he Spider Companion

Hi, Spider Reader!

We're so happy you're here! This November/December issue of Spider is full of curious minds, big ideas, and a few fizzing experiments. Together, we'll explore this question:

What makes an experiment successful, and how do we learn from trial and error?

In this guide, you'll find fun, creative activities that go along with these selections from Spider's November/ December issue:

Someday

Dream up your own invention to solve an everyday problem.

Blushing Blake

When plans fail, find another plan and make it shine!

Young Inventors

Choose your favorite young inventor and celebrate their achievement with an award speech or colorful poster.

Loony Balloon Inflator

Experiment with safe science variations and see what happens when you change one thing at a time!

• Plus: Homemade Spaceship

Find and color the hidden kitchen gadgets in a wacky rocket scene.

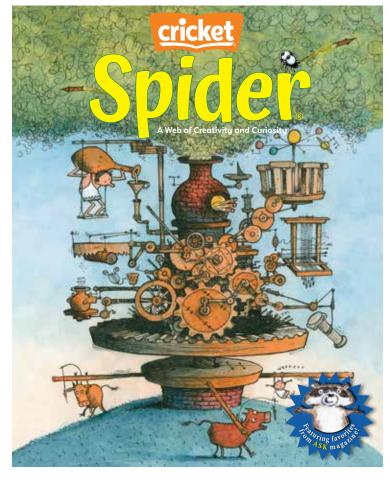
Each issue also includes an opportunity to share your ideas! Enter the latest contest for a chance to be published in *Spider*. Find the complete rules on page 47 in this issue.

We love hearing from you! Write to us at **spider@cricketmedia.com** to tell us what you discovered, invented, or loved most in this issue.

Happy experimenting—and remember, every "oops" can lead to a new idea!

Your Spider Companions







In the story "Someday" by Liz Huyck (page 6), Ada dreams up complex inventions to solve everyday problems, from blocks on the floor to melting ice pops. Even when she can't build her big inventions, she comes up with clever "good enough" fixes.

Inventors often start with simple ideas and improve them over time. That's how experimenting and making mistakes can lead to creativity!

Brainstorm Box!

Before you invent, think about what problem you want to solve. Use these brainstorm boxes to jot down some sketches or ideas to get started:



Improve It!

Think about something you use every day—like a lunch box, bike, chair, or front door.

Is there anything about it that could work better? How would you change it?

Make It Easier!

Think about something that frustrates you or takes a lot of time to do, like cleaning up, finding something you lost, or getting ready for school.

What might you invent to make it go faster or feel more fun?

Help Others!

Think about people and animals in the world that could use your help.

Maybe they don't have a home or food. Maybe pollution is hurting their environment.

What might you invent to help?

Invent It!

Choose one idea from your brainstorm. In the box on the right, draw or write or write about an invention that could solve the problem.

- Label or describe the parts of your invention. What makes it helpful?
- Give your invention a fun name!



Inventor Remix!

Pick one of the inventions that Ada dreams of making someday. Draw a picture of how you would make it. Then draw it again, changing one thing about your design. You might make one part bigger or smaller or a different shape. How would changing this one thing change how your invention works?







Blushing Blake

In the story "Blushing Blake" by Michele L. Rich (page 12), Blake wants to enter the science fair, but every experiment he tries seems to fail. In the end, he realizes that *he himself* can be his experiment! His persistence and creativity lead him to share something truly original.

Scientists and inventors often discover something new when they change direction or look at a problem in a different way.

Never Give Up

Every scientist has moments when things don't go as planned. Think about a time when you had to switch ideas or come up with a new plan.

Choose one of the options to show what you learned:

• Write It!

Write a short story, diary entry, or comic strip about someone who turns a "failed" idea into a surprising success.				
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• Design It!

Make a poster or mini science-fair display about an imaginary invention or discovery that came from a mistake. Include labels or captions to explain what went wrong and how that led to a new idea.

• Say It!

Record or present a short speech called "Never Give Up." Tell about a time you tried something new after an experiment or plan didn't work the first time.













- · What helped Blake keep going when his experiments didn't work?
- · How did Blake turn embarrassment into confidence?
- When have you changed your mind or found a new way to solve a problem?



In the story, Blake studies The Book of Fabulous Science Experiments. With an adult, visit a library to find a book of experiments. Look for an experiment



In "Young Inventors" by Kathie MacIsaac (page 18), you read about kids who came up with amazing ideas. Each inventor noticed a problem and found a creative way to solve it.

Inventing starts with curiosity—but it also takes observation, imagination, and persistence.

The	"Best	Kid	Inventor"	Award
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Imagine you are the judge of a contest. Which inventor from the article deserves the "Best Kid Inventor	" award?
Choose which inventor you think should win the award	
Choose one of these ways to share your decision:	

1. Give a Speech

Write and present a short award speech explaining why your inventor deserves the prize. Your speech should answer these questions:

- What did they invent?
- Why do you think their invention is awesome or most helpful?
- What makes this kid stand out as a great inventor?

Practice reading your speech aloud to friends, family, or even your stuffed animals. Remember to speak slowly, look up from your paper, and show your excitement!			

2. Design a Poster

Create a colorful "Best Kid Inventor" poster that celebrates your chosen inventor. Include the following:

- The inventor's name and invention
- A short caption explaining why the invention matters
- Drawings or symbols that show how the invention helps people today

Display your poster at home or in your classroom.

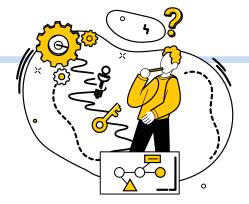




With a grown-up's help, look up another kid inventor. (Tip: Try "kid inventors" in a safe search engine or go to a library.)

- · What did they invent?
- · How old were they?
- How is their invention still useful today?

Write your own "Young Inventors" article that describes the inventor and invention you researched.





Talk About It!

- If you could ask one of the young inventors a question, what would it be?
- How did the young inventors use creativity to solve problems?
- · How are the inventors from the article similar? How are they different?



The second second

Loony Balloon Inflator

In the experiment *Loony Balloon Inflator* by Phillip Swift (page 30), you saw how mixing baking soda (a base) and vinegar (an acid) creates a gas called carbon dioxide. That gas fills up a balloon! Scientists learn by changing one thing at a time to see what happens. Let's test some safe variations.

Change It Up!

Do the experiment **more than once** and change just **one thing each time**. Always follow the same steps from the article, but instead of using ½ cup of room-temperature vinegar, try **one of these choices below**. (Don't mix them all together—pick one at a time!)

- ½ cup warm vinegar* (microwaved for 15 seconds by a grown-up)
- *Always ask a grown-up for help when using warm liquids.
- ½ cup cold vinegar (left in the freezer for 20 minutes)
- 1 cup room-temperature vinegar
- 1 tablespoon room-temperature vinegar

Observe: Which vinegar variable inflates the balloon fastest? Which inflates it the least? Which keeps the balloon inflated longest?

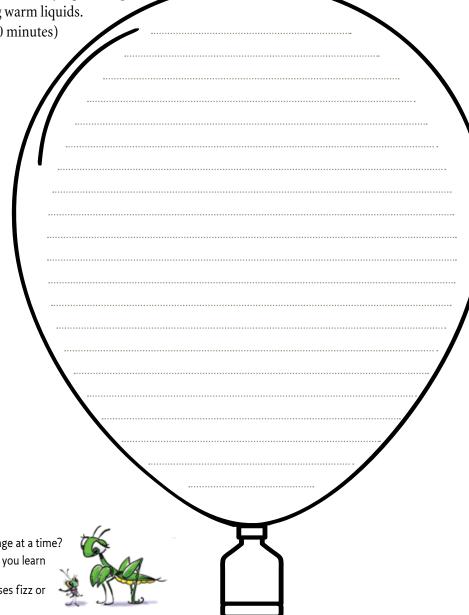
Fun Twists

- Add food coloring to the vinegar for a colorful fizz.
- Draw a face on your balloon before it inflates.
- Try using a rubber glove instead of a balloon. (Seal it tightly around the bottle opening with a rubber band. Gently shake the fingers to make sure all the baking soda drops into the bottle.)

Safety First!

- Ask an adult before heating vinegar or doing any experiment.
- Never mix random chemicals together.
- Only use the safe materials listed here.

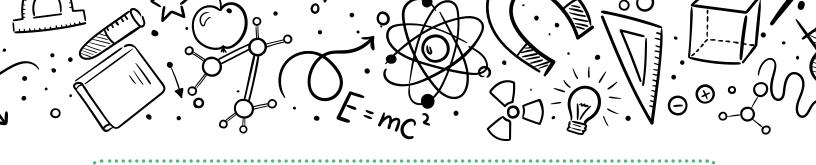






Talk About It!

- Why do you think scientists test one change at a time?
- How can even a "failed" experiment help you learn something new?
- If you could invent something new that uses fizz or bubbles, what would it be?





Science Experiment Word Search

Can you find these words from the issue?

ACID

BASE EXPERIMENT REACTION

BALLOON VINEGAR **INVENT**

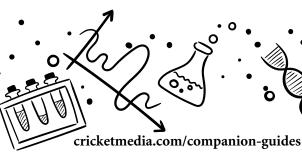
IDEA

SCIENCE

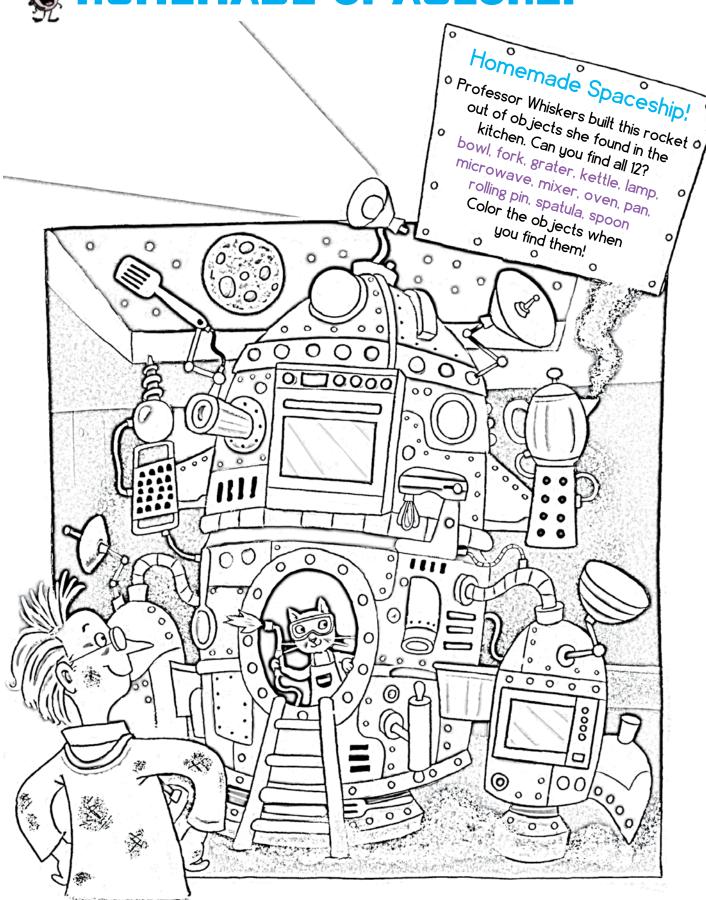
OYRTDDHPURVRFROLDV CEKPXGDKIT FFJBCARY TZWQNNQJLAMRDQ XWKGJZPEAXPDTLRGLQ OUCPQZML SP YHC LLQDA С TXONHL XULIHNT Ζ MMRVOWDRU UΟ ODDKKCXNNJ J T CKHBUHE CNPE PABA NXVCLGE Т WS Η Ι \mathbf{E} DLXUI HAEVC YUINADV IURKN UZNCROTC Ι DOL VВ UΕ Т С W Ι F YBE L Z Ρ Q Ι SFRT QL D Υ W S S Ν С OEWDABP Υ GXBB Ζ GAVZ E L W EVJJJQMLZC KUZ \mathbf{T} JMRJLFNRHEUQCOW

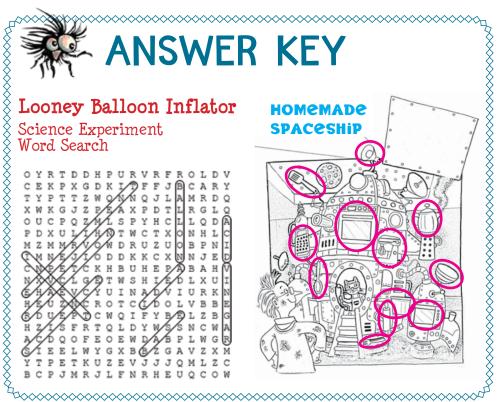






IEMADE SPACESHIP





Credits

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For Parents, Educators, and Grown-Ups

Thank you for encouraging joyful reading and learning!

The activities in this guide are designed to turn the magazine into **do-together moments** where you predict, try, notice, and try again.

As your child works through the activities, use the **Talk About It!** prompts to spark conversation. Celebrate what your child discovers, not just what "works" or turns out great.

The *Spider* Companion includes multidisciplinary activities that promote reading comprehension, creative thinking, STEM curiosity, and a love of learning. Each activity connects directly to the magazine content and is flexible for classrooms, homeschooling, or independent exploration.

For more ideas, questions, or to share feedback, email us at **spider@cricketmedia.com**. We'd love to hear from you!

STANDARDS ALIGNMENT

ACTIVITY	KEY SKILLS/FOCUS	ALIGNED STANDARDS
Someday	Creative problem-solving, invention design, narrative and explanatory writing	CCSS.ELA.W.2.3–4.3; SL.2.1–3.1; NGSS ETS1.A, ETS1.B
Blushing Blake	Reading comprehension, reflective or creative writing, persistence through mistakes, oral presentation	CCSS.ELA.RL.2.2–3.2; W.2.5–3.5; SL.2.4–3.4; NGSS PS1.A; Science Practice: Investigations
Young Inventors	Research skills, informational and persuasive writing, history of innovation, communication	CCSS.ELA.RI.2.1–4.1; W.2.7–4.7; SL.2.4–3.4; NGSS ETS1.A; ETS2.A
Loony Balloon Inflator	Scientific observation, cause- and-effect reasoning, variable testing, data recording	CCSS.ELA.SL.2.4–3.4; W.2.8–3.8; NGSS PS1.B; Science Practice: Data Analysis