



Creative Kits

ACTIVITIES FOR KIDS

NOVEMBER 2020

“MAKE SOME NOISE!”

Creative Kit: November 2020

Library Newsletter

What's It All About?

Welcome to your **Creative Kit!** Because the library is not yet open for programs, this kit includes a month's worth of activities for you to complete at home. Inside, you'll find craft projects, science experiments, games and activities, a book list, a reading challenge, and much more.

To make the most of your kit, tune in to videos and virtual programming hosted by the library (a full schedule is included). If you have any questions about your kit, please call the library at 224-7113, or email the Youth Services Librarian at juliana@bakerfreelib.org.

Theme of the Month

Did you know? 2020 is the International Year of Sound! This month, we'll focus on books, crafts and activities that explore the world of music and sound. Get ready to sing, dance, discover and play! Among other things, we'll learn about:

- The Science of Sound and Vibrations
 - How Our Ears Register Sound
 - How American Sign Language Works (and how to make some basic signs!)
 - Why Bees and Insects "Buzz"
- ...And much more!

Inside Your Kit

Each Creative Kit Includes:

- ☐ (1) Suggested Calendar
- ☐ (1) November Book List
- ☐ (1) November Reading Challenge
- ☐ (1) November Lego Challenge
- ☐ Assorted Worksheets & Printables
- ☐ **CRAFT:** Rubber Band Banjo
- ☐ **CRAFT:** Homemade Harmonica
- ☐ **STEM EXPLORATION:** The Science of Sound
- ☐ **ACTIVITY:** November Coloring Contest
- ☐ **ACTIVITY:** Family Fun Night
- ☐ **ACTIVITY:** Sound Walk

AGE 3-7 KIT ALSO INCLUDES:

- ☐ (1) Storytime At Home Resource Sheet
- ☐ **STEM PROJECT:** Singing Spoons
- ☐ **ACTIVITY:** Roll-a-Story

AGE 8-12 KIT ALSO INCLUDES:

- ☐ **STEM PROJECT:** Elastic Flutter Buzzer
- ☐ **ACTIVITY:** Introduction to Sign Language
- ☐ **ACTIVITY:** Short Story Challenge



Register for programs and future kits at www.bowbakerfreelib.org.

Let's Explore!

Additional Information & Resources

Additional Resources

CHROME MUSIC LAB

Get ready to make some music! The Chrome Music Lab is a free interactive program for aspiring songwriters and music moguls. Colorful graphics accompany a range of games and activities that make music accessible for even the youngest players. To get started, Google "Chrome Music Lab" or visit musiclab.chromeexperiments.com/ **Experiments**. A few activities we recommend:

SHARED PIANO

Invite your friends to join this virtual game room, and play or write a song on the piano together!

SONG MAKER

Create a song from start to finish by choosing a melody, adding rhythm and percussion, and setting the tempo (speed).

RHYTHM

Choose your drummers, then create a beat and set the pace to get that rhythm going.

EXPLORESOUND.ORG

The official web presence for the **International Year of Sound**. Explore simulations and videos, learn about acoustics and careers in the field, and take part in virtual events, crafts and activities!



Curious Questions

What is the Sound Barrier?

Sound waves move through the air at a very high speed - about 767 miles per hour. Objects and aircraft that approach this speed experience a dragging effect, almost as if they are moving through mud. This is called the **sound barrier**.

For many years, it was believed that man-made aircraft could never break this barrier. Today, however, planes and other aircraft are capable of much faster flight. In fact, the highest recorded airspeed in history was reached in 1976 by a Lockheed SR-71 Blackbird, which reached 2,190 miles per hour!

Aircraft aren't the only objects that can break the sound barrier. Have you ever heard the cracking sound a whip makes? That's a sonic boom, created by the tip of the whip moving faster than the speed of sound!

Why do Songs Get Stuck in Our Heads?

Have you ever had an "earworm?" That's the name for those catchy, repetitive tunes that play over and over in our heads, long after the song is over.

When we listen to a song, we trigger a part of the brain called the **auditory cortex**. Scientists have found that when a fragment of a popular song is played, our brains stay active for some time afterward, almost as if trying to complete the tune. They still aren't sure why this happens, but it's a common phenomenon: about 91 percent of people report having earworms at least once a week.

Their advice? Try to focus on another activity involving language, like a crossword puzzle. Or, listen to the song repeatedly to "complete the tune," and get your brain out of the loop it's stuck in!

NOVEMBER 2020



SUGGESTED CALENDAR

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p>2</p> <p>READING CHALLENGE</p> <p>Stock up on some new books at the library, and check off an item on your monthly reading challenge!</p>	<p>3</p> <p>GUESS-A-SOUND</p> <p>Play with a friend! Close your eyes and try to guess which item is making a certain sound. Take turns and try to stump each other!</p>	<p>4</p> <p>SOUND WALK</p> <p>Go on a sound walk, and try to "collect" as many different sounds as you can. Walk in different places to hear new things.</p>	<p>5</p> <p>PICTURE BOOK READ-ALOUD 10:30AM (Virtual)</p>	<p>6</p> <p>MUSIC LAB</p> <p>Visit the Chrome Music Lab to try your hand at songwriting! Try the Song Maker activity today.</p>	<p>7</p> <p>ART EXPLORATION</p> <p>Design and create your own working harmonica using popsicle sticks, markers and rubber bands.</p>
<p>9</p> <p>EXPLORE A LIVESTREAM</p> <p>Visit explore.org to drop in on some animals with amazing ears: watch bats, owls and whales in their natural habitats!</p>	<p>10</p> <p>OPEN EARS</p> <p>Ask a parent or relative to name their favorite song or musician, and give them a listen. Then, share one of your favorite songs with them.</p>	<p>11</p> <p>HANDS DOWN</p> <p>Learn about American Sign Language today, and practice basic signs to help you communicate in new ways.</p>	<p>12</p> <p>PICTURE BOOK READ-ALOUD 10:30AM (Virtual)</p>	<p>13</p> <p>ART EXPLORATION</p> <p>Make your own rubber band banjo using household materials, and start strumming away!</p>	<p>14</p> <p>MAKE YOUR MASTERPIECE</p> <p>Color and submit your picture for this month's coloring contest, either in person or by email. Entries are due next Wednesday.</p>
<p>16</p> <p>BOOKANEERS BOOK CLUB 4:00PM (Virtual)</p>	<p>17</p> <p>STORY TELLER</p> <p>Today, try the Roll-a-story activity (3-7), or make some noise with our short story challenge (8-12).</p>	<p>18</p> <p>THE SCIENCE OF SOUND</p> <p>Explore the science of sound by making vibrations, and use glasses to create your own water xylophone!</p>	<p>19</p> <p>PICTURE BOOK READ-ALOUD 10:30AM (Virtual)</p>	<p>20</p> <p>MUSIC LAB</p> <p>Visit the Chrome Music Lab to match the beat and play some drums! Try the Rhythm activity today.</p>	<p>21</p> <p>SIGN-UP FOR DECEMBER'S KIT</p> <p>Don't forget to register for the December kit! Sign-up using our online calendar.</p>
<p>23</p> <p>READING CHALLENGE</p> <p>Check off one of the items on your monthly Reading Challenge.</p>	<p>24</p> <p>STEM EXPLORATION</p> <p>Make your elastic flutter buzzer today (8-12), or try the Singing Spoons activity (3-7)!</p>	<p>25</p> <p>SOUNDS IN NATURE</p> <p>Head over to exploresound.org/listen-learn/ to hear animal sounds in nature. What animals can you hear around you?</p>	<p>26</p> <p> HAPPY Thanksgiving</p>	<p>27</p> <p>FAMILY FUN NIGHT</p> <p>Challenge your family to a lip sync battle, a karaoke contest, or an old fashioned talent show!</p>	<p>28</p> <p>LEGO CHALLENGE</p> <p>Build your own project, inspired by the library's monthly Lego Challenge!</p>
<p>29</p> <p>BOOK TRACKER</p> <p>Look over all the books you finished this month. Can you complete one more reading challenge today?</p>	<p>30</p> <p>REFLECTION</p> <p>What topics are you still curious about? Ask a librarian to help you learn more!</p>	<p></p>	<p>YOU CAN COMPLETE THE ACTIVITIES IN YOUR KIT AT ANY TIME. THIS CALENDAR SHOWS A PROPOSED SCHEDULE THAT SPREADS YOUR KIT'S CONTENTS THROUGHOUT THE MONTH, AND IS DESIGNED TO COORDINATE WITH PROGRAMS HOSTED BY THE LIBRARY. LIBRARY EVENTS ARE COLORED IN YELLOW!</p>		

SUGGESTED BOOKS

AGES 3-7

88 Instruments
PLAY: JP BARTON

Cock-a-Doodle-Do-Bop!
PLAY: JP BLACK

Kat Writes a Song
PLAY: JP FOLEY

Pokko and the Drum
PLAY: JP FORSYTHE

Plinka Plinka Shake Shake
PLAY: JP GARCIA

**The Bear, The Piano,
The Dog and the Fiddle**
PLAY: JP LITCHFIELD

Barnyard Boogie
PLAY: JP MCCANNA

Bears in a Band
PLAY: JP PARENTEAU

By the Light of the Moon
PLAY: JP PRESTON-GANNON

Monster Boogie
STORIES: JP BERKNER

Row, Row, Row Your Boat
STORIES: JP CABRERA

The Petes Go Marching
FAVORITES: JP DEAN

**If You're a Monster
And You Know It**
STORIES: JP EMBERLEY

The Seals on the Bus
STORIES: JP HORT

Because
FAVORITES: JP WILLEMS

AGES 8-12

El Deafo
Cece Bell
J BELL

Song for a Whale
Lynne Kelly
J KELLY

Amina's Voice
Hena Khan
J KHAN

Show Me A Sign
Ann Clare LeZotte
J LEZOTTE

The First Rule of Punk
Celia C. Perez
J PEREZ

Echo
Pam Munoz Ryan
J RYAN, CDAB RYAN

Tune It Out
Jamie Sumner
J SUMNER

Broken Strings
Eric Walters
J WALTERS

Genesis Begins Again
Alicia D. Williams
J WILLIAMS

Better Nate Than Ever
Tim Federle
Y FEDERLE

Blackbird Fly
Erin Entrada Kelly
Y KELLY

The Sweetest Sound
Sherri Winston
J WINSTON

NON-FICTION

R-E-S-P-E-C-T:
Aretha Franklin, The Queen of Soul
J 92 FRANKLIN

Ella Fitzgerald:
The Tale of a Vocal Virtuoso
J 92 FITZGERALD

Jimi Sounds Like a Rainbow:
The Story of the Young Jimi Hendrix
J 92 HENDRIX

Selena: Queen of Tejano Music
J 92 SELENA

Jazz
J 781.65 MYERS

The Beatles: Defining Rock n' Roll
J 781 TOUGAS

**Rhythm Ride: A Road Trip
Through Motown Sound**
J 781.6 PINKNEY

The Story of the Orchestra
J 784.2 LEVINE

Learn to Speak Music
J 782.42 CROSSINGHAM

The Science Book of Sound
J 534 ARDLEY

**The Noisy Paint Box: The Colors
and Sounds of Kandinsky's Art**
J 759.7 ROSENSTOCK

American Sign Language for Kids
DVD-16 AMERICAN

The Handmade Alphabet
CONCEPTS: JP RANKIN

The Book of Signing
419 BROWN

STORYTIME AT HOME

Suggested songs, rhymes and stories to share before bedtime,
or anytime you're missing our regular storytimes!

SONGS & RHYMES

**Visit "JBrary" on YouTube for melodies, sign language
and hand movements for all songs!*

Head, Shoulders, Knees and Toes

Point to each body part as you sing.

Challenge yourself to go faster and faster!

Head, shoulders, knees and toes, knees and toes.
Head, shoulders, knees and toes, knees and toes.
Eyes, and ears, and mouth and nose,
Head, shoulders, knees and toes, knees and toes!

Hands, fingers, legs and lips, legs and lips.
Hands, fingers, legs and lips, legs and lips.
Eyes, and ears, and mouth and hips,
Hands, fingers, legs and lips, legs and lips!

Here We Go, Looby Loo

Here we go Looby Loo,
Here we go Looby Lie
Here we go looby loo,
all on a Saturday night.

You put your right hand in,
you put your right hand out
You give your hand a shake, shake, shake
And turn yourself around!

Repeat with left hand, feet, etc.

If You're Happy And You Know It, Shake Your Hips

If you're happy and you know it, shake your hips!
If you're happy and you know it, shake your hips!
If you're happy and you know it,
and you really want to show it
If you're happy and you know it, shake your hips!

*Repeat with: Clap Your hands, Stomp your feet, spin
around, etc.*

Put Your Hands Up High

To the tune of: "Do Your Ears Hang Low?"

Put your hands up high,
put your hands down low,
Put your hands in the middle and wiggle just so!
Put your elbows in front,
put your elbows in back
Put your elbows to the side
and quack, quack, quack!

Walking, Walking

To the tune of: "Frere Jacques"

Walking, walking
Walking, walking
Hop, hop, hop!
Hop, hop, hop!
Running, running, running,
Running, running, running,
Now we stop.
Now we stop.

Tiptoe, tiptoe
Tiptoe, tiptoe
Hop, hop, hop!
Hop, hop, hop!
Marching, marching, marching,
Marching, marching, marching,
Now we stop.
Now we stop.

All the Little Babies

To the tune of: "Shortening Bread"

All the little babies love bouncing, bouncing,
All the little babies love bouncing so. (x2)
Bounce to the left side, bounce to the right,
Bounce in the morning and bounce at night.
All the little babies love bouncing, bouncing,
All the little babies love bouncing so. (x2)

STORYTIME AT HOME

Suggested songs, rhymes and stories to share before bedtime,
or anytime you're missing our regular storytimes!

STORIES TO SHARE

Books about trees and leaves, autumn, and all kinds
of woodland creatures! Ask a librarian to help you find more.

PLAY:

Play This Book
(JP YOUNG)

88 Instruments
(JP BARTON)

The Bear and the Piano
(JP LITCHFIELD)

Zin! Zin! Zin! A Violin
(JP MOSS)

Bears in a Band
(JP PARENTEAU)

Kat Writes a Song
(JP FOLEY)

Jazz Baby
(JP WHEELER)

Plinka Plinka Shake Shake
(JP GARCIA)

STORIES:

Row, Row, Row Your Boat
(JP CABRERA)

If You're a Monster...
(JP EMBERLEY)

The Seals on the Bus
(JP HORT)

Monster Boogie
(JP BERKNER)

Bear Went Over the Mountain
(JP TRAPANI)

Itsy Bitsy Spider
(JP TRAPANI)

Barn Dance
(JP MARTIN)

Miguel and the Grand Harmony
(JP PENA)

NON-FICTION:

Ah, Music
J 780 ALIKI

M is For Music
J 780.4 KRULL

Blues Journey
J 781.643 MYERS

Jazz
J 781.65 MYERS

The Story of the Orchestra
J 784.2 LEVINE

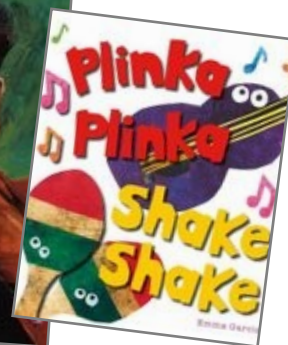
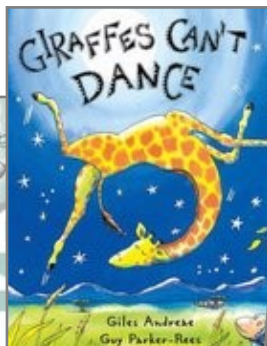
R-E-S-P-E-C-T:
J 92 FRANKLIN

Hello, I'm Johnny Cash
J 92 CASH

Jazz Day: The Making of a
Famous Photograph
J 811 ORGILL

FEATURED READ-ALOUDS

Tune in every Thursday to hear a virtual read-aloud with Miss Juliana!



Make Some Noise

A November Reading Challenge for Kids

- ☐ Listen to an audio recording of a book, or listen to someone else read you a story.
- ☐ **Election Day** is November 3rd! Read a book about voting or running for office.
- ☐ Read a book about someone who sings or plays a musical instrument, or a book that features music in some way.
- ☐ Draw or design a new book cover for a story you love.
- ☐ Read out loud to someone in your household.
- ☐ November 13 is **National Kindness Day**. Read a book about kindness, sharing or compassion.
- ☐ Read a biography about someone you admire, or someone you'd like to learn more about.
- ☐ Do you have a family gathering this month? Add something to your pre-dinner ritual: Ask each person to name a book they're thankful for.



Make Some Noise November Reading Log

Books Finished

Challenge Completed



Make Some Noise

Short Story Challenge

The Challenge: Write a short story that includes the phrase "I've never heard that sound before!"

The phrase can occur anywhere in the story. Be creative, and feel free to add pictures!







If you'd like to be featured on the library's website, submit the completed story to juliana@bakerfreelib.org, or bring it to the library on your next visit!

Space is provided below, but you can write or type your story anywhere you choose.

Look to the Sky...

Roll a Story Activity

All you need for this activity is a single die and some imagination! Create a story that weaves together the character, place and problem you receive by randomly rolling the dice. Your story can be long or short, and take as many twists and turns as you choose.

If You Roll A...	First Roll: Place	Second Roll: Character	Third Roll: Problem
	On stage at a concert	A group of friendly llamas	Loses their voice
	In the library	Your grandma	Gets stuck in a tuba
	At the town gazebo	The librarian	Can only speak in a shout
	At the doctor's office	A squawking parrot	Has to perform a guitar solo
	In the middle of Thanksgiving dinner	A pair of croaking frogs	Can't stop dancing the salsa
	At the post office	A trumpeting herd of elephants	Turns into a turkey

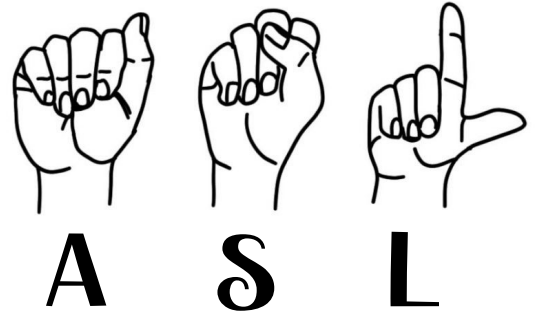
If you'd like to be featured on the library's website, submit the completed story to juliana@bakerfreelib.org, or bring it to the library on your next visit!

Introduction To: American Sign Language

WHAT IS AMERICAN SIGN LANGUAGE (ASL)?

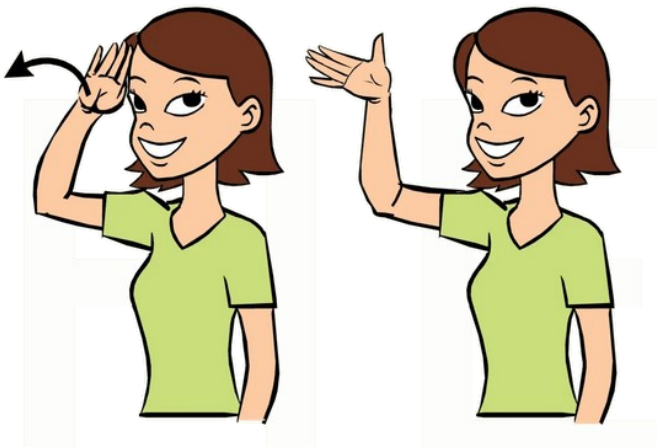
American Sign Language is a complete system of language, with its own rules and methods for communication. It is not spoken, like English. Instead, words and sentences are expressed using only the hands and arms, along with facial expressions. ASL is used by many people in the deaf community, those who have trouble hearing or speaking, and by children who are pre- or non-verbal. In fact, one of the most used languages in the world!

It is useful for everyone to learn a bit of sign language. Learn more about ASL below, and try out a few beginning signs. To see signs performed, visit SigningSavvy.com and HandSpeak.com online.



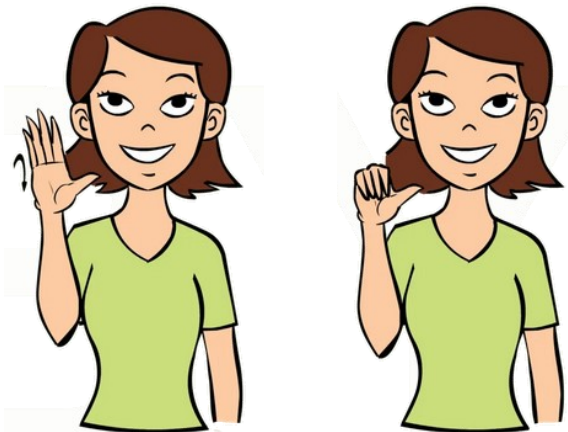
Each letter of the alphabet has a single shape. Most words have one sign associated with them, but many words can also be "finger-spelled" using the signs for each letter. You'll find the full alphabet on the next page. Can you learn to finger-spell your name? Your pet's name?

BEGINNING SIGNS



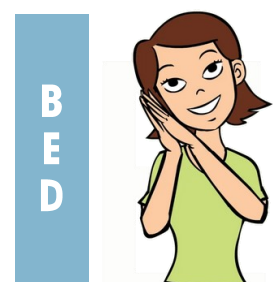
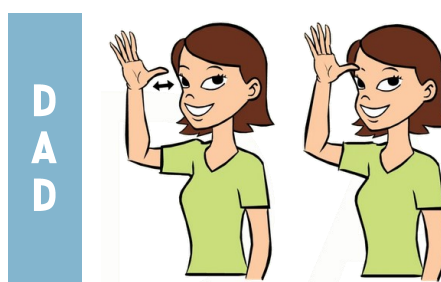
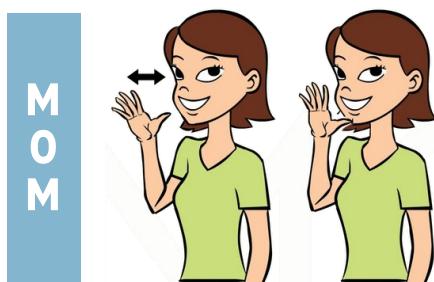
HELLO

Sign *hello* by extending your fingers, and cross your thumb in front of your palm. Hold the hand at your temple almost like a salute, and extend it outward and away from your body. Finally, smile! Emotional signs like *hello* are communicated as with body language, too.



GOODBYE

Goodbye is the same as the traditional gesture for the word. Hold your hand palm facing outward and open your palm, folding down your fingers, then lift them again. An ASL alternative for goodbye is to wave your open hand sideways, like a leaf swaying in the wind.



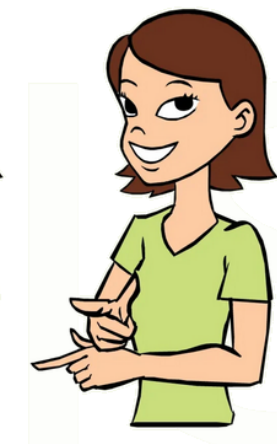
Introduction to American Sign Language



BROTHER



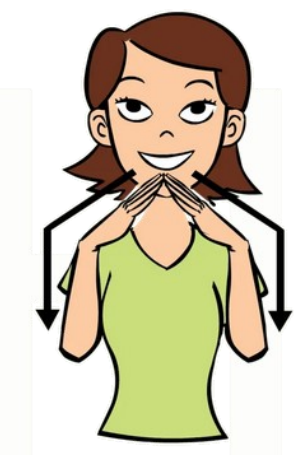
SISTER



FRIEND



BOOK



HOUSE



“I LOVE YOU”



Introduction to American Sign Language

Sign Language Alphabet



Aa



Bb



Cc



Dd



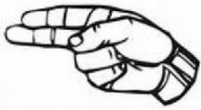
Ee



Ff



Gg



Hh



Ii



Jj



Kk



Ll



Mm



Nn



Oo



Pp



Qq



Rr



Ss



Tt



Uu



Vv



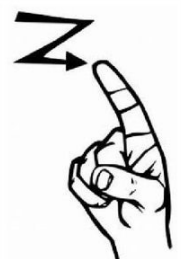
Ww



Xx



Yy



Zz

Introduction to American Sign Language

THE FOUR PARTS OF A (GOOD) SIGN

Once you begin making signs, you'll notice that a lot of new questions come up! How do you know if you're signing a word correctly? Which hand should you use? How close to your body should your hand be?

This introduction won't go into too much detail, but it's important to know that there are **four parts** to consider when making a new sign. They include:

- 1) **Handshape**: The position or shape your signing hand should take.
- 2) **Signing Area**: Where your hands should be in relation to your body.
- 3) **Hand Movement**: **Stationary** signs are signs that require no movement. Most signs, though, require movement from one or both hands
- 4) **Palm Position**: The direction your palm faces can be very important when signing.

Don't forget your face! Watch a conversation between two people using ASL, or a sign language interpreter on the evening news. Their faces do a lot of work. When signing, it's important that your facial expressions match the meaning of your signs.

KEEP PRACTICING!

There are many benefits to learning and using sign language. Not only does it help us to communicate in new ways, but it also expands the circle of people we can communicate with, and provides some serious brain-boosting power, too. Challenge yourself to learn 1-2 new signs every day, and you'll be in great shape.

Now that you've learned a few signs, we encourage you to keep practicing! Check out a signing dictionary, watch videos online, and make signing a part of your everyday routine. A few ways to practice include: making a "scavenger hunt" with items around the house and learning to sign each item as you find it, learning to sign along with your favorite songs, and testing friends or family with speed games, to see who can come up with a given sign the fastest!

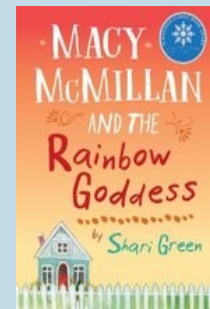
READ MORE ABOUT ASL

There are lots of great resources for learning about ASL. Stop by the library to check out a signing dictionary, or read one of the books featured below.



Show Me A Sign
Ann Clare Lezotte

A story inspired by the real-life deaf community on Martha's Vineyard during the 1800s, featuring a young girl who communicates with her family, friends and neighbors using sign language.



Macy McMillan and the Rainbow Goddess
Shari Green

Twelve-year-old Macy, who communicates through sign language, forms an unlikely friendship with her 86-year-old neighbor, Iris, through notes, books, and recipes, just before her family prepares to move across the country.

Get Moving With A... Sound Walk

WHAT IS A SOUND WALK?

A sound walk is just what it sounds like - an opportunity to move around your environment and listen to the sounds you hear. You can walk on a trail, in your backyard, at a park, or even around the house! Notice the volume, speed, and pitch of the sounds you hear. Are they low or high? Fast or slow? Walk in different places to “collect” different sounds, or try one of the activities below.

SOUND COLLECTOR

As you go out on sound walks, begin keeping a list of everything you hear. You can keep this list in a notebook, journal, or even illustrate the sounds you hear in a sketchbook.



RHYTHM WALK

In this activity, you bring the sound with you. Either listen to music using headphones, or pick out a repeating sound in the world around you (like a clock ticking, or water dripping). Try to match your steps to the beat of the sound. Then, choose another rhythm and start again!

SOUND HUNT

Go on a sound scavenger hunt! Try to find different sounds in nature, around town, or on the road. Challenge a friend to play with along with you to find a “ringing” sound, or a “buzzing” sound, but don’t repeat the same sound twice! A sample hunt is included on the back of this page for you to try.



ECHO WALK

On this walk, you’ll try to mimic, or echo, all the sounds you hear. Is a goose honking overhead? Try to make the same sound. What about leaves rustling in the wind? Which sounds are easiest to make? Which ones are hardest? Play with a friend, and see if they can guess the sound you’re making without telling them!

I SPY | I HEAR

Turn the classic game of “I Spy” on its head! Instead of trying to guess which objects are being looked at, see if you can guess which objects are being heard. Take turns playing with a friend, and try to stump them by choosing quiet or unusual sounds, like a plane flying far overhead, sneakers scuffing against the carpet, or a cat purring on your lap.

Host Your Own Family Fun Night!

MAKE SOME NOISE WITH YOUR FAMILY!

This month, we challenge you to host your own Family Fun Night at home! On Friday, November 27 (or any date of your choosing), invite your family to make some noise with one of these activities. Share highlights with the library by tagging **Baker Free Library** on Facebook!

LIP SYNC BATTLE

Wow the crowd with a lip sync battle! Choose a song you know all the words to, and mouth along while putting on a show-stopping performance. Challenge someone in your family to do the same, and have the rest of the group vote on their favorite performance!

KARAOKE

Karaoke (Care-Ee-OH-Kee) is an interactive, sing-along entertainment from Japan that has taken the world by storm. With karaoke, you become the singer. Use lyric videos or free apps like **Sing Karaoke** to help you remember the words. Make yourself a microphone out of recycled paper towel rolls to start, and dress up in your snazziest outfit!

ALTERNATIVE: CARPOOL KARAOKE

Traveling for Thanksgiving? Make the most of your ride with a rolling version of karaoke. Take turns controlling the playlist, and belt out your favorites from the backseat! Let the grown-ups teach you some of their favorite songs, too. Most dramatic performance wins!

AIR INSTRUMENTS

Forget singing: this activity is all about the band. Choose an instrument to play alongside your favorite song. Don't worry -- you don't need the actual instrument. We're playing them in the air! Place each member of the family behind a different air instrument and get rocking. Don't skip the guitar solo!



**GET YOUR FAMILY TOGETHER FOR A
NIGHT OF MUSIC AND DANCING!**

TALENT SHOW

Show off your favorite hobbies, no matter what they are! Choose someone to host your family talent show, and then set the stage for each person to perform their act. Costumes and props are encouraged!

DANCE PARTY

Finally, wrap things up with a family dance party. Get the wiggles out with a bouncy pop song, challenge someone to a dance contest, or make up a routine to one of your favorite songs and teach it to the rest of the crew. You could even try to learn a famous dance routine -- we recommend anything by Michael Jackson (and if we master the moonwalk, we definitely want to see it).

Science Exploration

The Science of Sound

HOW DO WE HEAR SOUNDS?

What we hear, **sound**, is the energy made by objects vibrating very quickly. That energy makes **sound waves**, which travel through the air to our ears. Those vibrations make our eardrums vibrate, too, and that is how our ears “hear” sound!

Because some objects vibrate so quickly, it's sometimes impossible for us to see them moving. With this first activity, you'll be able to slow down the process and actually see vibrations in action. With the materials listed on the right, you'll build your own “speaker” to watch how sound waves move through the air, and cause other objects to vibrate or dance!

MATERIALS NEEDED:

Radio or Speaker

Large Glass Bowl

Plastic Wrap

Rubber Band

Tissue Paper

OPTIONAL:

Earmuffs, ear protection

PROJECT 1: SEEING VIBRATIONS

STEP 1: Place a piece of plastic wrap on the top of a glass bowl and straighten as best as possible. Wrap a rubber band around the plastic wrap to hold it in place. Gently pull on the plastic wrap under the rubber band to make a very tight fit onto the bowl.

STEP 2: Crumble up a few small pieces of tissue paper and set them onto the plastic wrap.

STEP 3: Place the bowl next to a speaker and play some music. Experiment with songs that are fast and slow, or that feature different instruments. Turn the volume up. Is the paper moving?

***SUGGESTION:** If the volume gets too high for little ones, it might be helpful to have earmuffs or other protective coverings on hand.

STEP 4: Keep experimenting! Sound waves vibrates air. The sound from the speakers makes the air vibrate, which causes the plastic wrap on the bowl to vibrate. This makes the light pieces of tissue paper bounce and dance around. Try playing different songs and different volumes, and see how the paper moves.

- Line the tissue paper pieces around the edge of the bowl, and try to guess which one will fall off first!
- With a friend: choose two different colors of tissue paper, and find a way to line them up so that yours are knocked off the bowl before your opponent's!



Science Exploration

The Science of Sound

PROJECT 2: WATER XYLOPHONES

This project will have you building your own instrument, using items you can find around the house! Get ready to make some noise with your own water xylophone.



STEP 1: Arrange your glasses or jars in a straight line. You'll be adding water to each glass, but never the same amount twice. In the first glass, add $1 \frac{3}{4}$ cups of water, then $1 \frac{1}{2}$ cups of water in the second glass, $1 \frac{1}{4}$ cups of water in the third glass, and so on. We decreased the amount of water by $\frac{1}{4}$ cup in each glass, leaving the last glass empty. (Note: This is if you're using 8 glasses total. You can get the same effect with fewer glasses, just make sure the amount of water decreases along the line).

STEP 2: OPTIONAL. Once you have water in each glass, use food coloring to make them sparkle! You can create a rainbow effect, make a pattern with your favorite colors, or leave some glasses clear and others colored.

STEP 3: Time to play! Use a wooden spoon to tap each glass. Do they all sound the same? Why not? Some things to try and consider:

- Does tapping on different parts of the glass make a different sound? What about using your hand, or a plastic or metal spoon instead?
- Which glass makes the lowest sound? Which glass makes the highest sound? Why do you think this is?
- Can you tap out a song like "Happy Birthday" or "Twinkle, Twinkle, Little Star?"

MATERIALS NEEDED:

Water

Food Coloring

Wooden sticks, spoons,
or bamboo skewers

4+ Glasses or Jars

Measuring Cups



November Coloring Contest!



To enter our coloring contest, color the included picture and bring it to the library with your name and age on written on the back.

You can also scan and email your completed entry to
juliana@bakefreelib.org.

Prizes will be awarded to the best entries!

Please send in your completed picture by **November 18, 2020**.

