/> Breads /Grains <input type="checkbox"/> Beverage (milk, fruit juice, soda) <input type="checkbox"/> Other _____	

"Best By" "Sell By" and "Best If Used By" dates are not expiration dates. The food may still be good to eat. Ask an adult. Use your eyes, ears, and nose.

Name: \_\_\_\_\_ My solution for reducing food waste at home. I will

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Use your Investigator Eyes, Ears, and Nose



Date:	What food did I throw away at school?	Why
Sample	<input checked="" type="checkbox"/> Meat <input type="checkbox"/> Vegetable <input checked="" type="checkbox"/> Fruit <input checked="" type="checkbox"/> Breads /Grains <input checked="" type="checkbox"/> Beverage (milk, fruit juice, soda) <input type="checkbox"/> Other _____	it looked like it would taste bad. It smelled yucky. I was told to take it, but I didn't want it. I was full. I didn't like the taste. My friends told me to hurry up.
Day 1	<input type="checkbox"/> Meat <input type="checkbox"/> Vegetable <input type="checkbox"/> Fruit <input type="checkbox"/> Breads /Grains <input type="checkbox"/> Beverage (milk, fruit juice, soda) <input type="checkbox"/> Other _____	
Day 2	<input type="checkbox"/> Meat <input type="checkbox"/> Vegetable <input type="checkbox"/> Fruit <input type="checkbox"/> Breads /Grains <input type="checkbox"/> Beverage (milk, fruit juice, soda) <input type="checkbox"/> Other _____	

Name: \_\_\_\_\_ My solution for reducing food waste at school. I will

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# Investigate the Missing Food Mystery at school.

USE THIS WASTE  
AUDIT SHEET IN YOUR  
MYSTERY DATA LOG.

# Missing Food Mystery Workshop

## Activity 6: How can we inspire people to reduce food waste?





**ROLE:** You work for an ad agency, and your task is to create a media campaign that inspires everyone in Spokane to reduce food waste. Be Creative. Make it fun.



## IDEAS:

- Create a slogan
- Make a poster
- Act out a video scene
- Write an announcement
- Write a song

## PRESENTATIONS:

Each team will present your add campaign to the group.

# Ideas for Your Media Campaign to Reduce Food Waste

- Be part of the clean plate club! Take what you'll eat and eat what you take.
- Put food scraps in the green bin which is collected for commercial composting.
- Start a home compost bin or feed food scraps to red wiggler worms.
- Conduct a food waste audit with your family or in the school lunchroom.
- Visit a farm to learn about crops and animals.
- Grow your own vegetables and help an adult take care of a garden.
- Learn to cook a favorite meal (get help from a grown up).
- Share what you've learned today with others!



# Possible Slogans for Creating a Poster

- Take what you'll eat and eat what you take.
- Think twice before wasting food.
- Food waste benefits no one.
- Waste less, save more, live more.
- Be smart and say no to food waste.
- Nothing good comes out of wasting food.
- Wasting food doesn't make you cool.
- Food is meant to be eaten not wasted.
- Be thankful you have food. Never waste it.
- Cutting food waste is a delicious way of saving money, helping feed the world and protecting the planet.
- Someone is dying for the food you are throwing away.
- There is food enough for everyone on this planet, but not everyone eats.
- Give away food instead of throwing it in the garbage.
- You paid good money for that...Why throw it away.
- Hunger can kill a person. Please save food.
- Don't waste anything. Eat your leftovers the next day.
- Respect for food is respect for life.
- Don't waste food. Live simply so others may simply live.
- Don't take big portions of food you have never tried before.
- The food you save may bring a smile to a poor person's face.
- Store food properly so it doesn't spoil.
- Don't waste food, water, money, time or talent.
- Today's wastage is tomorrow's shortage. Save food.

# Posters Ideas to Inspire People to Reduce Food Waste





A stage with red curtains, a spotlight, and stars. The scene is set on a stage with red curtains. A bright spotlight shines down from the top center, creating a large, glowing area. The spotlight area is filled with numerous white stars of various sizes. The curtains are pulled back on both sides, revealing the stage floor. The overall atmosphere is one of anticipation and excitement.

**Audience Ready? Performers Ready? It's show time**