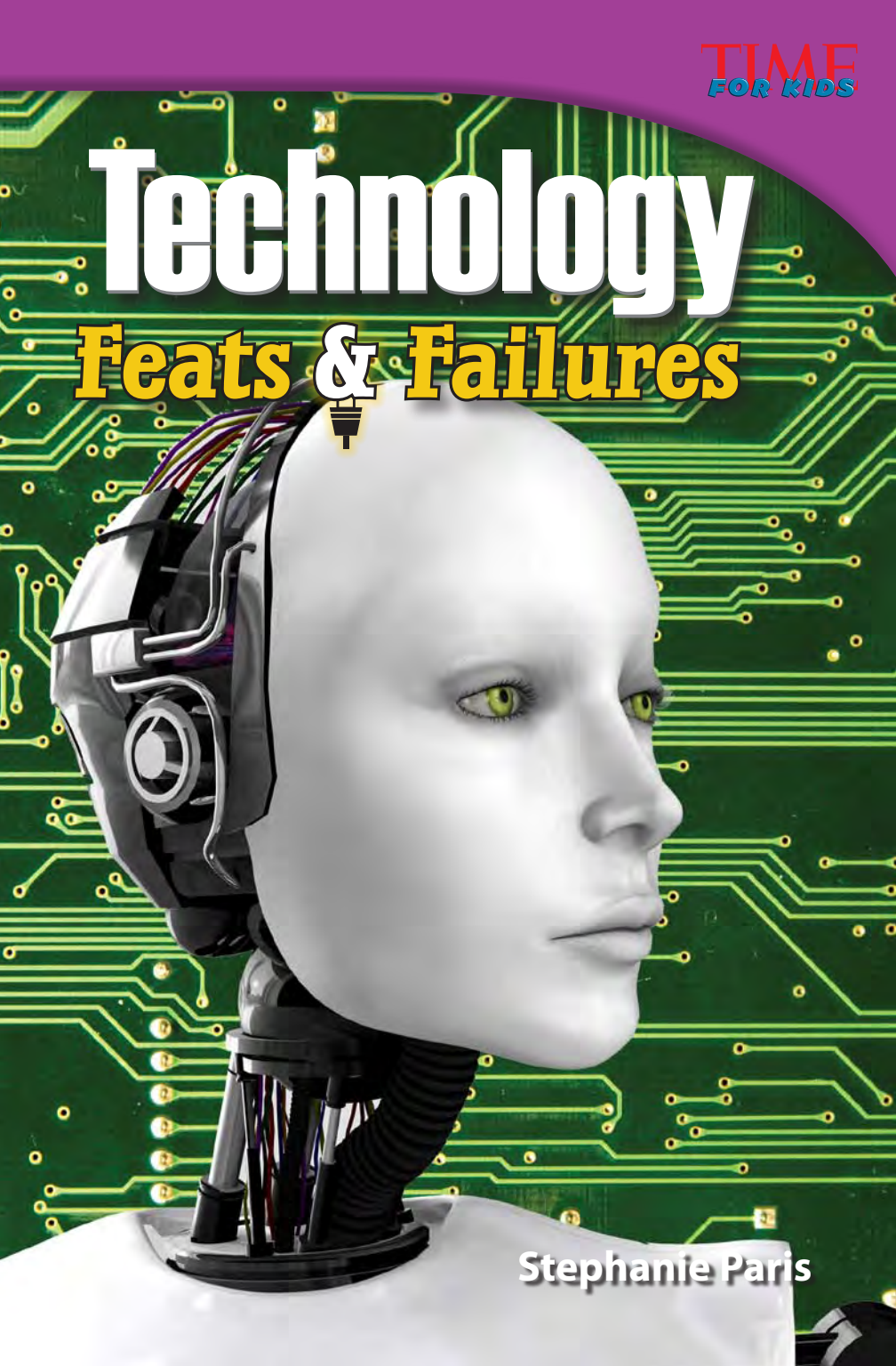

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Teacher Created Materials
5301 Oceanus Drive
Huntington Beach, CA 92649-1030
http://www.tcmpub.com

ISBN 978-1-4333-4869-3
© 2013 Teacher Created Materials, Inc.

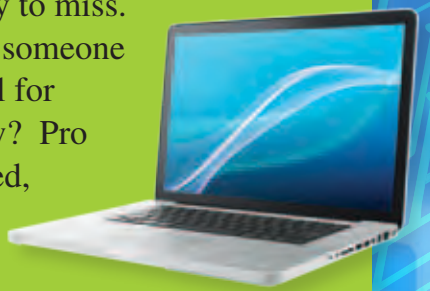
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Invention

New ideas lead to new inventions. Most items we use each day were invented by humans. Long ago, someone saw a need for a chair so they made one. Today, someone may see a way to make a new app, or perhaps there is an easier way to do something, like taking a bath. **Technology** includes electronics, such as computers or cell phones, but it also includes things as simple as a wheel or a needle. In any form, technology is designed to make our lives easier or more enjoyable.



Most inventions are easy to miss. They are small changes. If someone invents a new kind of wheel for skateboards, who will know? Pro skateboarders will be thrilled, and their fans will see the difference. But most of the world will never know anything has changed.

Sometimes, someone invents something that changes the world. What would life be like without phones or electricity? But not every invention is a success. For every new **feat**, there is at least one big failure.

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- How is new technology developed?
- Why are failures and mistakes a big part of success?
- How have advances in science, technology, and engineering improved our lives?

Health and Survival

Video games and books make our lives more fun. Some inventions, such as paper clips and cars, make life easier. Other technology improves our chances of survival. Medical and health advances make people healthier. They fight diseases and ease pain. They help people live longer. And the longer we live, the more time we have to invent new things!



Fascinating Feat

The invention of the X-ray machine allowed doctors to see inside our bodies without cutting into them.

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Hazards in the Home

Over 300 million people worldwide suffer from **asthma**. It's a condition that can make it hard to breathe. People with asthma have strong reactions to mold. But over time, we have perfected the chemical recipe for cleaning solutions. Someone invented a cleaning solution that kills mold and keeps it from growing in our homes.

A Royal Flush

As long as there have been people, there has been human waste. In ancient times, people buried it in a hole, but when they moved into cities, there wasn't room. New technology was needed.

In 1596, Sir John Harington invented a toilet that flushed. It thrilled Queen Elizabeth I. But it wasn't until 200 years later that flush toilets were used everywhere.



Sir John Harington



The Low-Flow

Toilets from before 1990 use more than 3.5 gallons of water with every flush. But newer low-flow toilets use 1.6 gallons of water with each flush. That saves over 11,000 gallons of water per household per year.

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Watch Out Below!

Before we had toilets, people tried many different ways to get rid of waste.

In the past, people in cities used **chamber pots**. People liked that they could use them in the comfort of their own rooms. But what did they do when the chamber pot was full? They threw the contents out the window, and hopefully no one was standing below!





Outhouses took waste outside. But a walk to the bathroom in the middle of the night could be cold and dark.

The ancient Romans had public toilets. They built a long bench with holes in it over a deep trench with running water. People sat and chatted while they did their business!

