

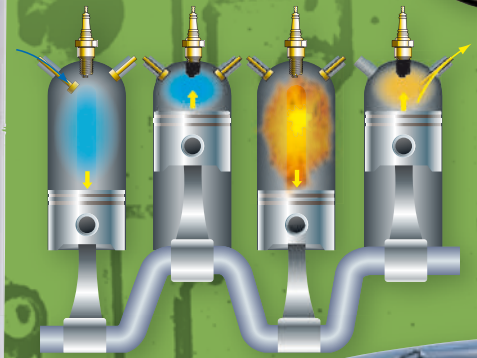
Springboard^{into} Comprehension 4

Main Idea	Religions Green All Around
Sequencing	Leading the Field in Green Camp Cavendish
Compare and Contrast	Crying Wolf Sun Tales
Fact and Opinion	This Ad's for You What Really Happened?
Cause and Effect	Inventions and Discoveries That Changed the World Water and Food Programs around the World
Bias and Prejudice	Graffiti Diamonds Forever

RA 9.5–10.5



Inventions and Discoveries That Changed the World



Written by Sarah Edwards

Inventions and Discoveries That Changed the World

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Introduction

Imagine life without refrigerators or cars. Imagine a world in which you could not watch television or e-mail a friend. Imagine if you could not get antibiotics to cure infections. People who lived 200 years ago did not have these things. Their way of life was different from the way that we live today. That is because these inventions and discoveries changed the world.

From the earliest times, people have invented and discovered new things. They have done this to try to understand the world around them and to make life easier. Some inventions and discoveries have had huge effects on people. They have changed the way people live and work.

In the past, before cars, people travelled in horse-drawn carriages.



The Refrigerator

Where do you store fresh food? One of the best places to store fresh food is in a refrigerator or freezer. This is because a refrigerator or freezer keeps this food cool. This stops it from going bad, or spoiling, so fast.

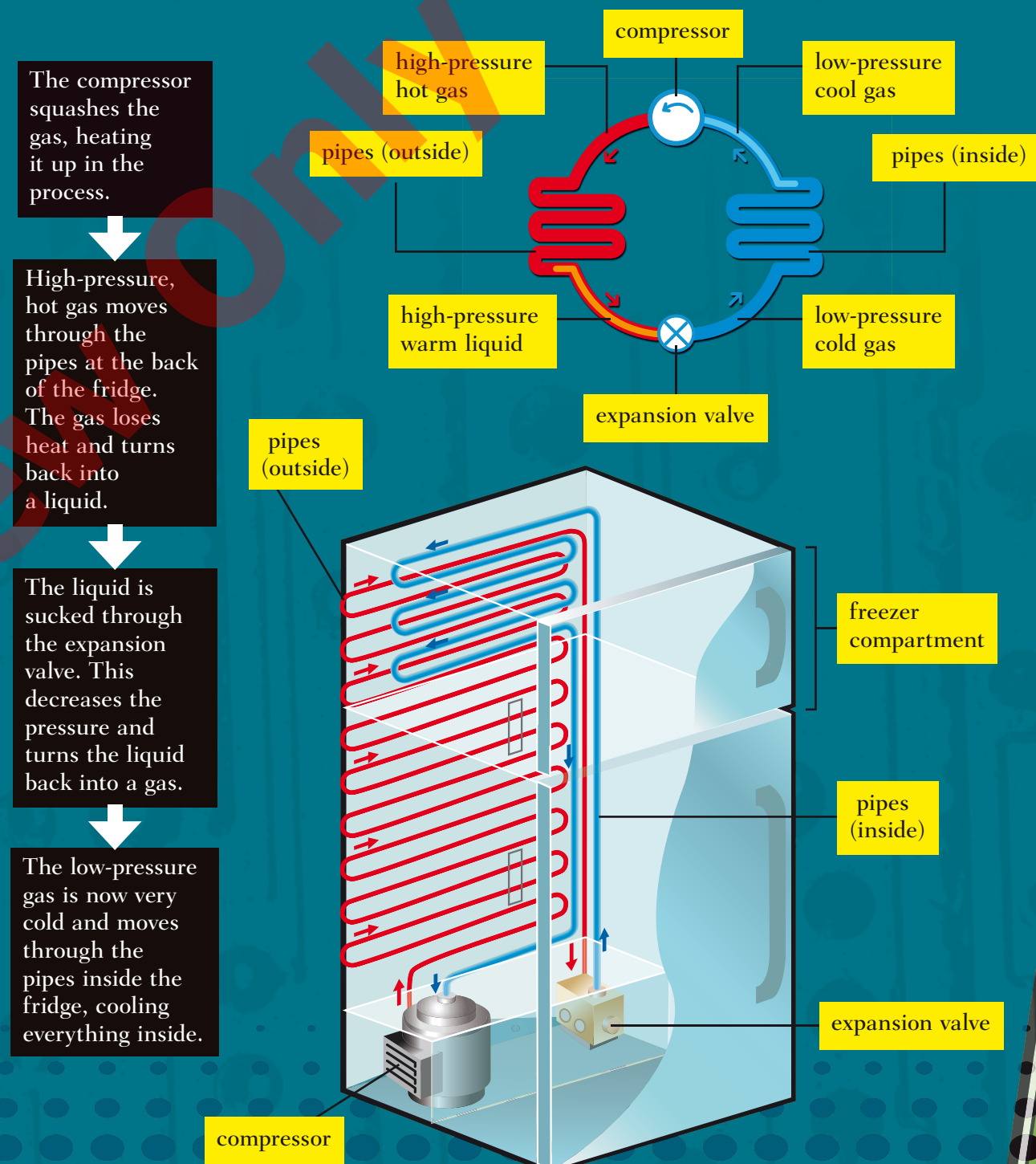
In 1834, Jacob Perkins built the first refrigerating machine. Over the next 100 years, other inventors worked on Perkins's invention. They changed and improved his invention. By the 1920s, people could buy refrigerators to store food in their homes.

How Does a Refrigerator Work?

Most home refrigerators work by using a special chemical liquid. The chemical liquid is called **tetrafluoroethane**. The tetrafluoroethane is pumped through the refrigerator. It is then turned into a gas. The gas absorbs the heat from the food. When the heat is absorbed, the food cools. Then, the gas is turned back into a liquid. Then, the cycle begins again.



How a Refrigerator Works



How Did Refrigeration Change the World?

Refrigeration changed the way people bought, ate, and stored fresh food. Before refrigerators and freezers were invented, it was difficult to store fresh food. Therefore, people had to shop more often for fresh food. Some people grew their own food, and others had ice delivered daily. Many people, however, bought less at a time because they could not store it. Fresh food could not be transported over long distances. Therefore, people mostly ate food that was grown or made close by. They ate only fresh food that was available or in season.



Refrigeration changed the way people bought food. People no longer had to shop as often for fresh food. They could buy more food at a time. They could store fresh food in a home refrigerator or freezer. Businesses could store more fresh food, too. Consequently, supermarkets were invented.

As supermarkets became more popular, other smaller businesses closed down. Refrigeration opened up a worldwide trade of goods. Refrigerated trucks and railway cars could transport fresh food over longer distances. Refrigerated ships and planes could transport fresh food around the world. As a result, people could get food from other countries and places. People could get fresh food that was not in season. This changed the types of food people ate. They began to eat a wider variety of food.

