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HOW TO USE THIS BOOK

BEAST ACADEMY SCIENCE 3A

In your hands is the very first printing of the very first Beast Academy Science book ever written!

We are always creating new books, materials, and resources to complement this book.

Check the Science 3A page of BeastAcademy.com for the most up-to-date information and resources available.

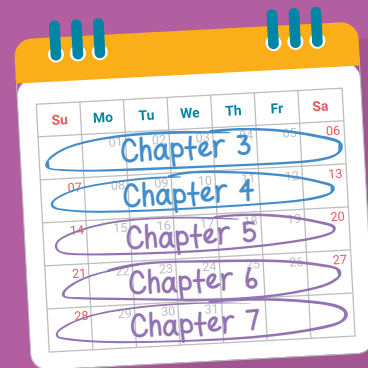


PLANNING

Beast Academy Science 3A is the first in a two-part Level 3 science series. Together with 3B, Level 3 offers a complete science curriculum for motivated and curious 3rd graders.

Level 3 includes 32 chapters (16 per book). To complete the curriculum in a typical 36-week school year, we recommend completing 1 chapter each instructional week.

If time is limited, students may skip enrichment activities marked with a ⊕ in the contents section at the beginning of each chapter.



ACTIVITY TYPES

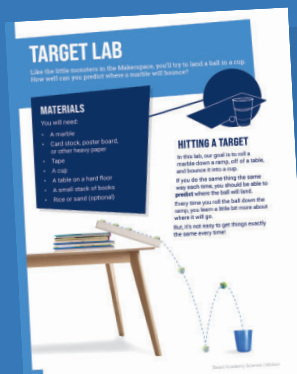
Comic Guide Sections

BA characters discuss important science concepts and ideas. Readers answer questions along the way.



Labs

One of the best ways to learn science is to do science! Students investigate how things work on their own.



Practice Pages

A variety of question types including puzzles, activities, and games help students learn to think like scientists.



QUESTION TYPES

Every question students are expected to answer is numbered and has an answer or brief discussion in the back, beginning on page 318.

There are a wide variety of question types including ones marked by the icons below:



CHALLENGE:

Starred questions and tasks have hints in the back starting on page 312.



DISCUSSION:

Find a partner or group and work through these questions together.



RESEARCH:

Students will need access to online resources to answer these questions.



JOURNAL:

Collect answers to these questions in a separate science journal notebook.

STANDARDS

BA Science 3A content is aligned to the Next Generation Science Standards (NGSS), but often goes well beyond what is typically expected of students. Together with 3B, Level 3 will cover all of the concepts, practices, and standards outlined for grade 3.

Among the NGSS standards covered in this book are:

Forces and Interactions (Unit 1: Chapters 1-4)

Using patterns to predict motion (3-PS2-2)

Weather and Climate (Unit 2: Chapters 5-10)

Graphing seasonal weather data (3-ESS2-1)

Describing the world's regional climates (3-ESS2-2)

Reducing the impact of weather-related hazards (3-ESS3-1)

Relationships in Ecosystems (Unit 3: Chapters 11-16)

Exploring advantages of social behavior (3-LS2-1)

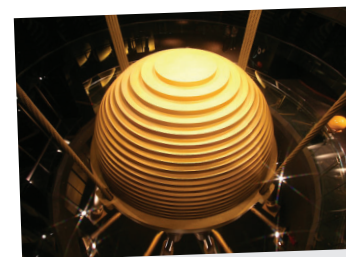
Recognizing how organisms adapt to survive in habitats (3-LS4-3)

Examining how changes to a habitat affect its organisms (3-LS4-4)

Inheritance and Variation of Traits (Unit 3: Chapters 11-16)

Identifying evidence that environment influences traits. (3-LS3-2)

Find additional information about the standards including core ideas, engineering practices, and crosscutting concepts online at ngss.nsta.org.



MATERIALS

SCIENCE JOURNAL

Every student should collect their work in a science journal. Any notebook will do.

COMMON ITEMS (Used in several activities)

- Scissors
- Tape
- Printer paper
- Stopwatch
- Thermometer
- Rubber bands
- Plastic water bottles
- Pens or Markers
- Cups

CHAPTER 1

- Marble
- Card stock or other heavy paper
- Rice or sand (optional)
- Variety of balls (optional)

CHAPTER 2

- Basketball
- Balloon
- Empty toilet paper rolls
- Feather or tissue
- Camera or phone with slow-motion video mode (optional)

CHAPTER 3

- Thin string
- Weights (such as metal washers)

CHAPTER 4

- Thin string
- Weights (such as metal washers)
- Measuring stick or measuring tape

CHAPTER 5

- Large baking sheet with rim
- Large bowl
- Toy car
- Towel (optional)

CHAPTER 7

- Orange
- Sharp pencil
- Headlamp (optional)

CHAPTER 8

- Flashlight
- Shoe box
- Dark construction paper
- Box cutter or knife (adult use only)

CHAPTER 9

- Air pump with inflating needle
- Nail similar in size to pump needle
- Hammer (adult use only)
- Marshmallows
- Bicycle tire
- Bicycle pump
- Push pin (optional)
- Glass bottle (optional)
- Ping pong ball (optional)
- Disposable coffee cup and lid (optional)
- Can of compressed air (optional)
- Camera or phone with slow-motion video mode (optional)

CHAPTER 10

- Two large containers
- Balloon
- Ice (optional)
- Thumb tack

CHAPTER 13

- Two tangerines or oranges

CHAPTER 15

- Coin
- Bubble wrap

CHAPTER 16

- Two sets of 6 tokens (we suggest 6 red and 6 black checkers)
- 30-36 dry beans or corn kernels
- Dice

Grogg (me)
"The Inventioneer!"

Invented the
battery-powered
hairbrush.

(And battery powered
scissors to get it out
of my hair.)



Winnie

"The firecracker"

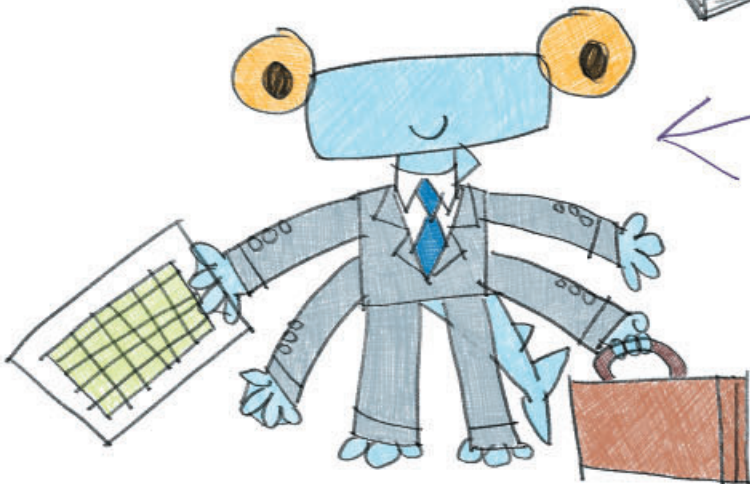
Got mad when I told
my see-food joke at
lunch.

Lizzie

"The bookworm"

Reads a LOT!
Even comics.

But she calls them
"graphic novels."



Alex

"The executive"

Knows a LOT about
spreadsheets.

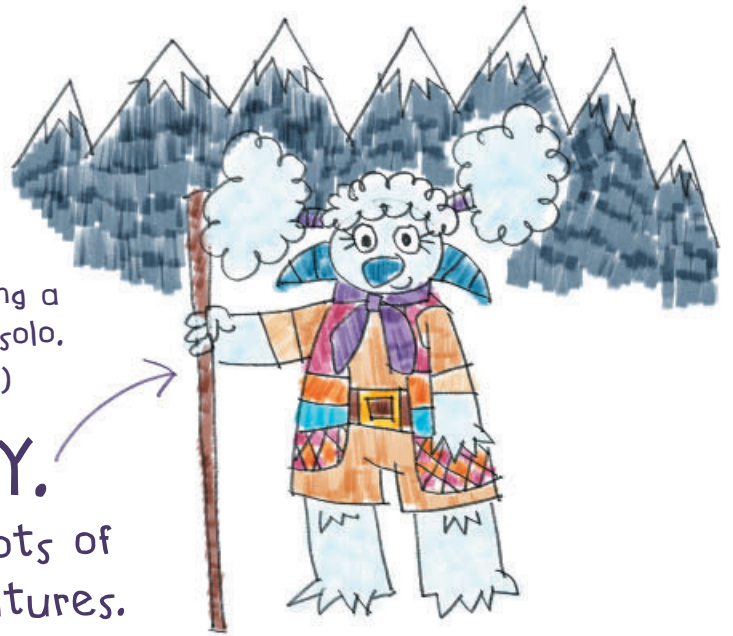
Colored this drawing
I made of him.



Mr. E.

Plays in a rock band!

Once fell asleep during a 15-minute xylophone solo. (More like Mr. Z's!)



Ms. Y.

Has lots of adventures.

Usually makes it back without getting lost.



Zak

Goes to the upper school.

Let me drive the remote-controlled sofa he built once. (Guess what - it floats!)

R&G

Take(s) care of the school.

I give the blue one fist bumps that explode.



Dr. Hau

Really old.

Like a bazillion years.

Says she always wanted to be an asteroid when she was a kid.





Here, every little monster is a scientist...

Welcome to Beast Academy!

This book is probably not like any other science book you've read.

It follows the adventures of four little monsters at Beast Academy.

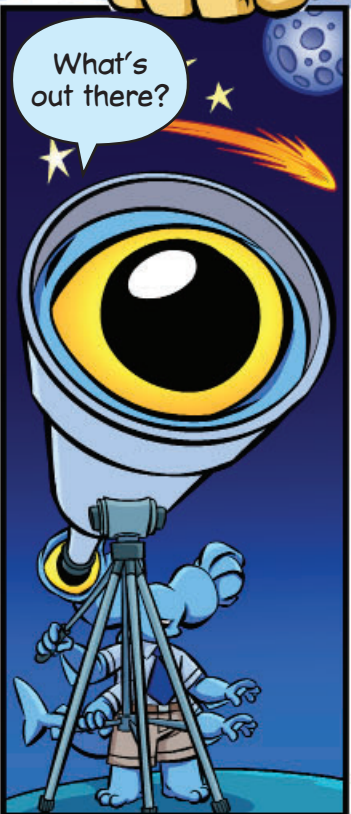
...eager to discover the secrets of the world around them.



Why did that happen?



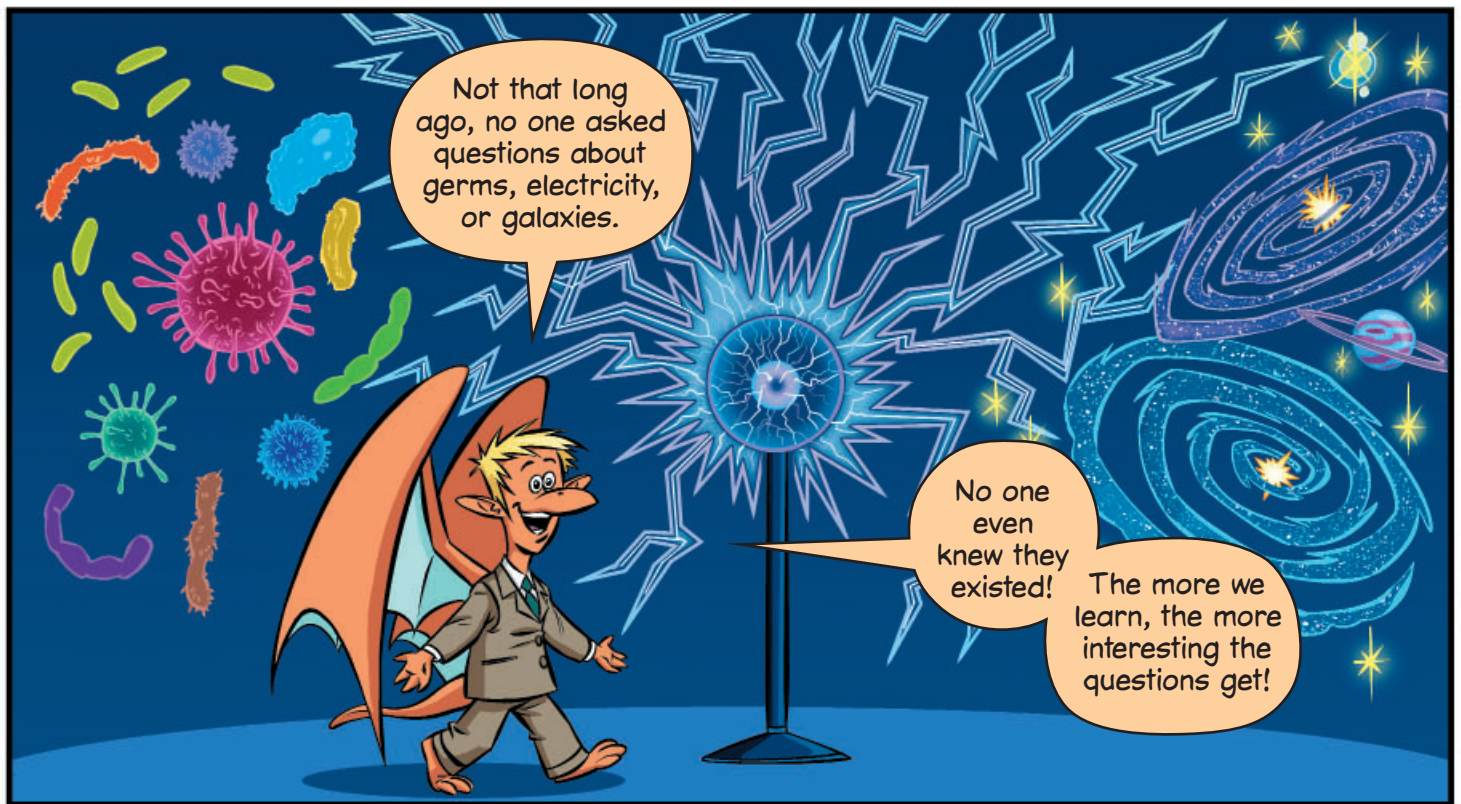
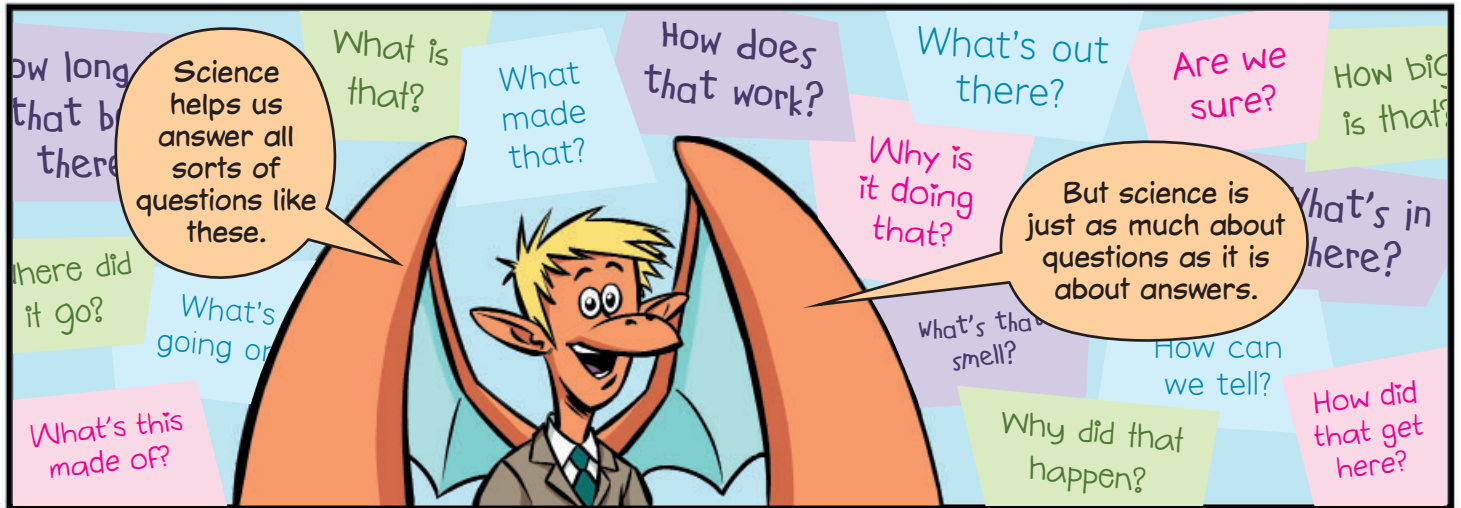
How did that get here?



What's out there?



What's in here?



THE BEAST ACADEMY WORLD WORKS JUST LIKE OURS. THE CREATURES MAY LOOK DIFFERENT, BUT THE WAY THINGS WORK AND WHAT THEY'RE MADE OF ARE THE SAME AS HERE ON EARTH!