Get to Work with Science and Technology

Asteroid Hunters

By Ruth Owen

[Intentionally Left Blank]

Asteroid Hunters

by Ruth Owen

Consultant:
Kevin Yates
Fellow of the Royal Astronomical Society

Ruby Tuesday Books

Published in 2016 by Ruby Tuesday Books Ltd.

Editor: Mark J. Sachner
Designer: Emma Randall
Production: John Lingham

Photo Credits:
Alamy: 22; Corbis: 12; Cosmographics: 23 (top); ESA: 13 (bottom); ESO: 10, 11 (bottom); Istock Photo: Cover, 14; Martin Mobberley: 13 (top); NASA: 4, 19 (bottom), 26, 27, 28–29; Rob Ratkowski/ Pan-STARRS: 9 (top), 14; Ruby Tuesday Books: 8, 15, 17 (bottom), 18, 19 (top), 24, 25, 30; Science Photo Library: 11 (top), 20, 21 (top); Shutterstock: Cover, 4 (bottom), 5, 6–7, 14, 17, 23 (bottom), 30; Karen Teramura: 9 (bottom); Wikipedia Creative Commons: 16, 21 (bottom).

Library of Congress Control Number: 2015907063

ISBN 978-1-910549-37-7

Printed and published in the United States of America

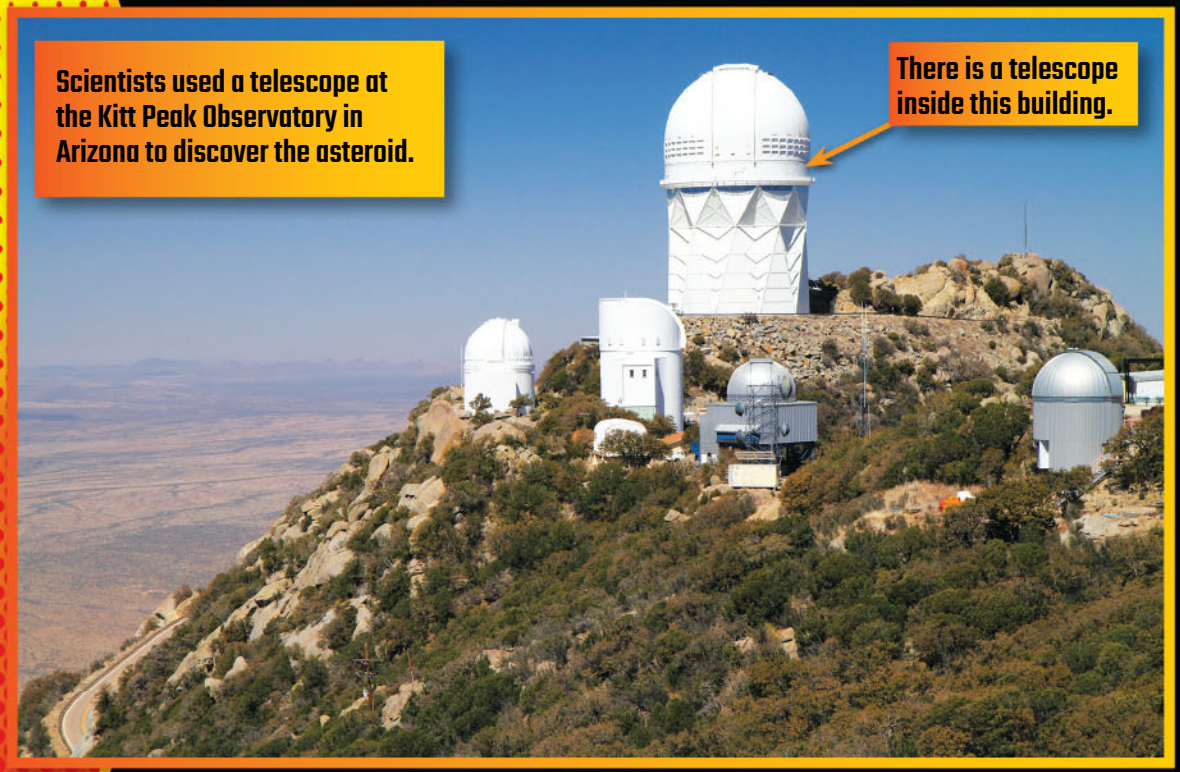
For further information including rights and permissions requests, please contact our Customer Service Department at 877-337-8577.

Contents

A Date with Disaster

It was June 2004. At a mountaintop **observatory** in Arizona, three **asteroid** hunters were studying grainy images captured by a **telescope**. As the scientists stared at a computer screen, they knew they had made an exciting discovery—a new asteroid! Using telescopes, they tried to see more of the asteroid, but it disappeared from view.

The white dot in this image is the newly discovered asteroid.



Six months later, in December 2004, asteroid hunters in Australia, New Zealand, and Tucson, Arizona, observed the asteroid again.

The scientists quickly gathered as much **data** as they could. What they learned was truly terrifying. The asteroid was bigger than a sports stadium, and it could be on course to collide with Earth on Friday, April 13, 2029.

The **solar system** is home to millions of asteroids. Some are just the size of a car. Others are as big as mountains. Asteroids are made of rock and metal.

A Threat from Outer Space?

What could happen if the newly discovered asteroid collided with Earth?

As it plunged through Earth's **atmosphere**, the asteroid would become a mountain-sized fireball. At the impact point with Earth, it would create a deep **crater** 2.7 miles (4.3 km) wide. For miles around the impact, bridges and buildings would collapse. The area where the asteroid hit would suffer utter devastation. Even 1,200 miles (1,931 km) from the impact, people would hear the blast.

All the available data predicted that the asteroid could hit Earth in 2029. Around the world, asteroid hunters went to work. Using science, math, telescopes, and supercomputers, they had to prove or disprove the prediction.

Was the world in danger? Only the asteroid hunters could answer that question.

The new asteroid was discovered by asteroid hunters David J. Tholen, Roy A. Tucker, and Fabrizio Bernardi. They named it Apophis after a character in the TV show *Stargate*. Apophis was also the ancient Egyptian god of evil, darkness, and destruction.

Index

Read More

Owen, Ruth. *Astronomers (Out Of The Lab: Extreme Jobs in Science).* New York: Rosen Publishing (2014).

Portman, Michael. *Could an Asteroid Harm Earth? (Space Mysteries).* New York: Gareth Stevens Publishing (2013).

Learn More Online

To learn more about asteroid hunters and asteroids, go to:
www.rubytuesdaybooks.com/asteroidhunters

Answers Page 30

1) The size of the craters increases as the drop height increases.
2) As the drop height increases, the speed of the ball bearing on impact increases.
3) Gravity is making the ball bearing accelerate as it falls.

[Intentionally Left Blank]

Asteroid Hunters

In 2004, a team of asteroid hunters discovered a new asteroid bigger than a sports stadium. The excitement of the discovery soon turned to horror when their data showed them the giant object might be on a collision course with Earth....

Inside this book, meet the men and women of Spaceguard who watch the skies for danger from outer space. How do they discover new asteroids? What technology do they use to predict an asteroid's pathway around the solar system? And what did the asteroid hunters do in 2004 when they discovered our planet could be in danger?

Titles in this series

Asteroid Hunters

Exploring Distant Worlds as a Space Robot Engineer

The Wild World of a Zoo Vet

The Wonderful Worlds of a Video Game Designer

Ruby Tuesday Books