

STEM

kit



Jump Around With Frogs!

GUIDE



Wisconsin Water Library
UNIVERSITY OF WISCONSIN-MADISON

STEM



Jump Around With Frogs

Science, Technology, Engineering and Math (STEM) Storytime Kit

Writer: Anne Moser

Editor: Elizabeth White

Designer/Illustrator: Yael Gen

Wisconsin Water Library is a service of the Wisconsin Sea Grant
and University of Wisconsin Water Resources Institute.

UW Sea Grant supports scientific research, education and outreach
to foster the wise use, conservation and sustainable development
of Great Lakes and coastal resources.

The Water Resources Institute focuses on solutions to Wisconsin's
present and emerging water resources issues.

2015, updated 2018

waterlibrary.aqua.wisc.edu

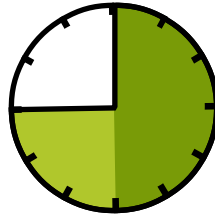


Wisconsin Water Library
UNIVERSITY OF WISCONSIN-MADISON

JUMP AROUND WITH FROGS!

STORYTIME GUIDE

This storytime is designed for children in preschool through second grade and lasts between 30 and 45 minutes, based on the number of books read and the science-based activities presented.



Science is integrated into a traditional storytime with a “science chat” and by listening to field recordings of frogs and toads and matching the sounds to photographs.

There are two additional science activities included — a true-false quiz and an explanation of the difference between frogs and toads.

JUMP AROUND WITH FROGS!

WHAT'S INSIDE?

This kit includes everything you need for storytime, including four read-aloud books, a CD of frog and toad sounds, a craft template and more. Also included are reading lists for preschoolers and children in kindergarten through second grade and websites for additional information.

THIS STORYTIME GUIDE

Storytime Outline	4
Read	5
Sing and Move	6
Scientific Method	11
Science Fun and Games	13
Craft	14
Reading List	15
For More Information	21

THE STEM KIT

- ① **Froggy Sounds** CD of frog and toad sounds
- ② **Froggy Photos** Wisconsin frog and toad images
- ③ **Fact or Fiction** quiz
- ④ **Frogs and Toads: What's the Difference?**
- ⑤ **Puppet Template** Frog craft instructions and example

JUMP AROUND WITH FROGS!

OUTLINE

This STEM kit integrates literacy and science into one storytime. Begin with your favorite welcome song, introduce the theme in a “science chat,” read one or more books, sing a song and enjoy some movement. Next, play the Froggy Sounds CD and display or pass around the Froggy Photos. Then you can choose to play Fact or Fiction or talk about the differences between frogs and toads. A paper bag puppet frog craft is included to finish up the storytime. Depending upon the group and your comfort level, you can choose which activities and books you would like to offer.

WELCOME SONG

Start with your favorite welcome song.

SCIENCE CHAT

Introduce frogs and toads as your storytime theme. You can begin by asking the children this question: “Do you know any facts about frogs or toads?” Listen without judgment. If there are no takers, you can suggest a few facts yourself.

You can mention that frogs are sometimes green. Or that frogs can jump. This might prompt some ideas from the group. If the children are on the young side, instead of asking an open-ended question, you can ask if anyone in the group can make the sound of a frog. Allow for an open discussion — with no need to judge answers right or wrong.

Later, you can choose to share an example or book with individuals to corroborate or correct a fact.

JUMP AROUND WITH FROGS!

READ



The following books are included in this kit and have worked well with this storytime. If you have a favorite title about frogs, please feel free to substitute.

Jump Frog Jump by Robert Kaplan, illustrated by Byron Barton
Red-Eyed Tree Frog by Joy Cowley, illustrated with photographs by Nic Bishop
City Dog, Country Frog by Mo Willems, illustrated by Jon J. Muth
Wide Mouth Frog by Keith Faulkner, illustrated by Jonathan Lambert

What you'll need:

One, two or three books, depending upon the group.

JUMP AROUND WITH FROGS!

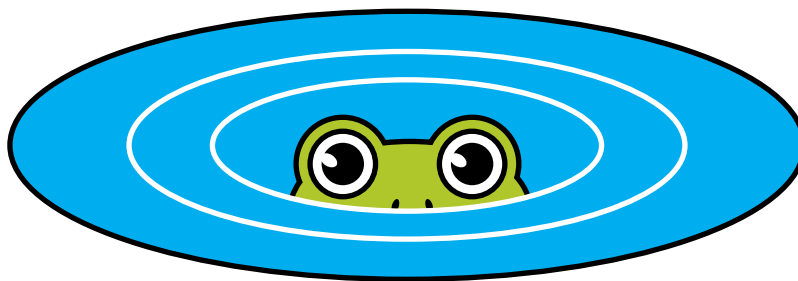
SING

Included in the kit are three songs about frogs and toads and a froggy version of the popular game Simon Says. You can sing or move as much as you want depending upon the dynamics of the group.

FIVE GREEN AND SPECKLED FROGS **(Prompt children to count down with you)**

Five green and speckled frogs sat on a speckled log **(Count five)**
Eating some most delicious bugs — YUM YUM! **(Everyone rub their belly)**
One jumped into the pool where it was nice and cool
Then there were four green and speckled frogs. **(Count four)**

Four green and speckled frogs sat on a speckled log **(Count four)**
Eating some most delicious bugs — YUM YUM! **(Everyone rub their belly)**
One jumped into the pool where it was nice and cool
Then there were three green and speckled frogs. **(Count three)**



JUMP AROUND WITH FROGS!

SING

Three green and speckled frogs sat on a speckled log **(Count three)**
Eating some most delicious bugs — YUM YUM! **(Everyone rub their belly)**

One jumped into the pool where it was nice and cool
Then there were two green and speckled frogs. **(Count two)**

Two green and speckled frogs sat on a speckled log **(Count two)**
Eating some most delicious bugs — YUM YUM! **(Everyone rub their belly)**

One jumped into the pool where it was nice and cool
Then there was one green and speckled frogs. **(Count one)**

One green and speckled frogs sat on a speckled log **(Count one)**
Eating some most delicious bugs — YUM YUM! **(Everyone rub their belly)**

One jumped into the pool where it was nice and cool
(Slowly and sadly conclude the song)

Then there were no green and speckled frogs.

Just some fun songs about frogs

JUMP AROUND WITH FROGS!

SING

TWO LITTLE FROGS

Adapted from *Two Little Blackbirds*

Two little froggies, sitting very still
(Put 2 forefingers and thumb on each shoulder to represent frogs.)

One named Jack, (Hold out one set of fingers.)

The other named Jill. (Hold out the other set of fingers.)

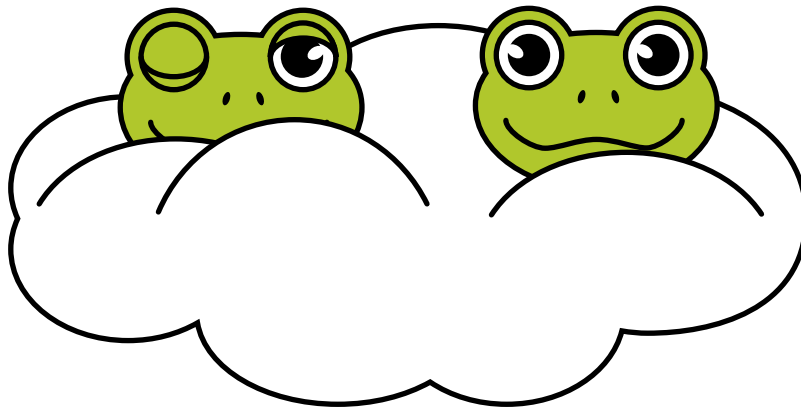
Jump away Jack! (Place one hand behind back.)

Jump away Jill! (Place other hand behind back.)

Come back Jack. (Return one hand to its shoulder.)

Come back Jill. (Return the other hand to its shoulder.)

More opposites:



Follow movements above but be sure the frogs move as their name sounds.

Sitting on a cloud... one named quiet, one named loud

Sitting on a stick... one named slow, the other named quick

Sitting on the ice... one named mean, the other named nice

Sitting on a lily... one named serious, the other named silly

JUMP AROUND WITH FROGS!

SING

FIVE LITTLE FROGS

(Prompt children for an animal each time)

Five little frogs were down at the pond,
Down at the pond to play,
Along came a hungry _____
And chased one frog away.

Four little frogs were down at the pond,
Down at the pond to play,
Along came a wiggly _____
And chased one frog away.

Three little frogs were down at the pond,
Down at the pond to play,
Along came a giant _____
And chased one frog away.

Two little frogs were down at the pond,
Down at the pond to play,
Along came a purple _____
And chased one frog away.

One little frog was down at the pond,
Down at the pond to play,
Along came a flying _____
And chased one frog away.

Then no little frogs were down at the pond
Down at the pond to play,
Where do you think the little frogs went?
When they all hopped away?

JUMP AROUND WITH FROGS!

MOVE

FROGGY SIMON SAYS

Tell children that you will give directions for them to follow.

If you say “Simon says” first, they should follow that direction.

If you do not say “Simon says” first, they should not.

Players are “out,” when they make a mistake and are asked to sit down.

Here are some suggestions. Feel free to imagine your own!

Stick out your tongue like a frog

Hop like a frog

Ribbit like a frog

Eat a fly

Sit like a frog

Close your eyes and swallow*

Make eyes on top of your head

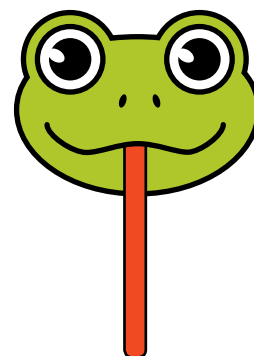
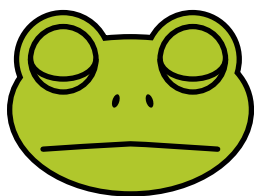
Walk like a frog

Re-grow your arm like a tadpole*

Eat slugs

Play dead like a frog

Show me your webbed toes



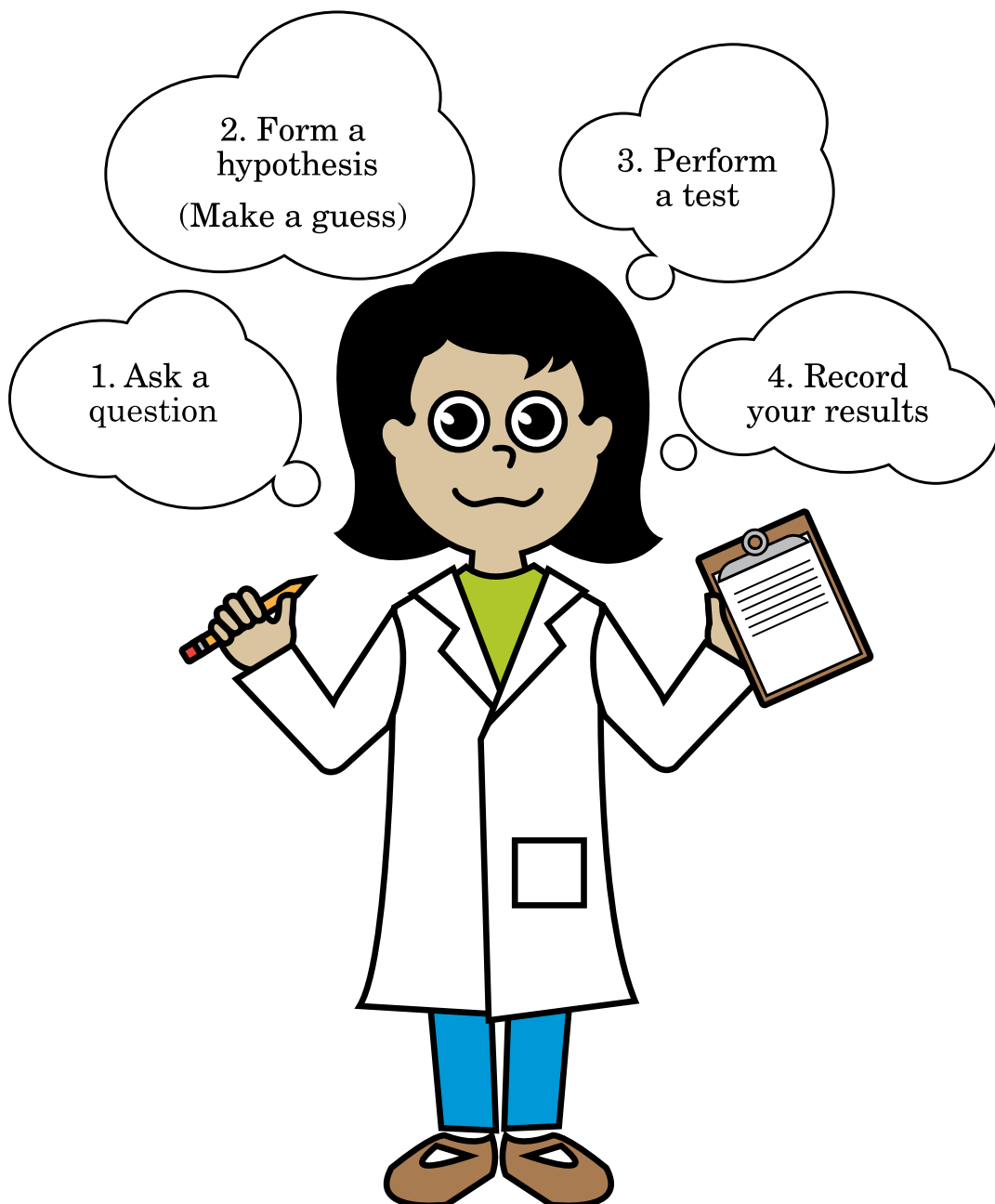
* Frogs close their eyes when swallowing prey. They push their eyes down, which presses on a membrane that separates the eyes from the top of the mouth. The movement helps propel food toward the stomach.

* Tadpoles and immature frogs can regrow lost limbs; adults cannot.

JUMP AROUND WITH FROGS

SCIENTIFIC METHOD

THINK LIKE A SCIENTIST





A SCIENTIST IS SOMEONE WHO...

- Observes and wonders
- Asks questions
- Listens to ideas of others
- Conducts experiments
- Shares their ideas and discoveries
- Explores the world around them
- Uses tools to solve problems

A SCIENTIST SAYS...

- I agree with you because...
- I disagree with you because...
- Why do you think that?
- So, what you're saying is...

- Can you tell me more?
- Can you give me an example?
- How could we test that?
- That reminds me of...



JUMP AROUND WITH FROGS

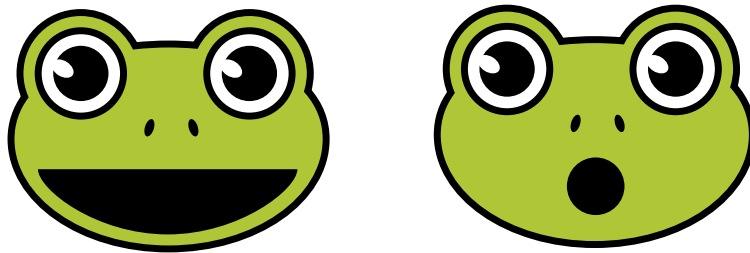
SCIENCE FUN AND GAMES

Play the CD included in the kit. It is shorter than two minutes and contains real field recordings of one toad and eight frogs that are native to Wisconsin. While the CD is playing, you can show the photo of the frog making the sound. On the back of the photos are some fun facts about each frog. You can share the fun fact or simply let the CD play.

You may also choose to display the photos or pass them around the group.

What you'll need:

- ① **Froggy Sounds**
- ② **Froggy Photos**



Option one: Play Fact or Fiction — a true-or-false quiz. The answers are included and can be read aloud. This is always a hit with the children.

Option two: Talk with the children about the differences between frogs and toads.

What you'll need:

- ③ **Fact or Fiction**
- ④ **Frogs and Toads:
What's the Difference?**

JUMP AROUND WITH FROGS! CRAFT

This classic project is easy and fun. Kids may be inspired to use the puppet and make frog sounds after listening to the sounds of real Wisconsin frogs and toads on the CD.

Materials

⑤ Puppet Template

paper lunch bag

construction paper

scissors

glue and/or tape

something to color with

googly eyes (optional)

Instructions

Precut the template for younger children; older children can cut out the shapes themselves.

The template includes:

Three sets of eyes that can be glued (individually or on top of each other or any which way the artist chooses) onto the top flap.

Tongue that can be glued under the flap. After applying, a grown-up can use a pencil to help the child curl the tongue.

Arms to be glued on the sides.

Decorate, decorate and decorate!



JUMP AROUND WITH FROGS!

READING LIST



Wisconsin Water Library, UW Madison, (608)-262-3069 or askwater@aqu.wisc.edu

Ask Me If I'm a Frog By Ann Milton. Owings Mills, Md.: Stemmer House: 1998.

An award-winning nature book for young readers compares the anatomy and habits of a pond-dwelling frog with that of a young girl. Learn the ways that frogs differ from and are the same as human beings.

Bently & Egg By William Joyce. New York: HarperCollins Publishers: 1992.

Bently the frog becomes quite fond of a duck egg left in his charge. After decorating the “boring” white egg with beautiful colors, it is mistaken for an Easter egg and disappears. An eccentric tale that is sure to entertain children.

An Extraordinary Egg By Leo Lionni. New York: Dragonfly Books: 1994.

One day three frogs find a lovely white egg. They bring it home and raise it as a chicken, but the reader will quickly realize that what they really have is a baby alligator! This is a fun book about friendship and mistaken identity.

Finklehopper Frog By Irene Livingston. Berkeley, Calif.: Tricycle Press: 2003.

Finklehopper Frog decides to start jogging when he sees his friends crocodile, sheep, turtle and mouse going out for a daily run. He gets himself a wildly colored jogging suit and sets out — only to discover that his body wasn't made for running.

Finklehopper Frog Cheers By Irene Livingston and Brian Lies. Berkeley, Calif.: Tricycle Press: 2004.

This follow-up to “Finklehopper Frog” highlights physical exercise and good sportsmanship. Full color.

Frog By Susan Cooper. New York: Margaret K. McElderry Books: 2002.

Little Joe cannot swim, unlike the rest of his family. But when he observes a frog who accidentally jumps into their backyard pool, he notices how his body is similar to the amphibian's — an understanding that allows him to learn to swim.

Frog Girl By Paul Owen Lewis. Berkeley, Calif.: Tricycle Press: 1999.

When the frogs suddenly vanish from the lake behind her village, a young Native American girl is led to the frog village underneath the lake. Here, she learns what she must do to save both the frogs and her own people.

Frog Went A-Courting By Wendy Watson. New York: Lothrop, Lee and Shepard Books: 1990.

The classic song of Frog's happy courtship and marriage to Miss Mouse is adapted here with illustrations by the author.

Frogs By Gail Gibbons. New York: Holiday House: 1993.

The difference between frogs and toads and the daily activities of these amphibians are presented in a great format for young readers.

JUMP AROUND WITH FROGS!

READING LIST



From Tadpole to Frog By Wendy Pfeffer. New York: HarperCollins: 1994.

From the “Lets-Read-and-Find-Out Science” series, this is a good book for readers eager to start learning simple facts about the life cycle of frogs and other happenings in a pond.

It’s Mine! By Leo Lionni. New York: Dragonfly Books: 1986.

Milton, Rupert and Lydia are three frogs who fight amongst themselves all day long. “It’s mine!” is their constant exclamation until a large brown toad teaches them that sharing is far more rewarding.

Jump, Frog, Jump! By Robert Kalan. New York: Greenwillow Books: 1981.

“This is the turtle that slid into the pond and ate the snake that dropped from a branch and swallowed the fish that swam after the frog — JUMP, FROG, JUMP!” This book, great to read aloud, should have young children chanting along with the cumulative tale.

Marsh Music By Marianne Berkes. Brookfield, Conn.: Millbrook Press: 2000.

Author Berkes turns the night songs of 10 different kinds of frogs into a concert in the marsh led by Maestro bullfrog. Containing beautiful watercolor depictions of marsh life, this book teaches children about both nature and music in an entertaining fashion. A glossary of musical terms used and descriptions of each frog in the cast are included.

The Mysterious Tadpole By Steven Kellogg. New York: Dial Books for Young Readers: 2002.

Louis’ Scottish uncle brings him the birthday gift of a tadpole, plucked right out of Loch Ness. It soon becomes clear that this “tadpole” is not turning into an ordinary frog! It’ll take a little help from friends and a lot of ingenuity to feed and shelter this unusual, ever-growing pet.

A New Frog: My First Look at the Life Cycle of an Amphibian By Pamela Hickman. Toronto: Kids Can Press: 1999.

This book on frog development has two simultaneous texts — a cumulative, sing-song rhyme in the style of “The House That Jack Built” and a fold-out flap with more detailed, scientific information about the life cycle of frogs.

Red-Eyed Tree Frog By Joy Cowley. New York: Scholastic Press: 1999.

Spend a night in the life of a red-eyed tree frog as it avoids predators and searches for food. Excellent photographs take readers deep into the heart of a Central American rainforest and show this cuter-than-cute frog in all its splendor.

Screen of Frogs By Sheila Hamanaka. New York: Orchard Books: 1993.

A spoiled rich man in Japan discovers a respect for nature just in time to turn his life around.

JUMP AROUND WITH FROGS!

READING LIST



The Three Dots By Elise Primavera. New York: Putnam: 1993.

Three dotted animals, a frog, duck and moose, move to New York to pursue music careers. Soon they meet in a donut shop and form a band — the Three Dots. They become overnight sensations and appear on all the talk shows. But the pressures of fame prove to be too much and they break up. Realizing that they miss one another, they reunite and for ever more get along famously.

The Wide-Mouthed Frog: A Pop-Up Book By Keith Faulkner and Jonathan Lambert. New York: Dial Books for Young Readers: 1996.

This clever pop-up book features not just a frog but a variety of wide-mouthed animals. Open-mouthed creatures greet the reader at each turn of the page, presenting unusual eating habits and bold color illustrations. The end should have listeners giggling aloud with pleasure.

JUMP AROUND WITH FROGS!

READING LIST

Early elementary

Wisconsin Water Library, UW Madison, (608)-262-3069 or askwater@aqua.wisc.edu

All About Frogs By Jim Arnosky. New York: Scholastic Press: 2002.

An excellent book for answering children's questions about how frogs develop and live. The well-crafted illustrations are scientifically accurate and many are true to size.

Ask Me If I'm a Frog By Ann Milton. Owings Mills, Md.: Stemmer House: 1998.

An award-winning nature book for young readers compares the anatomy and habits of a pond-dwelling frog with that of a young girl. Learn the ways that frogs differ from and are the same as human beings.

Bently & Egg By William Joyce. New York: HarperCollins Publishers: 1992.

Bently the frog becomes quite fond of a duck egg left in his charge. After decorating the "boring" white egg with beautiful colors, it is mistaken for an Easter egg and disappears. An eccentric tale that is sure to entertain children.

An Extraordinary Egg By Leo Lionni. New York: Dragonfly Books: 1994.

One day three frogs find a lovely white egg. They bring it home and raise it as a chicken, but the reader will quickly realize that what they really have is a baby alligator! This is a fun book about friendship and mistaken identity.

Finklehopper Frog By Irene Livingston. Berkeley, Calif.: Tricycle Press: 2003.

Finklehopper Frog decides to start jogging when he sees his friends crocodile, sheep, turtle and mouse going out for a daily run. He gets himself a wildly-colored jogging suit and sets out — only to discover that his body wasn't made for running.

Finklehopper Frog Cheers By Irene Livingston and Brian Lies. Tricycle Press: 2004.

This follow-up to "Finklehopper Frog" highlights physical exercise and good sportsmanship. Full color.

Frog By Susan Cooper. New York: Margaret K. McElderry Books: 2002.

Little Joe cannot swim, unlike the rest of his family. But when he observes a frog who accidentally jumps into their backyard pool, he notices how his body is similar to the amphibian's — an understanding that allows him to learn to swim.

Frog and Toad Are Friends By Arnold Lobel. New York: Harper & Row: 1970.

Those two best friends, Frog and Toad, have long been childhood favorites. This book contains five wonderfully silly adventures that illustrate the true meaning of friendship. "I Can Read" books are meant to introduce the beginning reader to the joy of reading.

JUMP AROUND WITH FROGS!

READING LIST

Early elementary

Frog and Toad Together By Arnold Lobel. New York: Harper & Row: 1972.

Lobel offers us five more wonderful stories in this volume from the classic children's series. The inseparable duo is always there for each other — just as best friends should be.

Frog Girl By Paul Owen Lewis. Berkeley, Calif. : Tricycle Press: 1999.

When the frogs suddenly vanish from the lake behind her village, a young Native American girl is led to the frog village underneath the lake and learns what she must do to save both the frogs and her own people.

Frog Went A-Courting By Wendy Watson. New York: Lothrop, Lee and Shepard Books: 1990.

The classic song of Frog 's happy courtship and marriage to Miss Mouse is adapted here with illustrations by the author.

Frogs By Gail Gibbons. New York: Holiday House: 1993.

The difference between frogs and toads and the daily activities of these amphibians are presented in a great format for young readers.

Frogs, Toads, Lizards, and Salamanders By Nancy Winslow Parker. New York: Greenwillow Books: 1990.

Young amphibian and reptile enthusiasts will enjoy this guide to 16 different species. The illustrations are whimsical, but this book is loaded with scientific facts, biological diagrams and vocabulary terms.

The Green Frogs: A Korean Folktale Retold By Yumi Heo. Boston: Houghton Mifflin Co.: 1996.

Poor mother frog has a hard time with her young frogs. They always do the opposite of whatever she says. When tragedy strikes, the young frogs regret their misbehavior.

It's Mine! By Leo Lionni. New York: Dragonfly Books: 1986.

Milton, Rupert and Lydia are three frogs who fight amongst themselves all day long. "It's mine!" is their constant exclamation until a large brown toad teaches them that sharing is far more rewarding.

The Life Cycle of a Frog By Bobbie Kalman. New York: Crabtree Pub. Co.: 2002.

A variety of information on frog species and conservation efforts complement the sections on frog development from eggs to tadpoles to froglets to adult frogs.

Lizards, Frogs and Polliwogs By Douglas Florian. San Diego, Calif.: Harcourt Inc.: 2001.

Florian's 21 rhyming poems about herps are "toadally" delightful. They are an ingenious way to instruct about the natural world.

Marsh Music By Marianne Berkes. Brookfield, Conn.: Millbrook Press: 2000.

Author Berkes turns the night songs of 10 different kinds of frogs into a concert in the marsh led by Maestro bullfrog. Containing beautiful watercolor depictions of marsh life, this book teaches children about both nature and music in an entertaining fashion. A glossary of musical terms used and descriptions of each frog in the cast are included.

JUMP AROUND WITH FROGS!

READING LIST

Early elementary

The Mysterious Tadpole By Steven Kellogg. New York: Dial Books for Young Readers: 2002.

Louis' Scottish uncle brings him the birthday gift of a tadpole, plucked right out of Loch Ness. It soon becomes clear that this "tadpole" is not turning into an ordinary frog! It'll take a little help from friends and a lot of ingenuity to feed and shelter this unusual, ever-growing pet.

A New Frog: My First Look at the Life Cycle of an Amphibian By Pamela Hickman. Toronto: Kids Can Press: 1999.

This book on frog development has two simultaneous texts — a cumulative, sing-song rhyme in the style of "The House that Jack Built" and a fold-out flap with more detailed, scientific information about the life cycle of frogs.

Red-Eyed Tree Frog By Joy Cowley. New York: Scholastic Press: 1999.

Spend a night in the life of a red-eyed tree frog as it avoids predators and searches for food. Excellent photographs take readers deep into the heart of a Central American rainforest and show this cuter-than-cute frog in all its splendor.

Screen of Frogs By Sheila Hamanaka. New York: Orchard Books: 1993.

A spoiled rich man in Japan discovers a respect for nature just in time to turn his life around.

Slippery Babies: Young Frogs, Toads and Salamanders By Ginny Johnston and Judy Cutchins. New York: Morrow: 1991.

"Slippery Babies" describes physical and behavioral characteristics of frog, toad and salamander young. Great photographs give readers an up-close view of these slimy creatures.

From Tadpole to Frog By Wendy Pfeffer. New York: HarperCollins: 1994.

From the "Lets-Read-and-Find-Out Science" series, this is a good book for readers eager to start learning simple facts. It details the life cycle of frogs and other happenings in a pond.

The Three Dots By Elise Primavera. New York: Putnam: 1993

Three dotted animals, a frog, duck and moose, move to New York to pursue music careers. Soon they meet in a donut shop and form a band — the Three Dots. They become overnight sensations appearing on all the talk shows. But the pressures of fame prove to be too much and they break up. Realizing that they miss one another, they reunite and for ever more get along famously.

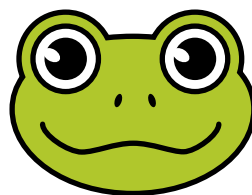
JUMP AROUND WITH FROGS! FOR MORE INFORMATION

EEK from Wisconsin Department of Natural Resources
eekwi.org/critter/amphibian/frogident.htm

Wisconsin Frog and Toad Survey
wiatri.net/inventory/frogtoadsurvey

Association of Zoos and Aquariums page on frogs in Wisconsin
aza.org/frogwatch-usa-wisconsin

Burke Museum
burkemuseum.org/blog/all-about-frogs



Wisconsin Water Library
University of Wisconsin-Madison
waterlibrary.aqua.wisc.edu
askwater@aqua.wisc.edu



Wisconsin Water Library
UNIVERSITY OF WISCONSIN-MADISON