

# Potato Packaging Waste

**Grade:** 5

**State Standards:** Grade 5 Science, Investigation and Experimentation 6.f Select appropriate tools and make quantitative observations. Grade 5 Math; Mathematical Reasoning 1.0 Students make decisions about how to approach problems. 1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.

**Groups**

**Preparation Time:** 25 minutes

**Activity Time:** 50 minutes

**Key Words:** Packaging

## OBJECTIVE

Students will:

- Compare and contrast the price per pound of products to the amount of waste they generate
- Analyze the positive and negative aspects of packaging

## MATERIALS

Potato Workshop worksheet and the No Waste Lunch guide

## BACKGROUND

Although packaging is useful and necessary for many reasons, it is a major component of the waste stream. People can reduce the amount of garbage they generate by making thoughtful and informed choices when they buy packaged products. Additionally, students should realize the connection between their purchases and the decisions product manufacturers make. Because manufacturers try to meet consumer demand, avoiding non-environmentally friendly products helps shift the curve towards more responsible, sustainable products.

## PROCEDURES

Assign the Potato Workshop worksheet. Explain to the students how to fill out the worksheet. Then discuss the following as a class:

- **Which forms of the potato seem to be most highly processed?**
- **Which forms are most expensive per pound?**
- **Which form of potato would you purchase if you were interested in reducing solid waste? In saving money?**
- **What relationships are there among cost, amount of processing, and packaging of products?**

- **Actually, for every \$10 that you spend at the grocery store, about \$1 is used to pay for the package. Remember that you pay for the package, then you take it home and throw it in the garbage--which you also have to pay for! Therefore, it makes sense to only buy the amount of packaging that you need!**

## **Discussion**

Review the trade-offs of packaging. Remember some of the drawbacks are: packaging increases the cost of the product, most packaging ends up in a landfill, some packaging becomes unsightly litter and can injure wildlife, packaging can make a product look bigger and better than it really is, and natural resources are used to make packaging. On the other hand, we need packaging to keep some things fresh and to protect them from breaking.

Reflect that nature's way of packaging does not have to create waste. Examples are bananas, apples, oranges, peanuts, coconuts – all come in their natural “wrapper” and can be purchased without other packaging and these items are useful in composting. Natural items can be composted or “broken down” by nature and provide nutrients back into the soil.

Write the following on the board, but in a different order from the correct one below:

1. No packaging
2. Refillable (or reusable) packaging made from recycled products
3. Packaging that is reusable
4. Packaging made from recycled products and is recyclable
5. Packaging that is made from recycled products
6. Packaging is not more than necessary, but not reusable or recyclable
7. Packing is excessive, and not reusable or recyclable.

Ask students to rate these choices in order of least wasteful to most wasteful and explain their answers.

## **Extension**

Have students make informative posters that recommend careful selection of food products. Include such ideas, for example, as: choose products in recyclable, returnable, or refillable containers, avoid excessive packaging, buy products in bulk and in larger sizes, buy unwrapped fruits and vegetables, avoid snack items in single-serving packages, carry products home in reusable bags, support companies that provide minimal and recyclable packaging.

Hand out the “No Waste Lunch” guide and ask students to practice this several times over the next few weeks or months and share their experience with the class. Was a “No

waste lunch” easy or hard? What changes did they have to make? What favorite items did they give up? What substitutes did they use instead?

Have students create a cafeteria display of a “waste-less” lunch that uses durable containers inside a lunch box and a refillable thermos, etc.

### **ASSESSMENT**

Students understand waste versus proper packaging and consumer responsibility to saving our landfills and environment.

## Potato Workshop Worksheet

Product	Size of Pkg	\$	Price/Pound	Packaging
Fresh russet potatoes	5 lb.	\$0.99	*.....*	Plastic bag
Fresh russet potatoes	10 lb.	\$1.69		Plastic bag
Fresh russet potatoes	4 lb.	\$1.00		Bulk
Canned potatoes Sliced	15 oz.	\$0.75		Can (steel)
Canned potatoes whole	15 oz.	\$0.75		Can (steel)
Tater tots – frozen	32 oz.	\$2.85		Plastic bag
Tater tots – frozen	5 lb.	\$5.55		Plastic bag
Mashed potatoes Frozen	22 oz.	\$2.39		Plastic bag
Hash brown patties Frozen	24 oz.	\$2.39		Cardboard box
Hash browns Country style-frozen	32 oz	\$2.79		Plastic bag
French fries Curly-frozen	32 oz.	\$2.75		Plastic bag
French fries Waffle-frozen	20 oz.	\$2.17		Plastic bag
Potato chips	9 oz.	\$2.09		Plastic bag
Potato chips	14 oz.	\$2.99		Plastic bag
Instant scalloped potato	5.5 oz.	\$0.99		Cardboard box
Instant scalloped potato	13.75 oz	\$2.45		Cardboard box
Instant scalloped potato	1 lb. 20 oz.	\$3.75		Cardboard box

# NO WASTE LUNCH

Follow these simple suggestions and you're on your way to going green!  
Practice these steps in their own lunch habits for a week or two.

## **Pack your lunch**

- in a colorful lunch box
- in a reusable and recyclable paper bag
- in a reusable cloth bag or lunch sack

## **Rinse and Reuse**

- yogurt tubs for pudding, blueberries, nuts and raisins
- plastic water/pop bottles for juice, water
- locking baggies for sandwiches, veggies, cookies, chips
- aluminum foil for sandwiches, pizza, chicken
- forks and spoons (plastic or metal)

## **Buy in Bulk**

- whenever you can, then package your individual servings into a reusable container bring items in their own natural packaging like oranges or bananas

## **Feed the worms or compost pile**

- save your vegetarian food scraps (no meat or dairy, please) for the worm or compost pile at school or home if you can

## **Close the loop**

- choose items that have recycled-content packaging--remember to look for the term "post-consumer content"
- choose items that are recyclable like a glass bottled drink over a disposable drink box
- take home used or leftover items to recycle if your school does not have a recycling program

## **Why pack with no waste?**

- it prevents waste, so there's less to throw away
- it saves energy, habitat for animals and natural resources
- it saves money---remember, you have to pay for all the extra packaging that you buy and then you have to pay to have your garbage taken away later!