

GOOD YEAR BOOKS

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STARRY SKIES

**Questions,
Facts, & Riddles
About the
Universe**

by Mike Artell



 GOOD YEAR BOOKS



Acknowledgement

My thanks to Matthew Dempsey, whose ideas for a book on astronomy for kids led to the book you now hold in your hands.

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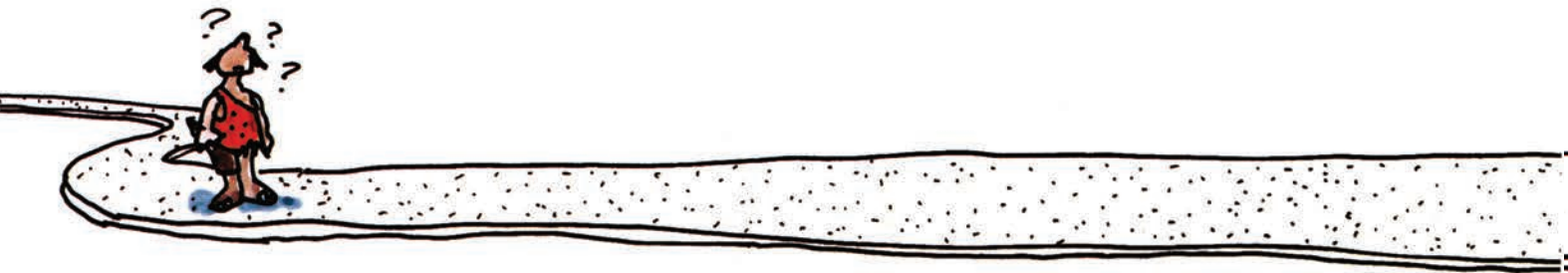
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Do you know

WHERE

You are in space on a giant ball of rock and water streaking around a huge mass of superheated gas on the edge of an immense galaxy. Amazing!

For thousands of years, human beings have gazed into the night sky and studied the objects in space, hoping to better understand their universe. This book will share some of what scientists have learned over the centuries about how the objects in space were formed, what they're made of, and their effects on each other.

But more than that, this book will give you a small glimpse of the awesome nature of the universe. It is a universe made up of an uncountable number of immense objects separated by incredible distances, all moving in a timeless dance. And you are part of it.

you are in the **UNIVERSE?**

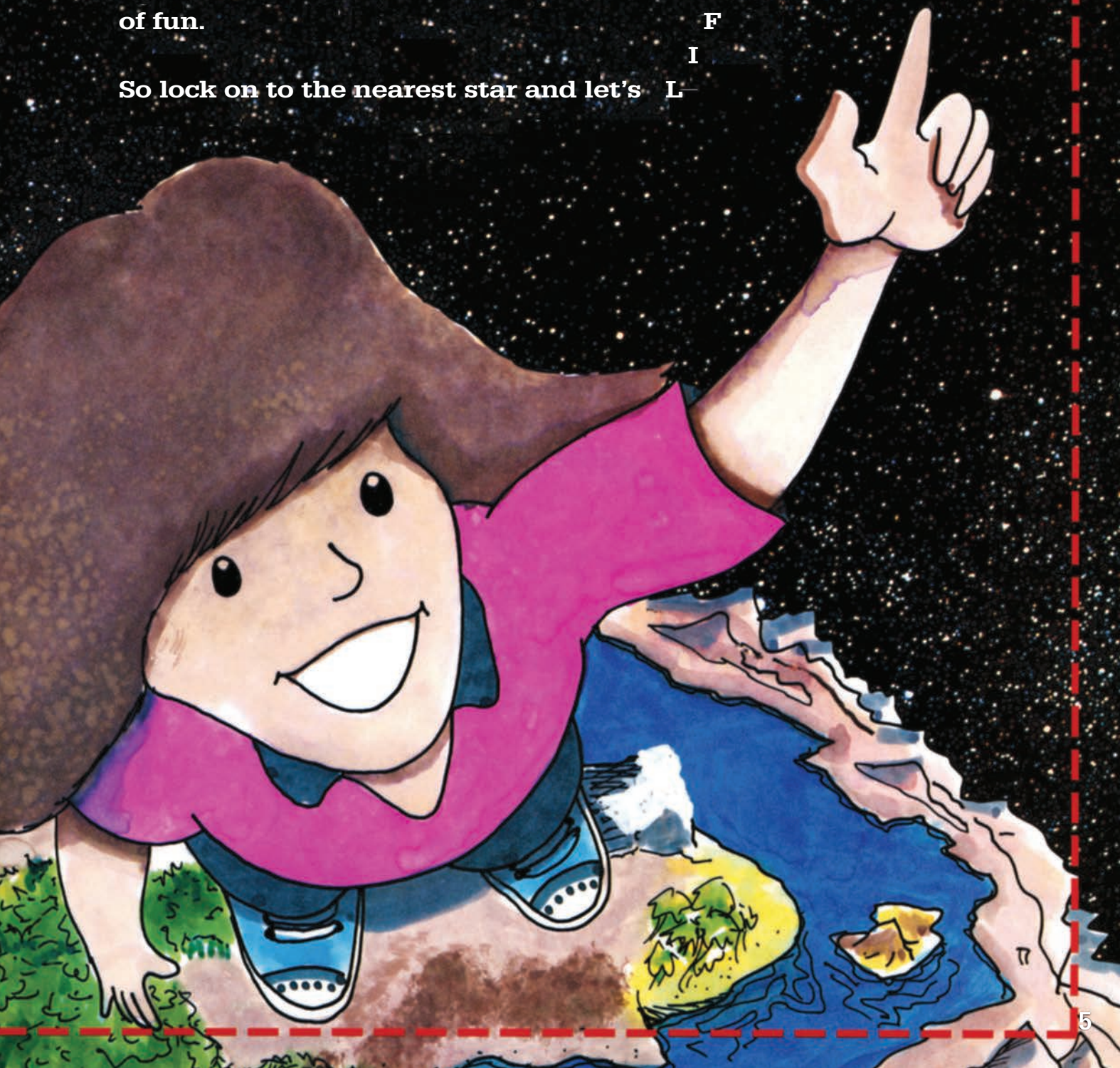
This space trip isn't just about numbers and facts, though. Along the way, you'll find jokes, riddles, tongue twisters, and plenty of goofy characters who will help make your journey lots of fun.

So lock on to the nearest star and let's

!
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Mike Artell has written and illustrated lots of books for children, several of which have received awards from major educational publications.

Mike didn't start drawing cartoons seriously until he was 27 years old, and he was 42 before his first book was published. But even though he started late, Mike caught up fast. This is his twenty-first book, not counting the twenty-four activity and coloring books he's done.

Each year, on average, Mike visits 50–60 schools, addresses six major educational conferences, conducts six writing/drawing workshops, and writes and illustrates three books. Then he rests.

Mike is married to Susan. They have two daughters, Stephanie and Joanna, who they suspect are from another planet.

All of the Artells currently live on Earth.

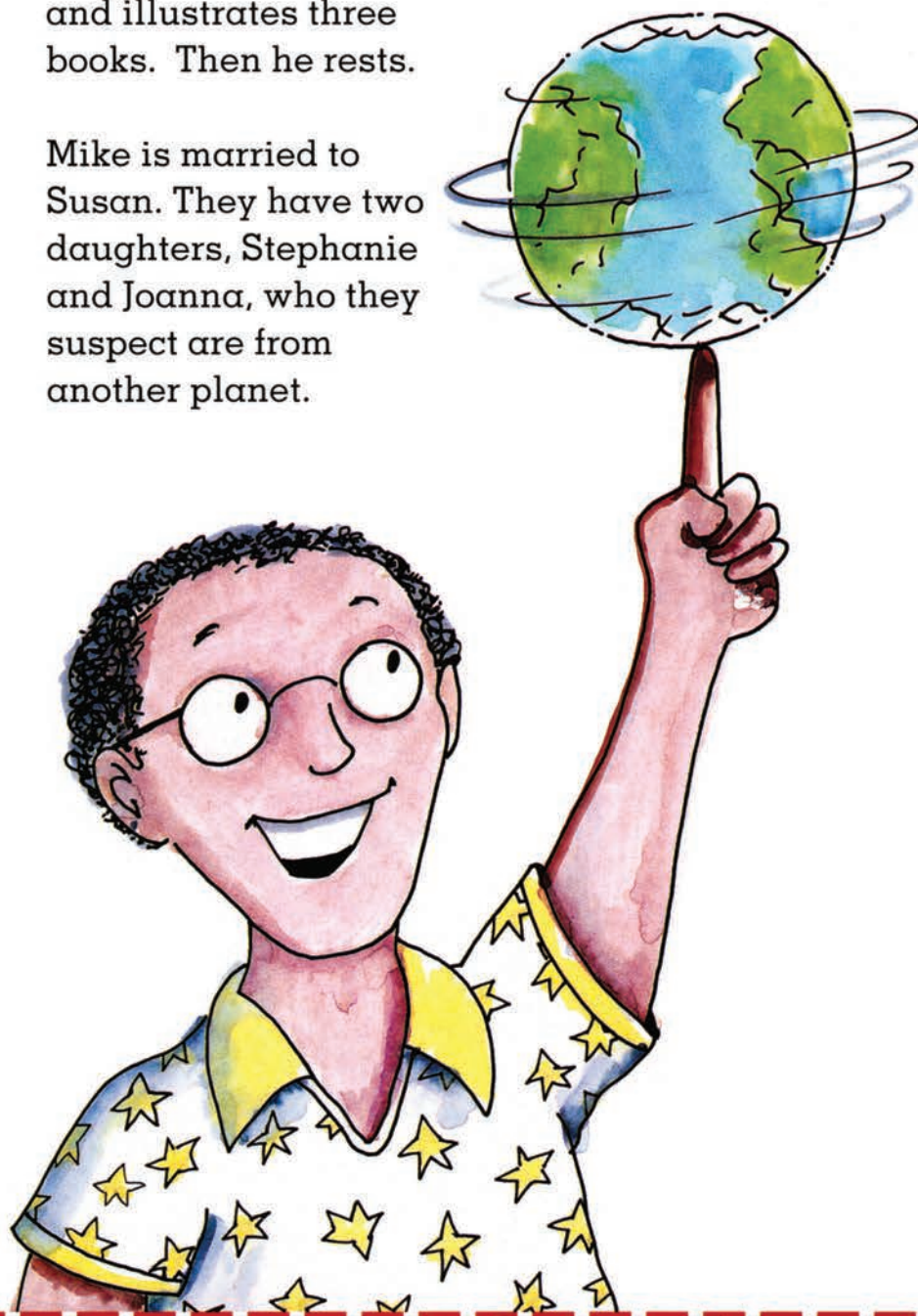


Table of CONTENTS



THE SKY

9

What is the sky?



10

What's out in space?

13

THE STARS

15

What is a star?

16

What is a galaxy?

22

What is a constellation?

31

THE PLANETS IN OUR SOLAR SYSTEM

35

What is a planet?

36

How did our solar system get started?

66

ASTEROIDS, METEORIDS, & COMETS

73

What is a meteor?

75

What is a comet?

77

BLACK HOLES & OTHER STUFF

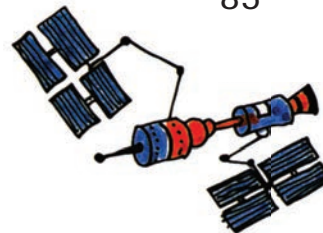
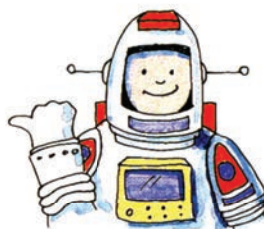
81

What is a black hole?

82

What is a light-year?

85



THE



SKY



What is THE SKY?



Think of the sky this way: As soon as you leave the surface of the Earth, you begin to enter the sky.



We call the part of the sky close to the Earth the **atmosphere**.

Among other things, the atmosphere contains the air we breathe, dust particles, water molecules, and clouds.

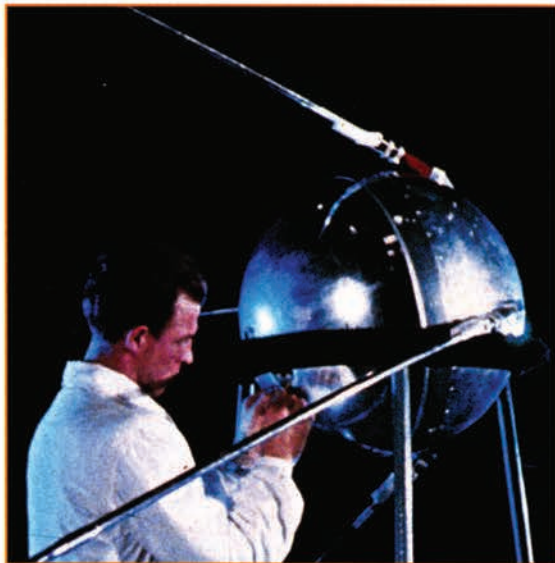
When you leave the Earth's atmosphere you enter the part of the sky we call **space**.



We call it space because there's a lot of space between things out there. But that doesn't mean that space is empty. There are billions and billions of things floating around.

SATELLITES

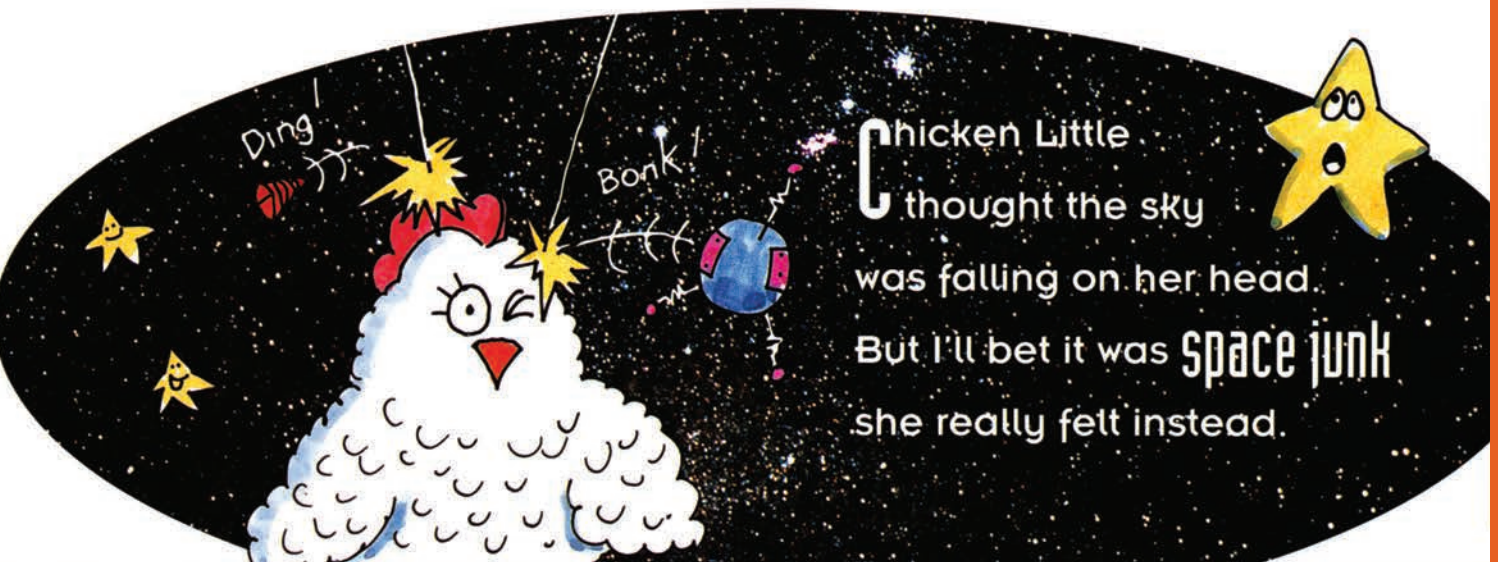
On October 4, 1957, the Soviet Union launched *Sputnik 1*, the first man-made satellite placed in orbit around Earth. It fell to Earth after about three months and signalled the start of the "space race" between the United States and the Soviet Union.



SPACE JUNK



There are more than 50,000 pieces of "space junk" orbiting the Earth. "Space junk" includes small bits of metal, large pieces of rockets, and other stuff that hasn't fallen to Earth yet. This material could do a lot of damage to a satellite or the space shuttle if they collided.



Chicken Little
thought the sky
was falling on her head.
But I'll bet it was **space junk**
she really felt instead.

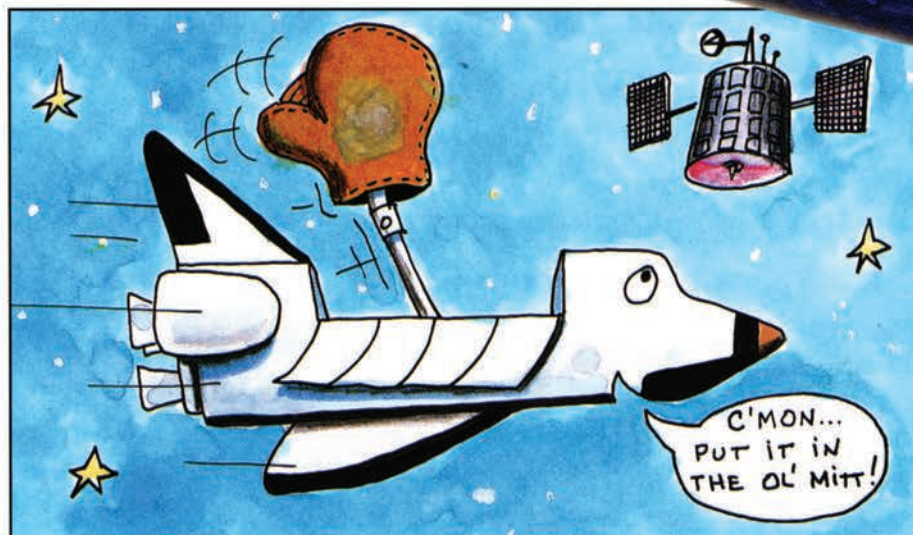
FOCUS ON FACTS

THE SPACE SHUTTLE

The Space Shuttle is an amazing vehicle. It's a laboratory for scientific experiments, a delivery truck for satellites, and a commuter bus for astronauts traveling to and from the Mir space station.

In addition to helping to launch satellites, the space shuttle also catches them. In the past when a satellite had a problem, scientists on the ground would try to "work around" the problem by sending a new set of commands to it. This would work sometimes, but many times the problem couldn't be fixed from the ground.

The space shuttle has helped to solve some of those problems. By using its robotic arm, the shuttle can catch a satellite and bring it close to the payload bay so that astronaut "mechanics" can fix it.



After the Hubble Space Telescope was in place, scientists discovered a flaw in one of the lenses. So they sent the space shuttle to the rescue! Astronauts flew the shuttle into space, made the necessary repairs, and placed the telescope back in its proper orbit.

Several years later, astronauts "caught" the Hubble Space Telescope again. During this mission, the astronauts did some maintenance work and replaced ten instruments to make the telescope even more powerful.

So you see, the space shuttle is not only a delivery truck, it's a pickup truck too!