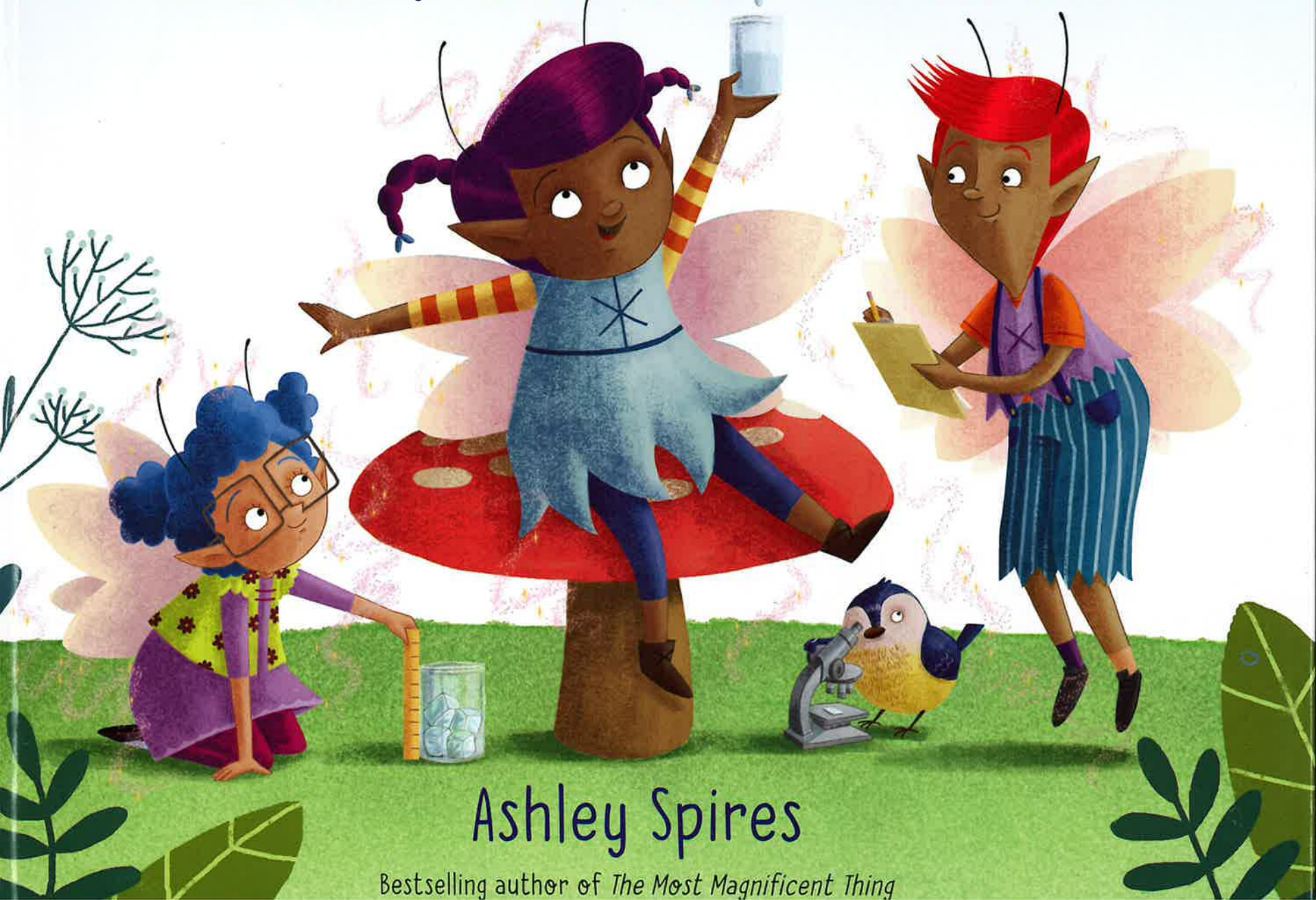



FAIRY SCIENCE

SOLID, LIQUID, GASSY



Ashley Spires

Bestselling author of *The Most Magnificent Thing*



Esther does not believe in magic.
Which is kind of a big deal when you are a fairy.

How does Jack Frost
make snow?

Magic!

While the other fairies wish on stars, Esther conducts experiments.

While they learn spells, she studies the law of density.



She's a fairy who prefers a microscope to a wand.



Esther is dedicated to science.
She and her friends use the scientific
method to explore the world around them.

First they ask a question.



Then they do some research.



They each make a hypothesis.



They do experiments, and they examine their results.



Finally they draw their conclusions.

When ice warms up, it
turns into a liquid, water!

I think mine peed.

Oh boy.



Esther and her friends try to share their discovery at school,
but none of their fairymates are interested.

JOIN THE
PIXIEVILLE
SPRING
MAGIC FAIR!

So, as you can clearly see,
the rising temperature
causes the water to change from
solid to liquid, which is the
real reason the ice melts!

ICE + HEAT = MELT!



They are too busy planning for the Magic Fair to listen to her silly logical theories.

Now, Esther,
we all know that
moon sneezes
are what make
the ice disappear
each spring.

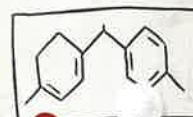


Last year's fair didn't go well for Esther. It turns out magic enthusiasts are surprisingly clueless.

Who has ever heard of "molecules"? Esther, you have such an imagination!

SPEAKING TO
THE SPIRIT
HOW TO USE
A CRYSTAL BALL

EVERYTHING
IS MADE OF
MOLECULES!



MOLECULES
DISQUALIFIED
DUE TO
UNMAGICAL
CONTENT.



While her fairymates work on their magic projects,
Esther focuses on solving scientific problems.

How does the compass needle
always point north?



Last one in the pond is
a rotten toadstool!



And there is no bigger problem . . .



SPLOOOT

... than a missing pond!





I have mud in my ears!

I have mud up my nose!

I have mud in ALL the places.



There are lots of ideas about what happened to the pond.

An ogre drank it.



It went down
the drain.



It fell in love
with a mole
and moved
underground.



It went for a
stroll in the woods
and got lost.



But only Esther and her science pals observe the facts.



Fig asks a question.

Where did the pond go?



Clover does some research.

This has been the hottest
spring in years!



Esther forms a hypothesis.

We know water is a solid
when it's very cold,
and it turns to a liquid when
it warms up. . . .



Together, they conduct experiments
and examine the results.




At last, they draw their conclusion.



The pond is
up there!





It DID fly away!

It didn't fly, exactly.

When the sun heats up the
water, it turns into gas and
floats upward to the clouds.
The pond will be back
when it rains.

It's called
evaporation!



Since there is no scientific way to force it to rain, Esther and her friends just have to wait to see if her theory is correct.



I've noticed that science seems to involve a lot of waiting.

Come here, pondy pond!





My potion
will bring
the pond back!

They wait and wait and wait a little longer, until finally it starts to pour.



Eureka! They were right!
After a few days of steady rain,
the pond is restored.



My potion worked!

It's amazing that water
can change states like that.
No wonder some fairies
think it's magic.



Hmm . . .

The water cycle is
almost magical.

And, it gives Esther the perfect way
to bring science to the Magic Fair!

MAGIC FAIR TODAY!

PIXIE DUST:
What Can't It Do?

COLORS AND THEIR MEANINGS

WHAT YOUR AURA
SAYS ABOUT YOU!

HOW FATE WORKS.
Why I Was MEANT
to Write This
Report

My Aunt
TOOTH FAIRY:
The Story of a
Molar Hoarder



I'm gassy!

I'm liquid!

I'm solid!

The *ALMOST* Magical*
Water Cycle!
*not actually magic

Did it work?



The *ALMOST* Magical*
Water Cycle!
*not actually magic

What type of spell
makes the water change?



Water is a shape-shifter?



Does water make
everyone gassy?



Has Esther finally made everyone excited about science?



Blossom Dinglepuff, for her report,
"GLITTER BOOGERS: Make Your Snot Sparkle!"

I'm a Pisces, so I
understand water. . . .



Apparently, the Magic Fair isn't ready for science.
But the judges appreciate a good costume.

Esther, Clover, and Fig
get first place for
Best Magic Fair Costume Design!



Esther may not have won any trophies, but like all good scientists,
she knows that discovery is the best reward.



And there is *always* something new to discover.



ESTHER'S RAINY-DAY EXPERIMENT

You don't have to be a fairy to do a science experiment! Why not make it rain indoors? You'll need these things:



Experiment Checklist

- Hot Water
- One Large Glass Bowl
- Food Coloring
- Salt
- One Small Glass Cup
- Plastic Wrap
- Ice Cubes
- Spoon



First, pour the hot water into the bowl so it is about a quarter full. Ask an adult for help.



Add food coloring and a pinch of salt to the water and give it a stir.

Next, place the small cup into the bowl. Be careful to keep the cup dry inside.



Quickly cover the bowl with plastic wrap and place a few ice cubes on top.

Wait ten minutes. Then check
out your water cycle!



The hot water
heats the air, causing
water vapor to rise.
When the hot air hits
the ice, it cools
back down.



As water droplets
form, they fall
into the previously
dry cup,
making rain!



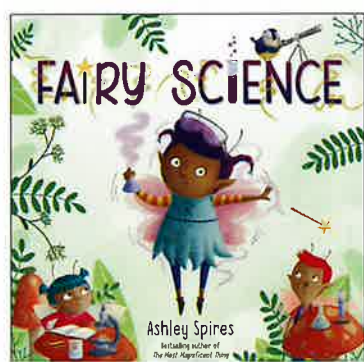
That's called
condensation!

SCIENCE WORKS ITS MAGIC!

When a pond dries up, Esther doesn't freeze under pressure.
She and her friends go full steam ahead to make a scientific discovery!



Help Esther get to
the root of another
science mystery!



Try the Rainy-Day
Experiment in your
home laboratory!

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