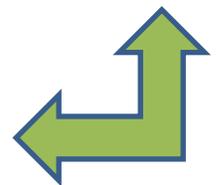


# **Snack Time!**

The Evolution and Disposability  
of Snack Food Packaging



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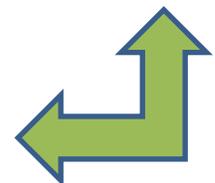
1. The Evolution of Soda Packaging
2. The Evolution of Cracker Packaging
3. The Evolution of the Potato Chip Bag
4. Review Questions
5. “The Evolution of the Coke Bottle” Activity

## **From Barrel to Box**

Imagine you’re in a grocery store, and you’re hungry. Are you going to choose a box of crackers or maybe a bag of your favorite potato chips? Now, you’re thirsty, too. What do you reach for in the cooler by the checkout? A can of soda? A plastic bottle of juice?

Now imagine it’s the year 1915 and you just walked into the corner grocery store for a snack. You could still buy crackers or potato chips. But watch out! Your chips are in a tin and are broken and starting to go stale. Your crackers are from the bottom of a barrel, so they are not much better. They are soggy, broken, and it looks like a mouse may have munched on them already. You can still have some soda, too, but instead of a can or plastic bottle, you reach for a glass bottle. Remember to be careful- you don’t want to drop it! Because glass bottles are expensive, it is expected that you will wash and return the bottle when you finish your drink. Bottling companies will then refill, reseal, and resell the bottle.

Today consumers expect that any product they buy will be clean, fresh, and pest free. It wasn’t always that way. Since the early 1900s, food packaging has evolved significantly.



## The Evolution of Soda Packaging

In 1835, flavored soda arrived on the market as a refreshing beverage sold in glass bottles. Glass bottles, when sealed, kept carbonation inside and prevented spills. In 1915, Coca-Cola introduced a contoured glass bottle designed to fit the consumer's hand [Slide 2].

Glass bottles were expensive. Bottling companies established a bottle deposit system to encourage bottle recycling. Consumers would pay an additional fee when purchasing beverages, which they would get back when they returned the cleaned bottles after enjoying their contents. Not everyone obeyed this, however, which created a problem. Bottling companies did not want to charge consumers for the bottle because it would increase the price and hurt sales.

### **FACT CHECK:**

**In the early 1900s, a bottle of Coca-Cola cost about 5 cents. If the company charged customers for the bottle, the price would have been 7½ cents.**

By the 1960s, bottlers started to replace glass bottles with less expensive tin and aluminum cans. In 1964, Royal Crown (RC) Cola became the first brand to sell soda in a can when it developed a container that could withstand the pressure of carbonation without damage [Slide 3].



In the 1970s, aluminum cans were joined by plastic bottles made of a type of plastic called *polyethylene terephthalate*, or PET [Slide 3]. Unlike glass bottles, PET bottles can be resealed, are cheaper to produce, and are unlikely to break if dropped. Compared to aluminum cans, PET bottles are also cheaper to produce, can be resealed, and can hold more soda.

Today, most companies sell beverages in aluminum cans and PET bottles. Some companies do continue to use glass bottles in nostalgic reference to old-fashioned packaging or to mark their beverage as high-quality and unique.

	Glass	Tin/Aluminum	PET Plastic
Shatter-Resistant		X	X
Holds Carbonation	X	X	X
Lighter Weight		X	X
Recyclable	X	X	X
Resealable			X
Less expensive		X - than glass	X - than glass and cans



## The Evolution of Cracker Packaging

Before 1900, crackers were sold out of large barrels. When a customer wanted crackers, a storekeeper would scoop them out and put them into a bag. This presented problems for customers, because the crackers (especially the ones at the bottom) were often broken, soggy, and even moldy.

Slow improvement in cracker packaging began in 1899, when inventor Frank Peters patented cardboard boxes lined with wax paper to seal in the freshness of boxed crackers [Slide 4]. He was friends with the President of the National Biscuit Company (Nabisco), which adopted his invention to package its Uneeda Biscuit crackers. They called the packaging the “In-Er-Seal,” and they used it in their advertising to distinguish themselves from other cracker brands.

Cracker packaging followed the patterns of other products like Cracker Jacks and cold cereals. Part of what Peters had done to “seal” products was to make the tin or cardboard box relatively tight around its contents. Not only did this help to keep out moisture and air, but it also lessened the amount of jostling and breakage that occurred during transportation.



Cereal box manufacturers took this a step further. In 1924, Kellogg's packed its cereal in sealed wax paper bags that were packed into cardboard boxes [Slide 5]. The sealed bag-within-a-box method of packing crackers is the one that we are most familiar with today.

	Cracker Barrel	Wax paper lining	Sealed bag within a box
Protect from moisture/mold		X	X - more than lining
Protect from air/staleness		X	X - more than lining
Reduce breaking		X	X - more than lining



## The Evolution of the Potato Chip Bag

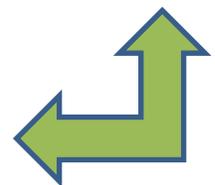
The first commercial potato chips were sold in 1908 by the Leominster Potato Chip Company. Early chips were sold in bulk tins or glass jars and scooped out into tins or bags for consumers to bring home.

In 1926, Laura Scudder began to use sealed wax paper bags to pack potato chips [Slide 6]. After hand-packing the chips into the bag, her workers ironed the opening to seal it shut. The invention of the individual potato chip bag was very important because it allowed chips to stay fresh longer and prevented crushing.

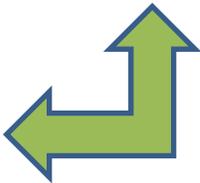
### **FACT CHECK:**

**According to the Northern Plains Potato Growers' Association, each year American consumers purchase about 7.3 billion bags of potato chips.**

In 1958, the first plastic bags were introduced onto the market. Wax paper bags remained popular until the 1970s, when plastic began to dominate. Modern potato chip packaging is made from thin layers of plastic and aluminum that form a bag, which manufacturers fill with nitrogen and seal. This keeps light and air out, so the chips inside stay fresh for longer. However, the composition of the bags also means that they cannot be recycled.



	Glass/Tin	Wax Paper Bags	Plastic Bags
Maintains Freshness		X	X
Prevents Crushing	X	X	X
Keeps Light Out			X
Weighs Less		X	X



## Questions

1. What are some of the major packaging materials that have been used for snack packaging?
  - a. Aluminum, Paper and Cardboard, Glass, PET Plastic
2. What was the most important innovation in the packaging of potato chips?
  - a. The invention of the sealable bag in 1926
3. Why did metal cans come to dominate the market?
  - a. They less fragile, less expensive, and easier to transport because they weighed less than glass jars.
4. Why was Frank Peters's invention of the "In-Er-Seal" important for cracker packaging?
  - a. It minimized product exposure to moisture and air, which helped to maintain freshness.
5. What were some of the benefits and drawbacks of glass bottles?
  - a. Benefits: Portable, prevents spills, able to be sealed to hold carbonation and prevent soda from going flat, recyclable
  - b. Drawbacks: Heavy, expensive, will shatter if dropped

**Food for thought: All three of the examples of packaging evolved over time. Looking at all three examples, what general trends do you see that motivated companies to develop new packaging strategies?**



## Evolution of the Coca-Cola Bottle, 1915-Present

Go to: <http://www.coca-colacompany.com/chronology>.

Click through the slideshow, looking at the change in bottle design over time and the descriptions provided.

1. How did the shape of the container change over time?
2. In addition to changes in the bottle's shape, identify other changes to its appearance.
3. What are some of the reasons that Coca-Cola changed its bottle design?



