For my niece and nephews, the most amazing children I know!
–LB

To all the children who will read it. I hope this book can encourage them to pursue their dreams! With commitment and dedication anyone can achieve their desired success
–FF

To all the little ones, who make me believe that everything is possible
–IM

To Olivia and Ryan
–JS

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YOUNG HEROES

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Illustrated by
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and Julianna Swaney

Stripes

INTRODUCTION

Do you ever wonder what it would be like to change the world? Are you passionate about a particular hobby or cause, or always coming up with new ideas? Do you dream of making your community a better, happier and safer place for all?

Sometimes it only takes one person to make a change. And what's even more exciting is that you don't have to wait until you're older to do it – you can be amazing at any age! From impressive inventors to awesome artists, this book is a celebration of the children, teenagers and young adults who dreamed big, aimed high and have already made an awesome contribution to the world.

First up we have the children from STEM: young scientists, tech wizards, engineers and mathematicians, whose inventions and discoveries are changing and saving lives.

Then there are the stars of Film and Music, talented actors and musicians who dazzle audiences around the world.

Where would we be without the children who devote their lives to saving the Environment for future generations? How about the child champions and record-breakers of Sport, who encourage us to strive to be our best every day?

Life would be so very dull without the young entrepreneurs and inventors of the Business world, or the talented artists, writers and dancers of the Arts and Literature world. Finally, we celebrate the children who dedicate their lives to making the world a better place through Politics and Activism.

Each of the children in this book has something in common – they are not afraid to stand out, speak up and work hard to achieve their goals. Maybe their incredible stories will inspire you to follow in their footsteps?

Childhood Through Time

You may think it's hard being a kid today, but spare a thought for the children of the past – life could be so tough in ancient cultures that many children didn't even make it past childhood! If a child did survive, they had very few of the freedoms that most young people enjoy today. Boys were usually favoured over girls, while almost all children had to work for a living instead of going to school. In fact, life only started to get better for children in the late nineteenth and early twentieth centuries, when governments began to pass laws that protected their rights and freedoms.

3300BC–1700BC

Indus Valley Civilization
Pakistan and Northwest India

It was so hot in the Indus Valley that children played outside in the courtyards and streets, and on the flat roofs of their homes to keep cool. Sometimes they'd even sleep on the roof at night!

3100BC–332BC

Ancient Egyptians
Northeast Africa

One in every two or three Ancient Egyptian babies died from disease before the age of one. Mothers tied amulets (small pieces of jewellery) to their newborns to ward off "evil spirits", and carried their babies in slings to protect them from scorpions and snakes.

1000BC–AD1521

Ancient Mayans
Mexico and Central America

Ancient Mayan parents bound babies' heads between two wooden boards for several years to give them a flat, sloping forehead. They also dangled objects in front of their baby's face until the baby's eyes were permanently crossed!

753BC–AD476

Ancient Romans
Mediterranean and
Western Europe

Ancient Roman girls were married from twelve. The night before her wedding day, a girl removed her *lunula* (birth charm) and returned it to her parents. She also gave away all her toys, as a symbol of her childhood coming to an end.

AD793–1066

Vikings
Denmark, Norway and
Sweden (Scandinavia)

Viking fathers trained their sons as warriors from an early age. They taught them to fight with swords, spears and axes. Stronger girls were also allowed to train as warriors. Boys learned how to build and repair boats, and were taught to navigate oceans using landmarks and the stars in the night sky.

AD500–1500

Middle Ages
Europe

During the Middle Ages, houses were often dirty, dark and cold, so mothers swaddled their babies in cloth to keep them warm and snug. At night, older siblings huddled together on a hay mattress on the floor.

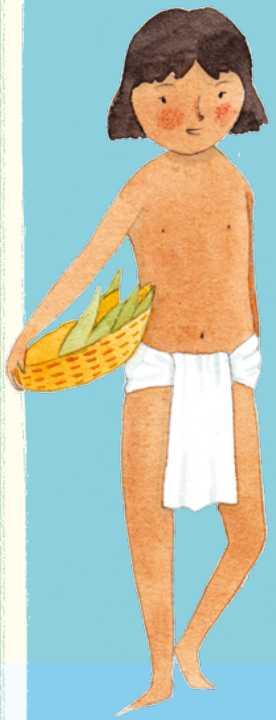
AD900–1897

Kingdom of Benin
Southern Nigeria

In the Kingdom of Benin, there were no schools. Children learned from parents and elders. Boys were responsible for sweeping and clearing the forest paths that surrounded their village. Girls were expected to collect firewood and water, and carry pottery and textiles to market.

1195–1522

Aztecs
Central Mexico



Aztec parents loved their children but they gave strict punishments. One was to hold the naughty child over a chilli-pepper fire until the smoke stung and burned the child's eyes, nose and mouth.

1271–1911

Late Imperial China
China

During the Late Imperial period in China, all but the poorest girls had their feet bound from the age of six, as small feet were seen as beautiful. First the girl's feet were soaked in a mixture of herbs and hot water. Then her toes were broken and curled underneath her feet before being bound with strips of cotton or silk. The girls wore tiny shoes to hold the bandages in place.

1485–1603

Tudors
England

Water was so dirty during Tudor times that everyone – including children – drank weak beer or ale! It may seem strange today, but beer was actually safer to drink because the brewing process killed many of the nasty germs in the water.

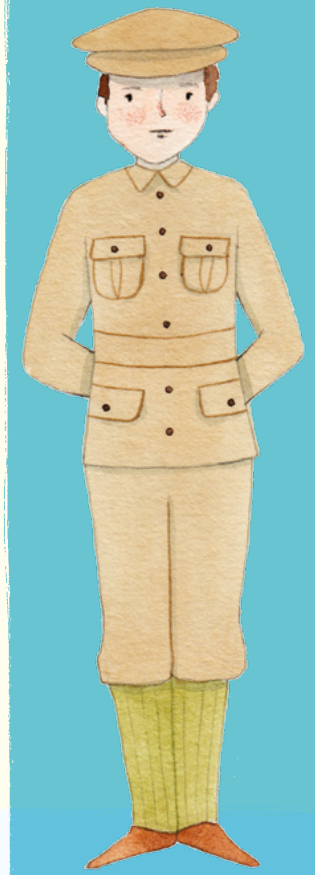
1760–1901

The Industrial Revolution
and the Victorians
Great Britain

Girls and boys as young as four worked for more than twelve hours a day in factories, textile mills and coalmines, or as chimney sweeps or servants for rich families. Many died or were injured as a result. Child workers were also beaten with a leather strap or stick for talking, singing or leaving their place of work without permission.

1914–1918

The First World War
Europe



During the First World War, around a quarter of a million British boys, many as young as fourteen, lied about their age in order to join the army. The same happened in Germany. Over 30,000 teenage soldiers on both sides were killed or wounded during the Battle of the Somme (July–November 1916).

STEM

Do you ever wonder how machines work? Perhaps you have a talent for maths or love coming up with new inventions? Maybe you're fascinated by technology, and dream of making your very own video game or launching a rocket to Mars? If any of the above sounds like you, then you are a fan of STEM!

STEM stands for Science, Technology, Engineering and Mathematics. It attracts many of the world's most gifted and curious minds. Why? Because not only is STEM fun but it can also transform lives. Through science and mathematics we are able to understand and engage with the world around us, from curing disease and protecting the environment to solving the mysteries of the universe. Technology is rapidly changing the way we live, while we rely on engineering to make buildings, vehicles and machines work.

The people involved in STEM are true pioneers – they not only solve many of the problems facing society today but they're also building a brighter future. And what better group to reimagine that future than children? Take Kelvin Doe, Ann Makosinski and Richard Turere, whose engineering inventions are already changing lives. If you want to know about children saving lives, look no further than budding research scientists Sarah Sobka and Krtin Nithiyanandam, whose medical discoveries have given hope to millions suffering with disease. George Matus and Marita Cheng have turned their passion for drones and robots into successful businesses, while Nick D'Aloisio and Jacob Barnett are using their knowledge to solve some of life's biggest problems.

These young innovators, inventors and entrepreneurs are already making a difference. Perhaps their amazing stories will inspire you to join them?

George Matus

1998– | DRONE ENGINEER | USA

When eleven-year-old George Matus and his family moved to Salt Lake City in Utah, USA, he found himself living in an enormous natural playground. Salt Lake City is surrounded by snow-capped mountains, and what better way to explore them than from way up in the sky? George bought a remote control (RC) helicopter and attached a camera to it. When he uploaded the footage to YouTube, the helicopter's makers saw it and invited him to become a test pilot. The schoolboy had soon tested every RC aircraft, and drones became his passion.

But what exactly is a drone? Think of it as a tiny aircraft but without a pilot on board. Instead, it is operated from the ground by remote control. Not only are drones fun to fly but they're also a safer alternative to sending a person into a dangerous area, such as a battlefield or disaster zone.

George spent every spare moment flying and adapting drones but he soon grew frustrated. Most drones are designed for one job: some are built for racing, others to capture footage of the Earth from the clouds. Why couldn't a single drone do all these things? That's when George began creating his "wish list" for the perfect drone.

At sixteen, George won a grant from the Thiel Foundation, which invests in young entrepreneurs, to develop his drone. Several years later, he'd built Teal and Teal 2, the world's fastest battery-operated drones. Teal 1 and 2 can reach speeds of up to 137kmh (85mph). Best of all, they do every job on George's wish list.

Today, George is flying high. At eighteen, he became founder and chief executive of Teal Drones, while his dream drones are now being sold around the world. You could say that his idea really took off!

"Really find what interests you, and then it doesn't feel like work."

Sarah Sobka

1998– | RESEARCH SCIENTIST | UK

In 2015, seventeen-year-old Sarah Sobka was named the UK's Young Scientist of the Year. Sarah had been volunteering for a University of Sheffield team that was testing the effects of the drug lubiprostone on cystic fibrosis (CF). CF is a genetic disease (meaning a person is born with it). The disease affects around 100,000 people across the world. People with CF lack the gene that controls the movement of salt and water in and out of the cells of their body. This causes their lungs and other organs to fill with thick, sticky mucus, making it hard for them to breathe and digest food.

Current CF drugs are expensive and don't always work. Lubiprostone is a cheaper drug used to treat women with another disease, irritable bowel syndrome. Now a full-time medical student, Sarah is hopeful that her initial research will go on to help find a cheaper, more effective cure that could one day save thousands of lives.

Kelvin Doe

1996– | ENGINEER | SIERRA LEONE

Kelvin Doe has a curious mind and endless imagination. Growing up poor in Freetown, Sierra Leone, Kelvin taught himself to build radios, transmitters and generators from scrap metal he found in the city's rubbish dumps. By sixteen, he had built his own radio station and was broadcasting across Freetown as DJ Focus.

After reaching the finals of Global Minimum Inc's competition for young African inventors, Kelvin was invited to the USA to attend a programme at the Massachusetts Institute of Technology (MIT), making him the university's youngest-ever "visiting practitioner". Then, a YouTube documentary about Kelvin went viral, with 12.3 million views to date! Kelvin's life changed overnight, and in 2012 he flew to the USA to share his inspirational story on the TEDxTeen stage.

Today, Kelvin runs his own company, KDoe-Tech Inc, through which he teaches young people that they too can create something from nothing. All it takes is creativity, passion and belief.

Richard Turere

1998– | INVENTOR OF LION LIGHTS | KENYA

Nairobi National Park in southwest Kenya is known as the "Wildlife Capital of the World". Each year millions of tourists flock to the park to see elephants, rhinos and big cats roam freely here. But the park is no wilderness: just 7km (4miles) separates these wild plains from Kenya's capital city, Nairobi, and the 6.5 million people living there. And when herd animals migrate, their predators follow…

Richard Turere grew up disliking lions. As a member of the Maasai tribe, he lived on a farm on the national park's borders. Like many boys his age, it was nine-year-old Richard's job to herd his father's cattle and protect them from the predators that wandered on to the farm, looking for an easy meal. It could be a grim job: some mornings he would wake up to discover that lions had attacked in the night, killing valuable livestock. He wasn't the only one. Livestock loss is a common problem in Kenya. Some farmers would poison entire prides in order to protect their cattle, damaging the park's lion population – and its tourist figures – in the process.

The young Maasai boy believed there had to be a better way, so he put his imagination to the test. His first idea was to use fire. But rather than scaring the lions, the orange flames only drew them closer to the farm. Next, knowing that lions are frightened of humans, Richard built a life-like scarecrow. But these were clever cats. They soon learned that the scarecrow was a trick, since it never moved. Finally, Richard was patrolling the farm with a torch at dusk when he had another bright idea: wild animals associate the flickering torchlight with humans. That night, the lions stayed away.

Richard leaped into action. In his spare time, he enjoyed pulling apart and rebuilding radios. He figured he could use his knowledge of electronics to build his new invention: "Lion Lights". Gathering a car battery, an indicator box (which makes vehicle indicators "blink"), a solar panel and a light bulb, Richard rigged up an electrical circuit around the farm. It worked: the flashing lights fooled the lions into believing that Richard was patrolling the farm with a torch, when he was actually asleep in his bed!

The hungry lions never returned. When other farmers saw the results, they asked Richard to install the lights on their fences. Since then, Lion Lights have been used on farms across Kenya and they're helping to keep other large predators, such as leopards and hyenas, at bay.

Richard's brilliant invention soon caught the attention of local conservationist Paula Kahumbu. She helped Richard to win a scholarship to one of Kenya's best schools, putting him one step closer to fulfilling his dream of becoming an engineer and pilot. In 2013, he was also invited to the USA to tell his story on the TED stage. Now, thanks to Richard, lion numbers in Naoribi National Park are growing again while farmers – and their cattle – can finally sleep easy.

"One year ago I was just a boy herding my father's cows. Now I want to be an engineer and pilot."