



Activity Book 2

GALAXY SCOUTS

Space-Ventures
with Stella and Riley



PUBLISHED BY UW-MADISON
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Our Mission

Galaxy Scouts Space-Ventures with Stella and Riley is a comic book series designed to get kids excited about astronomy and physical sciences in general.

The comic book series strives to improve societal literacy of STEM (Science, Technology, Engineering, Math) subjects and share the excitement and importance of STEM discoveries with younger generations. The comic books feature space adventures of Stella and Riley and involve cutting-edge STEM topics to engage youth in science learning and discovery.

Who is the Galaxy Scouts Comic Book Series for?

The comic book series is mainly for youth with a 4th to 8th grade reading level, or who are about 9 to 13 years old. Still, we welcome people of all ages to explore these pages!

This activity book was designed to accompany Galaxy Scouts Comic Book 1, but most of the activities can be carried out without reading the comic book series. Activities are designed so you can do them individually or in a group.

Youth educators, including science teachers, librarians, and science museum program managers, may find the material useful for working with individuals or groups.

**To access the electronic versions of Galaxy Scouts comic books and the activity books, please go to:
<https://galaxyscouts.wisc.edu>**

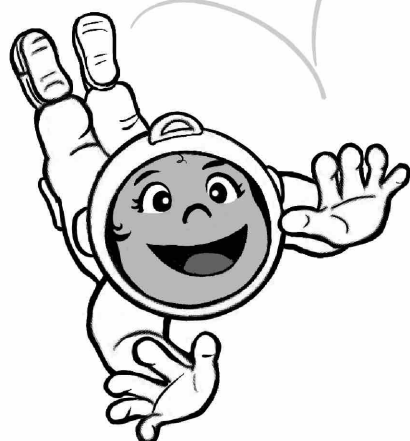


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The number of Stars reflects the reading levels. More stars means the activity requires a higher reading level.



Activity 1

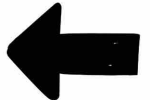
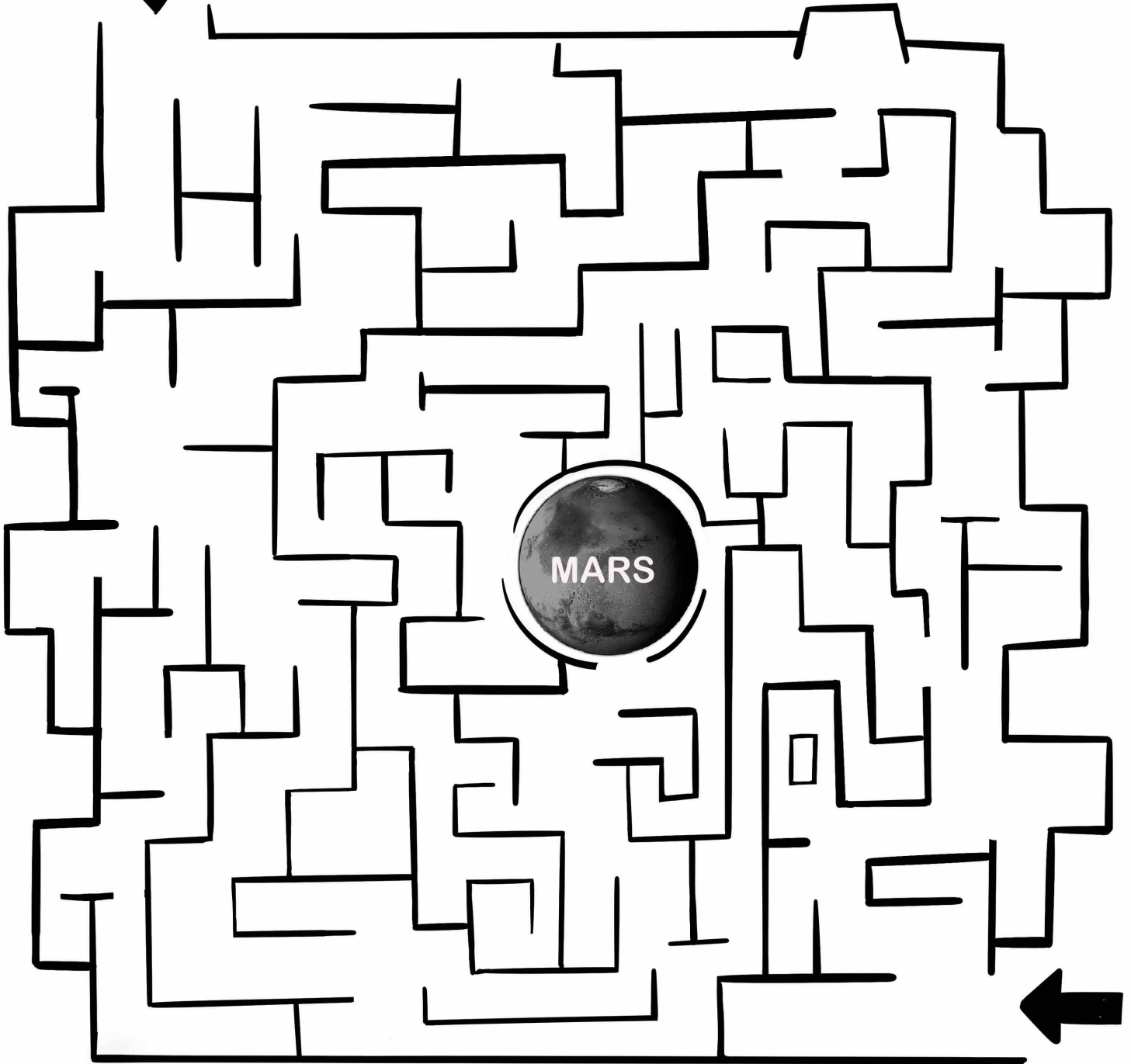
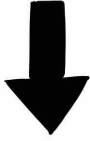
Space Maze



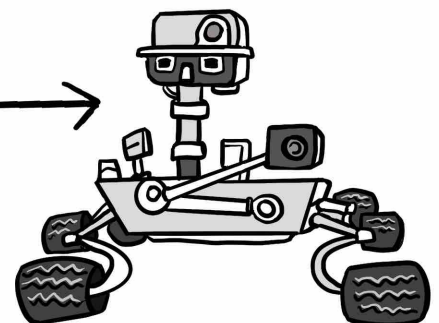
Help Curiosity and Ingenuity find each other on Mars.



Ingenuity (Ginny) was the first helicopter drone to attempt controlled flight on another planet.



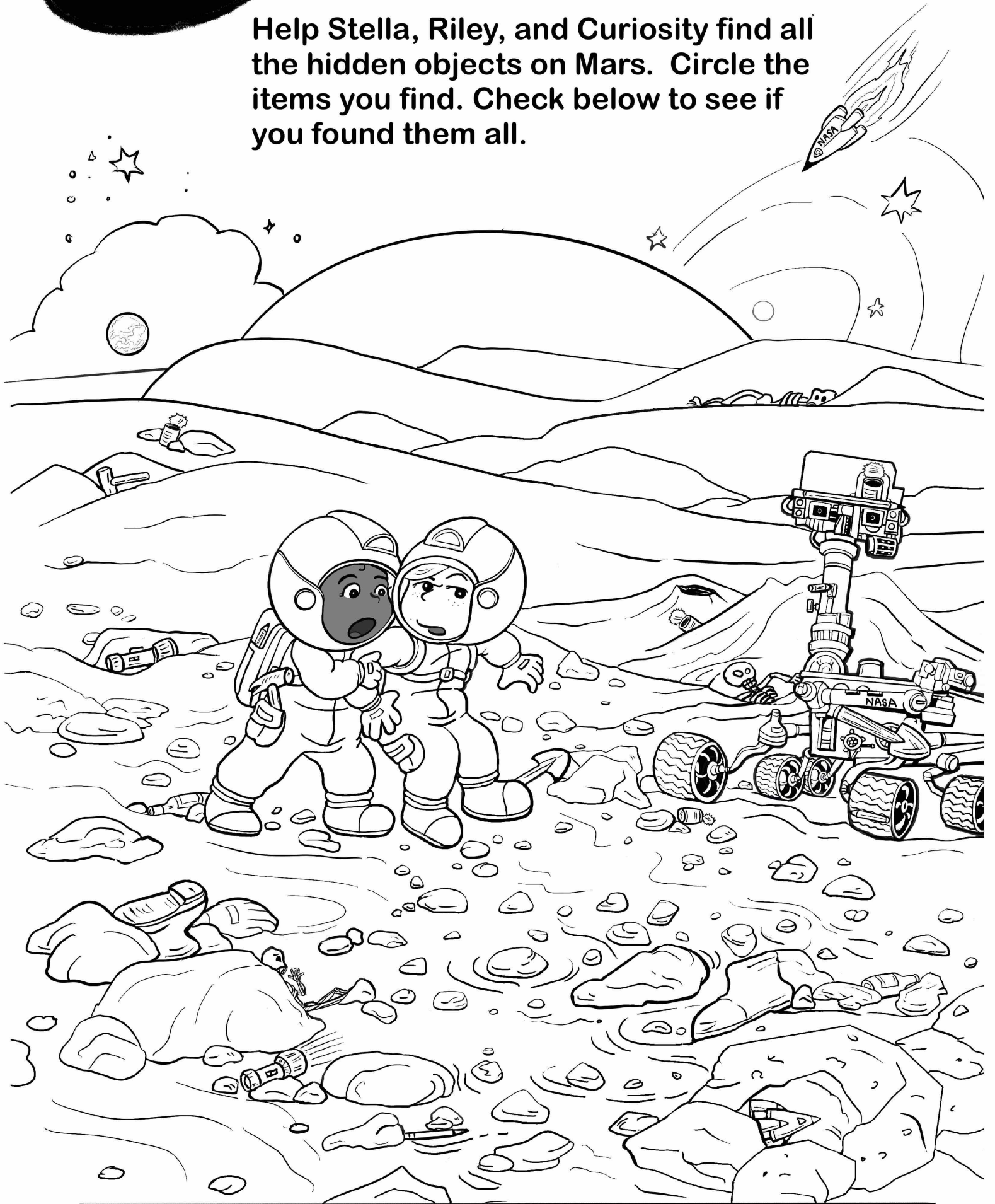
Curiosity hunts for special rocks that formed in water and/or have signs of organic life.



Activity 2

Find the Hidden Objects

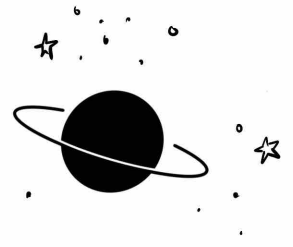
Help Stella, Riley, and Curiosity find all the hidden objects on Mars. Circle the items you find. Check below to see if you found them all.



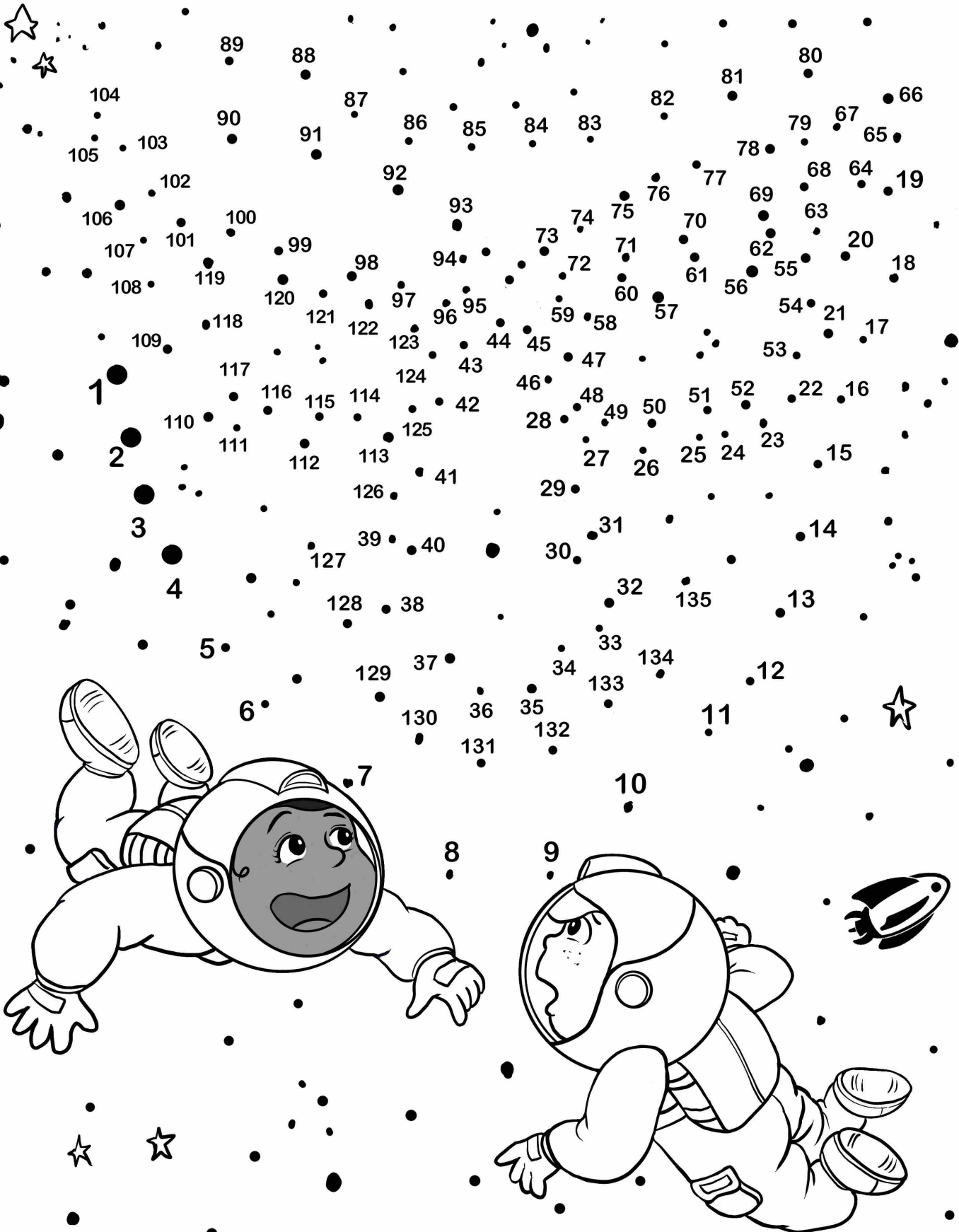
2 rockets 4 cans 6 boots 3 bottles 5 pencils 2 NASA logos
2 shovels 2 hammers 2 flashlights 3 skeletons 1 Earth 4 gloves

Activity 3

Connect the Dots



Connect the dots using the numbers, and when you finish, you will see the hidden objects. You have to connect the dots by numbers in order. No skipping!



Activity 4

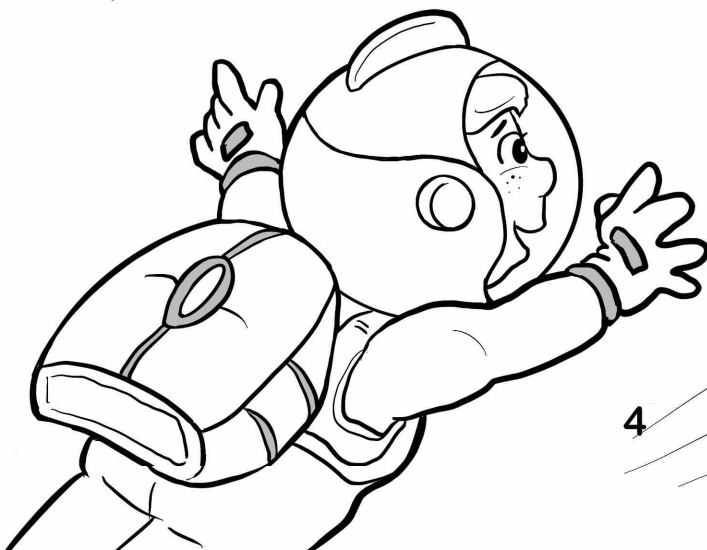
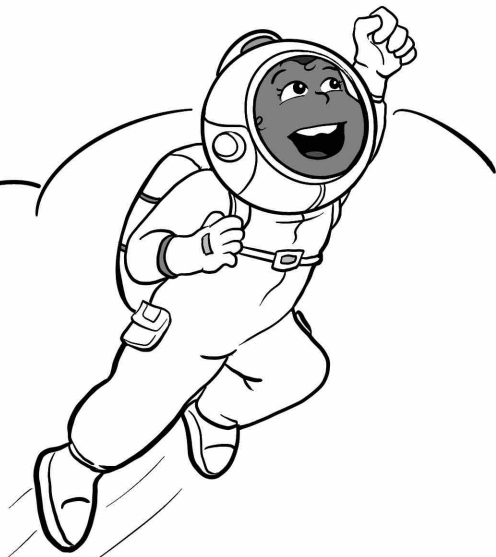
Story Fun Part 1



This activity is fun to do either with a buddy or by yourself. To start, fill in the chart below with words that match the word type listed in the first column. You can use words from the examples given or think of your own words. Then, using the words you have chosen, transfer these words to the spaces in the story on the next page. Remember, fill in the words by the numbers. No peeking at the story!

- 1. Teacher's name _____
- 2. Emotion _____
- 3. Adjective _____
- 4. Noun _____
- 5. Part of body (plural) _____
- 6. Animal _____
- 7. A kind of fruit _____
- 8. Noun _____
- 9. Verb+ing _____

- 10. Number _____
- 11. Verb+ing _____
- 12. Number _____
- 13. Liquid _____
- 14. Noun _____
- 15. Noun _____
- 16. Adjective _____
- 17. Emotion _____
- 18. Your name _____
- 19. Same as #1 _____
- 20. Verb+ing _____





Story Fun Part 2

Fill in the blanks by matching the numbers in the chart (on part 1) with the numbers in the story here.

Sometimes I daydream in my favorite Astronomy class. I really like my Astronomy teacher (1) _____. The class is always (2) _____. But I still get distracted and soon I will be a/an (3) _____ pilot of the first (4) _____ rocket to go to Mars. I was so excited that my (5) _____ were shaking. Blast off in 5, 4, 3, 2, 1.

“Welcome aboard, the (6) _____ Mars Space Line. This is your captain and pilot, (7) _____. You are traveling in the latest space (8) _____. At present, we are (9) _____ directly over North America. Our speed is (10) _____ miles per hour. Soon we will be (11) _____ past the moon. Our trip to Mars will take about (12) _____ days. If you care for a cup of (13) _____ or a/an (14) _____ sandwich, please push the (15) _____ located above your seat. Our (16) _____ flight attendant will be (17) _____ to help you...” “WAKE UP, (18) _____! Are you daydreaming again?”

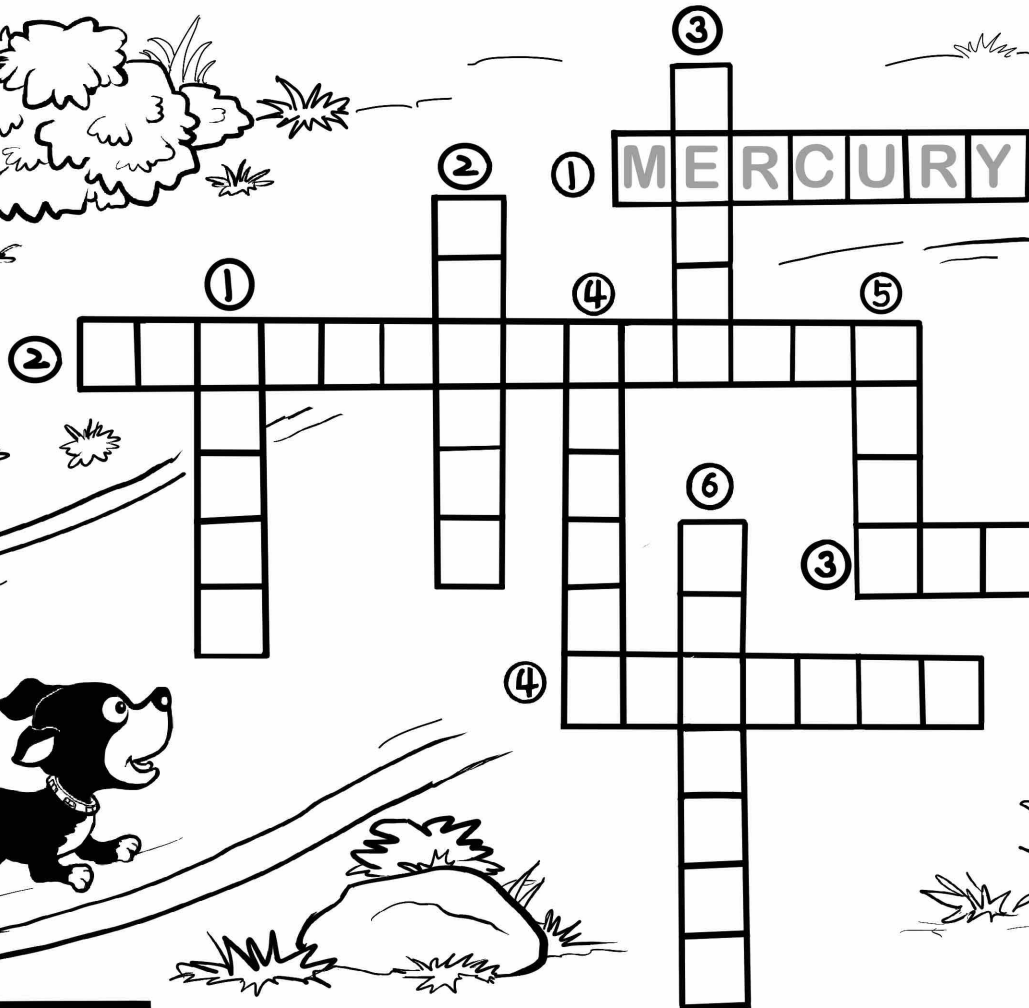
“Um. No. I mean yes. I mean ... oh, sorry, (19) _____.”

I guess I had better stop daydreaming and start (20) _____, if I want to be an astronaut.

Activity 5

Crossword Puzzle

Use the clues below to help fill in the crossword puzzle.



Across

- (1) Mercury is the closest planet to the sun.
- (2) The _____ has 8 planets, 5 dwarf planets, 690 moons, 552,394 asteroids and 3,083 comets.
- (3) Light from the _____ only takes 8 minutes to travel to the earth. It's the star of our solar system.
- (4) The planet _____ is an ice giant. It is mostly made of methane which gives it a blue color.

Down

- (1) Our _____ is the only planet in our solar system that has life, to our knowledge.
- (2) _____ is the first planet to be discovered after the invention of the telescope. It is the only planet that spins on its side.
- (3) _____ is the hottest planet in the solar system. It has only two sunrises per year.
- (4) _____ is famous for its beautiful rings that circle its equator.
- (5) _____ is called the red planet. Robots are its only inhabitants.
- (6) _____ is the largest planet in our solar system. It's sort of like a big brother to Earth. Can you guess why?

The Secret Code

Activity 6



Help us decode the secret message from Mr. Halley. Look at this key to help crack the code.

A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	2	3	4	5	6	7	8	9	10	11	12	13	14
O	P	Q	R	S	T	U	V	W	X	Y	Z		
15	16	17	18	19	20	21	22	23	24	25	26		

Write the letter above each number to read the secret message.

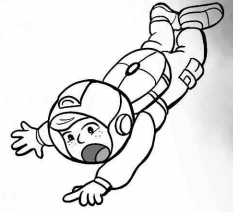


20 15. 19 20 5 12 12 1. 1 14 4.
 18 9 12 5 25.
 16 12 5 1 19 5. 13 5 5 20. 13 5. 1 20.
 20 8 5. 15 2 19 5 18 22 1 20 15 18 25.
 1 20. 14 9 14 5. 1 13. 19 1 20 21 18 4 1 25.
 13 15 18 14 9 14 7. 9. 23 1 14 20. 25 15 21.
 20 15. 7 15. 15 14. 1. 16 18 1 3 20 9 3 5.
 13 9 19 19 9 15 14. 20 15. 20 8 5. 4 1 18 11.
 19 9 4 5. 15 6. 20 8 5. 13 15 15 14.
 13 18. 8 1 12 12 5 25

Activity 7

Dangerous Maze

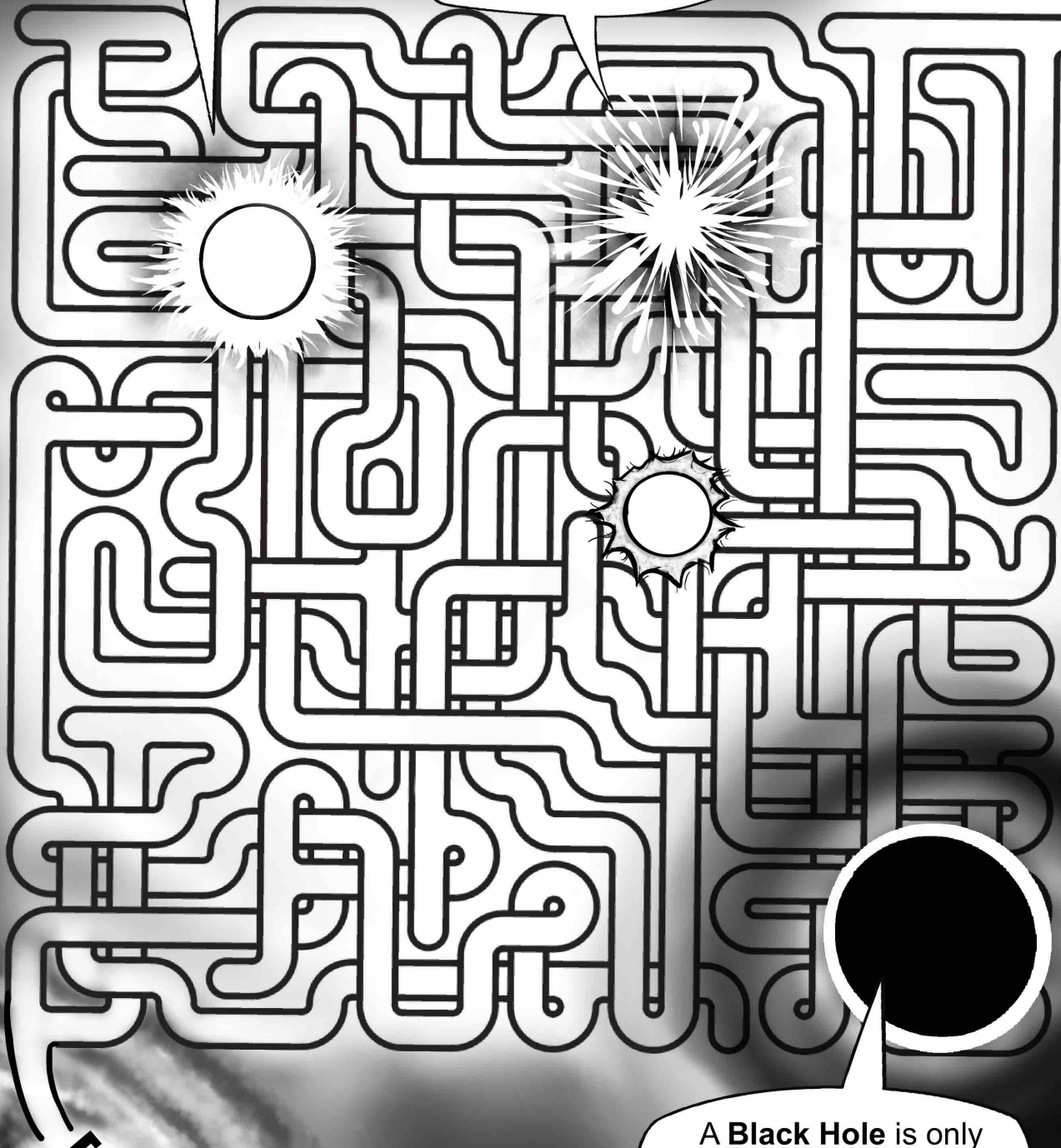
Help Stella and Riley make it through space and get to the Star Nursery. They have to be careful. Stay away from the dangerous places along the way.



The **Sun** gives us life here on the Earth but don't get too close. You will become a poof of smoke.

A **Supernova** is when a huge star explodes. So don't go near any exploding stars.

Start



Star Nursery

A **Black Hole** is only dangerous if you get too close. If that happens you may be stretched into a large strand of spaghetti. If you want to know why, look up black holes.

Activity 8

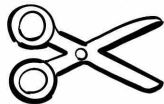
Make a Straw Rocket

Part 1



Let's make a paper rocket that can be launched from a soda straw. These are the materials you will need.

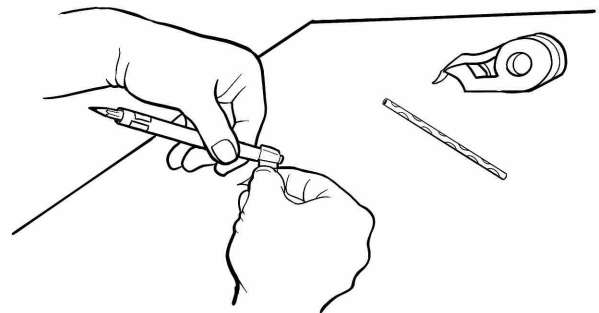
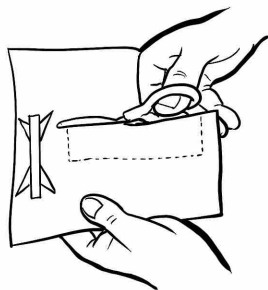
- PENCIL
- SCISSORS
- TAPE
- SODA STRAW
- ROCKET TEMPLATE



* It helps to work with a partner. One to hold the paper parts and one to tape them in place.

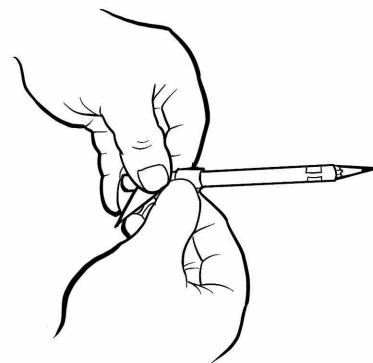
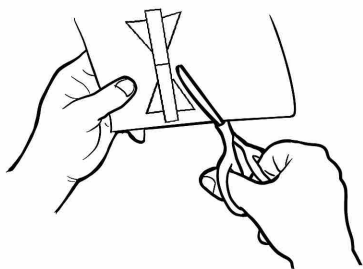
1. Cut out the rectangle from the rocket template.

- Wrap it around a pencil length-wise and tape it closed to form a tube.
- Don't wrap it too tightly. It should be loose enough to fit on a soda straw.

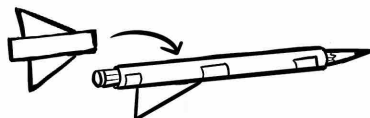


2. Cut out the fin template.

- Tape it horizontally to the body of the rocket. Nothing should extend past the bottom of the rocket.



3. Tape the other fin on the opposite side.



4. Bend the fins so they stick straight out.

- Looking from the bottom the rocket, it should look like a "+".

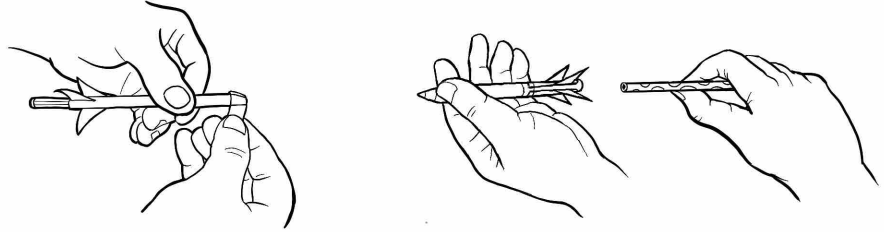


Make a Straw Rocket

Part 2

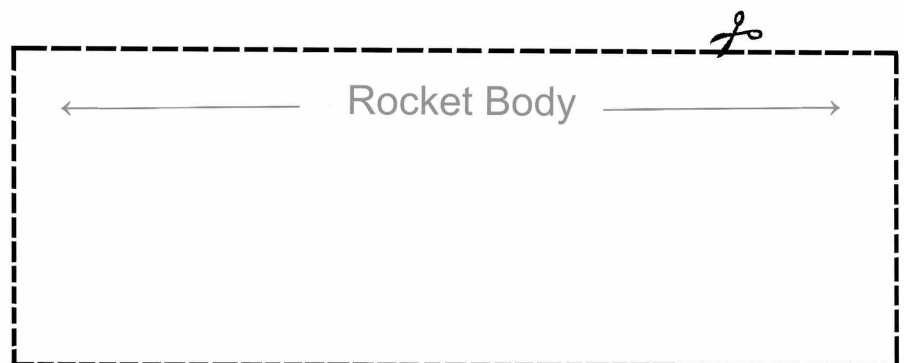
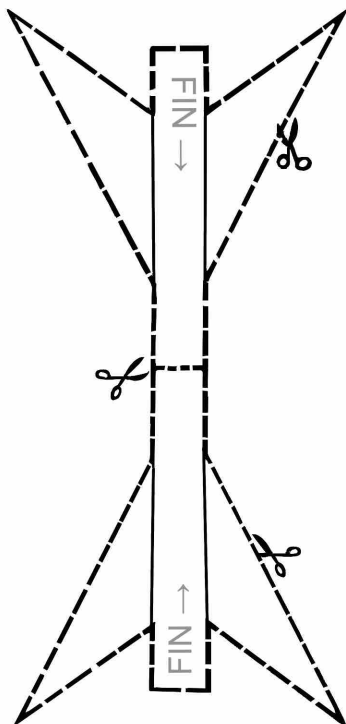
5. Make a nose cone with the top of the body.

- Do this by twisting the top into a cone and tape it.



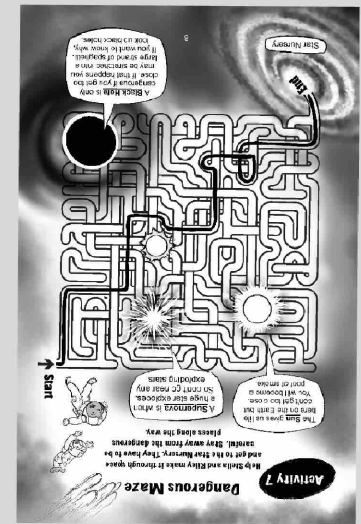
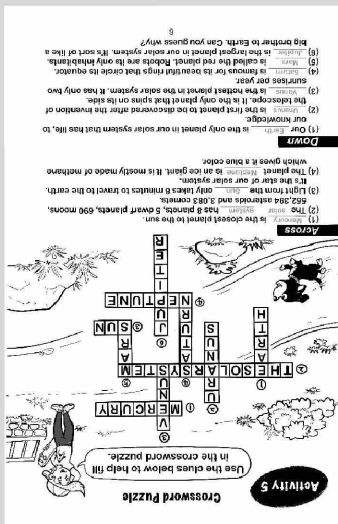
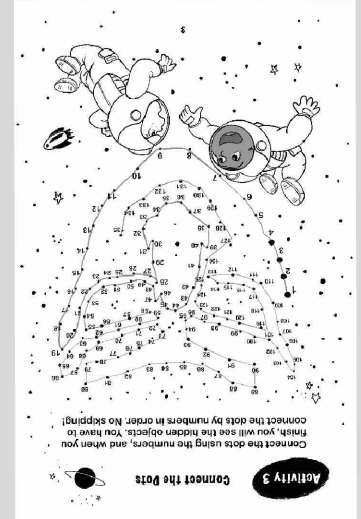
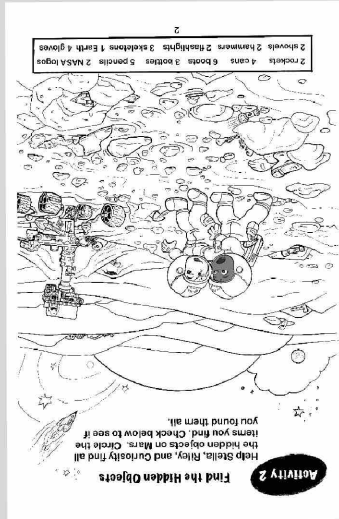
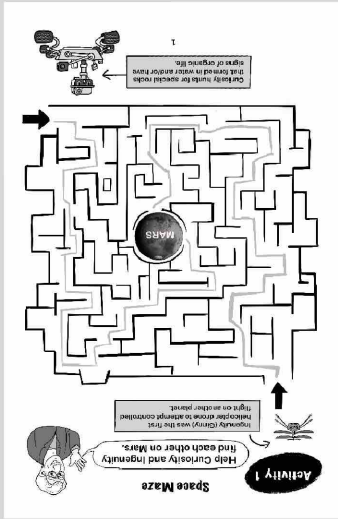
6. Prepare for launch.

- Take the rocket out of the pencil and put the straw into it. Be sure your launch area is clear of people. Mark where you are launching from with a piece of tape and then blow into the straw. See how far and how straight it flies.





Answer Key



Acknowledgement

The Galaxy Scouts comic book series is funded by the Research Corporation for Science Advancement, the National Science Foundation, and the University of Wisconsin Baldwin fund.

The activities in this book were developed by Robert Tetzner, Jan Lin, and Rebecca Cors, in close collaboration with the rest of the Galaxy Scouts team: Snežana Stanimirović, Kay Kriewald and Amy Gaeta.

Special thanks to Julie Persico for brainstorming and proofreading help.

If you have any comments or questions, please contact UW Madison, Astronomy Professor, Snežana Stanimirović, ssstanimi@astro.wisc.edu





JOIN STELLA AND RILEY ON THEIR GALAXY SCOUTING ADVENTURES!

Galaxy Scouts Space-Ventures is a comic book series for kids, introducing astronomy and other sciences in a fun-filled ride that is full of adventures combined with cutting edge STEM topics and discoveries. Take a journey to the stars with Stella and Riley and many other characters. The journey is just beginning, so fasten your seatbelts. It's time to blast off!

GALAXY SCOUTS TEAM

Snežana Stanimirović is a professor at the University of Wisconsin Madison who studies how molecules and stars form in the interstellar medium. She is the creator and an advisor for the comic.

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Amy Gaeta is a social science researcher, practicing poet, professional editor, and disability rights activist. She's the editor and proofreader for the comic.

Jan Lin has illustrated many children's educational books in Taiwan. She is the illustrator and art director for the comic.

Robert Tetzner is the director of an ESL school in Taiwan. He also writes and illustrates children's books and magazines. He is the chief writer and activity designer for the comic.



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