



Halloween Edition

5 spooky-but-sweet Sparks to explore together



All ages · 20–25 min each · Print and go

How to Use This Pack

Five Halloween Sparks to explore together, a little spooky and a lot of fun. Most use things you already have at home; a few need a small pumpkin, a balloon or some treats. Every Spark also works as a fall activity.

Spark	Subject	Time
1 Pumpkin Float Detective	science	25 min
2 Dancing Tissue Ghosts	science	20 min
3 Candy Math Lab	math	25 min
4 Jack-o'-Lantern Feelings	language arts	20 min
5 How Do Bats See in the Dark?	science	25 min

How Each Spark Works

- **Read it first.** Take five minutes to read the Spark and gather what you need.
- **Follow the stages.** Each stage has a time, what to do, and Know Before You Teach: what's good to know, how to answer their questions, and easier or harder versions for every age.
- **Look for Done when.** The blue box tells you when your child gets it and you're ready to move on.
- **Check Mai's Tips.** Safety notes and small tricks that make the Spark go smoothly are always at the top.
- **Finish with the quiz.** Two choices per question, plus a Parent Tip to guide without giving the answer away.



Kid pages: Candy Math Lab and Jack-o'-Lantern Feelings each have a printable page right after the Spark. Print only the Sparks you need, or the whole pack.



Pumpkin Float Detective

science • 25 min • All ages

Will a big, heavy pumpkin sink or float? Your child makes a prediction, tests it with a real pumpkin and a tub of water, and discovers that being heavy isn't the whole story. What's inside matters too.

Our goal: Children will understand that whether something floats depends on how heavy it is for its size, not just how heavy it is. They'll practice the detective steps of science: predict, test, observe and explain.

What You Need

- Small pumpkin
- Towel
- Paper and pencil
- Sink, tub or large bowl of water
- 4–5 kitchen items to test (apple, potato, orange, carrot, metal spoon)
- A knife for the grown-up (optional stage 4)

Mai's Tips

1. **Splash Zone:** Put a towel down. Even a small pumpkin is heavy for little hands, so a grown-up lowers it into the water.
2. **Guess Before You Test:** A wrong guess isn't a mistake; it's what makes the result exciting.
3. **Simple Words First:** Start with "heavy for its size." Bring in "density" once your child has seen it happen.

1 The Big Pumpkin Question 4 Min



Let your child hold the pumpkin and feel its weight. Ask: "If we put this in water, will it sink or float? Why?"

Know Before You Teach

- **Good to know:** Many children predict "sink" because the pumpkin feels heavy. That's a perfect starting point.
- **If they ask:** Why do I have to guess first? [Guessing first is how scientists work! We say what we think, then test it.](#)

- **Easier:** Thumbs up for float, thumbs down for sink. Stuck? Ask what their toys do in the bath.
- **Harder:** Explain what they think makes things sink or float.

 **Done when:** Your child has made a prediction and explained it in their own words.

2 Sink or Float Lineup 8 Min



Test the kitchen items one at a time. Your child predicts each one, drops it in, and records it under Sink or Float.

Know Before You Teach

- **Good to know:** An object floats when it's lighter than the same amount of water. Results can surprise you.
- **If they ask:** Why did the little spoon sink but the big apple float? *Being small doesn't mean something will float. The spoon is heavy for its tiny size.*
- **Easier:** Test only 3 items and draw instead of writing.
- **Harder:** Line the items up from "most likely to float" to "most likely to sink" before testing.

 **Done when:** Your child has tested at least 3 items and recorded each result.

3 The Pumpkin Splash 5 Min



A grown-up gently lowers the pumpkin into the water. Let go and watch: it floats! Compare the result with your child's prediction.

Know Before You Teach

- **Good to know:** Pumpkins float because they're mostly hollow inside, so they're less dense than water.
- **If they ask:** But it's so heavy! *It's heavy, but it's also really big. It pushes a lot of water away, and that water pushes back up.*
- **Key words:** **Float, Sink, Density** (how heavy something is for its size).
- **Easier:** Just say what happened. Stuck? Ask: "Did it act like the spoon or the apple?"
- **Harder:** Explain why the result was different from the prediction.

 **Done when:** Your child describes what the pumpkin did and compares it with their prediction.

4 Inside the Pumpkin 5 Min (optional)



A grown-up cuts the top off. Look inside together: a big hollow space, stringy pulp and seeds. How does this explain the float?

Know Before You Teach

- **Good to know:** The hollow space is the big clue. A lot of the pumpkin's size is just air.
- **If they ask:** Would it still float without the seeds? **Let's find out! Scoop them out and test again, open side up.**
- **Easier:** Look and describe what you see.
- **Harder:** Predict what would happen if the pumpkin were filled with sand.

 **Done when:** Your child points to the hollow inside as a reason the pumpkin floats.

5 Detective Report 3 Min



Your child draws the floating pumpkin and finishes: "I think it floats because..."

- **Easier:** Draw it and say the sentence out loud.
- **Harder:** Write what they predicted and what they learned.

 **Done when:** Your child explains in their own words why the pumpkin floated.

Beyond the Spark

Fuel their curiosity beyond the Spark with bonus extras.



Table Talk

In some towns, people hollow out giant pumpkins and paddle them in boat races. If you had a pumpkin boat, where would you paddle it?



Did You Know?

Giant steel ships float for a similar reason: much of a ship's inside is air, so overall the ship is less dense than water.



Challenge

Build a boat from aluminum foil. How many coins can it carry before it sinks?

★ Quick Recap Quiz 4 Min

Each question has a Parent Tip to help your child find the answer without giving it away.

1. Did the pumpkin sink or float?

☐ Sink

☒ Float

 Ask: "What did the pumpkin do the moment we let go?"

2. Why does a heavy pumpkin float?

☐ Because it's orange

☒ Because it's mostly hollow inside

 Ask: "What did we find when we looked inside the pumpkin?"

3. What does a scientist do before testing?

☒ Makes a prediction

☐ Skips straight to the answer

 Ask: "What did we say out loud before each item went in the water?"

4. A small spoon sank. Why?

☐ Small things always sink

☒ It's heavy for its size

 Hand them a spoon and an apple: "Which one feels heavier for its size?"



Loved testing what floats? [Download the Mai app](#) and explore more science Sparks together, with Mai guiding the way.

Dancing Tissue Ghosts

science • 20 min • All ages

Can you make a ghost dance without touching it? Your child makes tiny tissue ghosts, charges a balloon on their hair, and watches the ghosts rise and wiggle, then discovers the invisible force behind it: static electricity.

Our goal: Children will understand that rubbing some materials together moves tiny charges, and that charged objects can pull on things without touching them. They'll practice testing one change at a time.

What You Need

- Balloon
- Child-safe scissors
- Tape
- Tissue paper or a facial tissue
- Marker
- Your hair or a wool sweater

Mai's Tips

1. **Balloon Safety:** Children under 8 can choke on uninflated or broken balloons. A grown-up blows it up, stays close and throws away broken pieces right away.
2. **Dry Day Magic:** Static works best in dry air. On a humid day, rub the balloon a little longer.
3. **Magic First, Then the Why:** Let your child enjoy the surprise before you explain it.

1 Ghost Workshop 5 Min



Cut 3–5 small ghosts (about 2 inches) from one layer of tissue. Your child draws gentle faces. Tape the bottom edge of each ghost to the table so it can stand up and dance.

Know Before You Teach

- **Good to know:** The thinner and lighter the ghost, the easier it is for an invisible force to lift it.
- **If they ask:** Are we making real ghosts? *Pretend ones, but we're about to give them a real science superpower.*
- **Easier:** A grown-up cuts; your child draws the faces.
- **Harder:** Make ghosts of different sizes to test later.

 **Done when:** At least 3 tissue ghosts are taped to the table.

2 Charge the Balloon 3 Min



Rub the balloon on your child's hair or a wool sweater for 10–15 seconds. Lift it slowly and watch their hair.

Know Before You Teach

- **Good to know:** Rubbing moves tiny particles called electrons from the hair onto the balloon, giving it extra negative charge. That's static electricity.
- **If they ask:** Why is my hair standing up? *Each strand has the same kind of charge, and things with the same charge push away from each other.*
- **Key words:** **Static electricity:** charge that builds up on an object. **Electrons:** tiny particles with a negative charge.
- **Easier:** Just describe what the hair does. Stuck? Rub longer, or use the sweater.
- **Harder:** Which object gained electrons, and which lost them?

 **Done when:** The balloon is charged and your child has seen their hair react.

3 Make Them Dance 6 Min



Hold the balloon just above the ghosts, close but not touching. Watch them rise and wiggle! Move it slowly back and forth.

Know Before You Teach

- **Good to know:** The negative balloon pulls on the tiny charges inside the tissue. The side nearest the balloon becomes slightly positive, and opposites attract, so the ghost lifts. The ghost stays neutral overall.
- **If they ask:** Why did they stop dancing? *The charge slowly leaks into the air. Rub the balloon again.*
- **Easier:** Just watch and cheer. Stuck? Bring the balloon closer or recharge it.
- **Harder:** Find the farthest distance where a ghost still lifts.

 **Done when:** Your child has made a ghost dance without touching it.

4 Ghost Lab Tests 4 Min



Change one thing at a time: rub for 5 seconds vs. 20 seconds, try a cotton shirt, or test a ghost cut from printer paper.

Know Before You Teach

- **Good to know:** Changing only one thing at a time makes a test fair. Scientists call it a variable.
- **If they ask:** Why didn't the paper ghost dance as much? *It's heavier than tissue, so the same pull can't lift it as easily.*
- **Easier:** Try just one change: a short rub vs. a long rub.
- **Harder:** Count how many seconds each ghost stays up, and compare.

 **Done when:** Your child has tested one change and described the result.

5 Explain the Magic 2 Min



Your child finishes: "The ghosts dance because..."

- **Easier:** "The balloon pulled the ghosts without touching them."
- **Harder:** Use the words electrons, charge and attract.

 **Done when:** Your child explains the dance in their own words.

Beyond the Spark

Fuel their curiosity beyond the Spark with bonus extras.



Table Talk

Where else have you felt static? A plastic slide, a sweater, a doorknob?



Did You Know?

Static is stronger on dry winter days. With fewer water molecules in the air to carry the charge away, it builds up, and you get more little zaps.



Challenge

Stick a charged balloon to a wall. How long does it stay? Try again after rubbing twice as long.

★ Quick Recap Quiz 4 Min

Each question has a Parent Tip to help your child find the answer without giving it away.

1. What made the ghosts dance?

- ☐ A breeze from the window
- ☒ The charged balloon pulling on them

👤 Ask: "Did anyone touch the ghosts? So what was moving them?"

2. How did we charge the balloon?

- ☒ By rubbing it on hair
- ☐ By filling it with water

👤 Ask: "What did we rub the balloon on, and what did your hair do?"

3. Opposite charges...

- ☒ Attract (pull together)
- ☐ Push apart

👤 Ask: "Did the ghosts move toward the balloon or away from it?"

4. When does static work best?

- ☐ On rainy, humid days
- ☒ On dry days

👤 Ask: "In which season do doorknobs give you the most little zaps?"



Got an idea for a Spark, or something didn't work for your family? We'd love to hear from you: mai@mai.school

Candy Math Lab

math • 25 min • All ages

That pile of treats is a math lab in disguise. Your child invents a sorting rule, counts and compares the groups, builds a real candy graph, and figures out how to share the pile fairly. It works perfectly on November 1, too.

Our goal: Children will sort objects by a rule they choose, count and compare groups, show the results in a bar graph, and share a set into equal groups, then decide what to do with the leftovers.

What You Need

- About 20 small treats (or paper squares for little ones)
- Crayons
- Candy Graph kid page (right after this Spark)
- 2–3 small cups or plates

Mai's Tips

1. **Tokens Work Too:** Use paper squares for young children, for allergies or if your family skips candy. Hard candy is a choking risk for children under 4.
2. **Math Before Snack:** Agree at the start how many treats your child gets to eat at the end.
3. **Let Them Choose the Rule:** Inventing their own sorting rule is the thinking part. Don't hand them one.

1 Make a Sorting Rule 5 Min



Pour the treats on the table. Your child makes a rule and sorts every piece into groups: by color, by wrapper, chocolate or not, or a rule of their own.

Know Before You Teach

- **Good to know:** Sorting by a rule is a building block of math and science: it's how we organize information.
- **If they ask:** Is there a right way to sort? *Any rule works, as long as every piece fits into exactly one group.*

- **Easier:** Just two groups, like "chocolate" and "not chocolate." Stuck? Ask what's different about two pieces.
- **Harder:** Sort, mix everything and sort again with a new rule.

 **Done when:** Every piece is in a group and your child can explain the rule.

2 Count and Compare 5 Min



Count each group. Which has the most? The fewest? How many more does the biggest group have than the smallest?

Know Before You Teach

- **Good to know:** "How many more?" is an early subtraction question, even before your child knows the word.
- **If they ask:** How do I know which is bigger without counting? [Line the groups up side by side. The longer line has more.](#)
- **Easier:** Compare only two groups. Count together, touching each piece.
- **Harder:** Add up all the groups and check that the total matches the whole pile.

 **Done when:** Your child has counted every group and found the most and the fewest.

3 Build a Candy Graph 7 Min



Line up each group in a column on the Candy Graph kid page, starting from the same bottom line. Then your child colors one square for each piece to make a bar graph.

Know Before You Teach

- **Good to know:** Starting with real objects, then drawing, can help children see that a graph is a picture of real things.
- **If they ask:** Why do all the columns start at the same line? [So we can compare them fairly. The tallest column is the biggest group.](#)
- **Key words:** **Data:** information we collect. **Bar graph:** a picture that compares groups with bars.
- **Easier:** Keep the real-treat graph and skip the drawing.
- **Harder:** Add a title and labels, then write one question the graph can answer.

 **Done when:** Your child has a finished graph and can read it.

4 Share It Fairly 6 Min



Set out 2 or 3 cups, one per person. Your child shares the treats so every cup has the same number. Any left over?

Know Before You Teach

- **Good to know:** Sharing into equal groups is the first step to division. The pieces that don't fit are the remainder.
- **If they ask:** What do we do with the leftovers? *That's a real fairness question! Decide together.*
- **Easier:** Share between 2 cups, dealing one at a time like cards.
- **Harder:** Write it as a division sentence, for example $20 \div 3 = 6$, with 2 left over.

 **Done when:** The treats are shared equally and your child can explain the leftovers.

5 Math Report 2 Min



Your child finishes: "Our graph shows..." and "Sharing fairly means..."

- **Easier:** Point to the tallest bar and say what it shows.
- **Harder:** Explain what would change if one more person joined the sharing.

 **Done when:** Your child shares one fact from the graph and one idea about fair sharing.

Beyond the Spark

Fuel their curiosity beyond the Spark with bonus extras.



Table Talk

Who uses graphs in real life? Weather reports, store owners, scientists. Why is a picture easier than a list of numbers?



Did You Know?

In 1786, William Playfair from Scotland drew what's often called the first bar graph. It compared how much Scotland traded with other countries. Your candy graph uses the same idea!



Challenge

Ask your family for their favorite fall treat, make tally marks, and turn them into a new graph.

★ Quick Recap Quiz 4 Min

Each question has a Parent Tip to help your child find the answer without giving it away.

1. What does the tallest bar on a graph show?

- ☒ The biggest group
- ☐ The smallest group

💡 Point to your graph: "Which bar is tallest? Which group is it?"

2. Why do all the bars start at the same line?

- ☐ Because it looks nicer
- ☒ So we can compare them fairly

💡 Ask: "If one bar started halfway up the page, could we still compare?"

3. We share 10 treats between 2 cups. How many in each?

- ☐ 4
- ☒ 5

💡 Hand them 10 tokens and 2 cups, and let them deal it out.

4. What are the pieces that don't fit into equal groups called?

- ☒ Leftovers (the remainder)
- ☐ The bonus

💡 Ask: "When we shared the treats, what happened to the pieces that didn't fit?"



Want a new Spark every day? Mai's Daily Spark brings a free one each morning at mai.school

My Candy Graph

Color one square for each treat in a group. Write the name of each group under its column.

My graph is about: _____

The biggest group is _____

It has _____ more than the smallest group.

Jack-o'-Lantern Feelings

language arts • 20 min • All ages

Is your pumpkin happy, grumpy or surprised? Your child designs jack-o'-lantern faces that show different feelings, finds describing words for each one, and explains why each pumpkin feels that way. No carving needed.

Our goal: Children will name feelings and recognize them in faces, use describing words to add detail, and explain an idea in a full sentence using "because."

What You Need

- Jack-o'-Lantern kid page (right after this Spark)
- Crayons or markers
- A mirror (optional)
- A real pumpkin and washable markers (optional)

Mai's Tips

1. **No Knives Needed:** Faces are drawn, not carved. On a real pumpkin, use markers or stickers.
2. **Mirror Magic:** Making the faces in a mirror first helps your child notice what eyebrows, eyes and mouths do.
3. **Every Feeling Is Welcome:** A grumpy or scared pumpkin is as good as a happy one. It's a gentle way to talk about real feelings.

1 Feelings Face-Off 4 Min



Play Guess My Face: take turns making a feeling face in the mirror (happy, sad, surprised, grumpy) while the other person guesses. One point for every right guess!

Know Before You Teach

- **Good to know:** Noticing faces is a simple way to start talking about feelings, in people and in the characters in stories.
- **If they ask:** How did you know I was grumpy? *Your eyebrows went down and your mouth went flat. Faces tell a lot!*

- **Easier:** Use just happy and sad. Stuck? Make the face together and look at the eyebrows.
- **Harder:** Add tricky feelings, like proud, nervous or bored.

 **Done when:** Your child has guessed the feeling on at least 3 faces.

2 Draw the Pumpkin Faces 6 Min



Your child gives each of the 4 pumpkins a different feeling, using what they noticed in the mirror. Then swap papers: can you guess each other's pumpkin feelings?

Know Before You Teach

- **Good to know:** Eyebrows and mouths change a lot from one feeling to another. Small changes make a big difference.
- **If they ask:** Can a pumpkin be scared? **Sure! What would a scared pumpkin's eyes look like?**
- **Easier:** Draw 2 pumpkins instead of 4.
- **Harder:** Draw a pumpkin with a mixed feeling, like happy and nervous at once.

 **Done when:** Each pumpkin shows a feeling someone else can guess.

3 Describing Words 5 Min



For each pumpkin, your child finds 2–3 describing words: "a grumpy, wrinkly, little pumpkin."

Know Before You Teach

- **Good to know:** Describing words (adjectives) tell us what kind. They help a reader picture exactly what we mean.
- **If they ask:** Is "orange" a describing word? **Yes! Colors, sizes and feelings all count.**
- **Key words: Describing word:** a word that tells what someone or something is like.
- **Easier:** One word per pumpkin, said out loud. Stuck? Ask: "What size? What color?"
- **Harder:** Skip "nice," "big" and "good," and find stronger words.

 **Done when:** Each pumpkin has at least one describing word.

4 Why Does It Feel That Way? 3 Min



Your child picks a favorite pumpkin and finishes: "My pumpkin feels ___ because ___."

Know Before You Teach

- **Good to know:** "Because" connects a feeling to a reason, an early step toward writing explanations and stories.
- **Easier:** Say it out loud; you write it. Stuck? Ask: "What happened to your pumpkin today?"
- **Harder:** Write a "because" sentence for all 4 pumpkins.

 **Done when:** Your child has said or written one full "because" sentence.

5 Pumpkin Patch Show 2 Min



Your child presents their favorite pumpkin in its own voice: "Hi, I'm a grumpy, wrinkly pumpkin, and I'm grumpy because..."

- **Easier:** Just introduce the pumpkin's name and feeling.
- **Harder:** Have two pumpkins talk to each other about how they feel.

 **Done when:** Your child has introduced one pumpkin out loud.

Beyond the Spark

Fuel their curiosity beyond the Spark with bonus extras.



Table Talk

When did you feel like one of your pumpkins this week? What helped?



Did You Know?

The first jack-o'-lanterns weren't pumpkins. In Ireland, people carved faces into turnips and potatoes. Irish families who moved to America brought the tradition with them, and pumpkins took over.



Challenge

Decorate a real pumpkin (markers, no carving) with the feeling of your choice, and give it a name.

★ Quick Recap Quiz 4 Min

Each question has a Parent Tip to help your child find the answer without giving it away.

1. What part of the face shows a lot about a feeling?

- ☒ Eyebrows and mouth
- ☐ Ears

👤 Ask: "Make a happy face, then a grumpy one: 'What changed the most?'"

2. Which one is a describing word?

- ☐ Pumpkin
- ☒ Grumpy

👤 Ask: "Which word tells us what kind of pumpkin it is?"

3. Finish it: "My pumpkin is happy _ _ _ it got a hat."

- ☒ because
- ☐ or

👤 Ask: "Which word helps us give a reason?"

4. What were the first jack-o'-lanterns made from?

- ☐ Pumpkins
- ☒ Turnips and potatoes

👤 Ask: "Remember our Did You Know about Ireland? What did people carve there?"



Did you know I can guide a Spark with your child? [Download the Mai app](#) and start free with 10 Sparks, no credit card needed.

My Jack-o'-Lantern Feelings

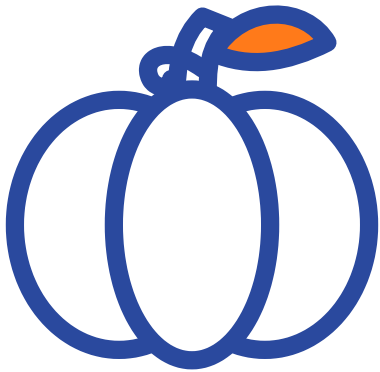
Draw a face on each pumpkin to show a feeling. Then write describing words and a "because."



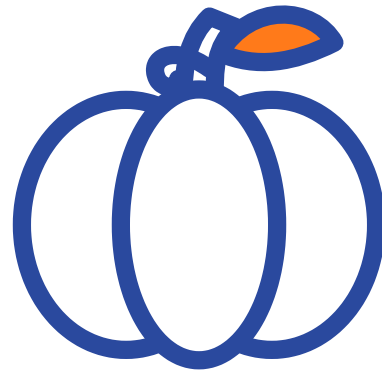
Feels: _____
 Words: _____
 Because _____



Feels: _____
 Words: _____
 Because _____



Feels: _____
 Words: _____
 Because _____



Feels: _____
 Words: _____
 Because _____

How Do Bats See in the Dark?

science • 25 min • All ages

Bats zoom through the night without crashing. How? Your child busts the "blind as a bat" myth, goes on an echo hunt around the house, and plays a Bat and Moth game to feel how bats find their way using sound.

Our goal: Children will understand that sound bounces back as an echo, and that many bats use those echoes to find their way and catch food in the dark. This is called echolocation.

What You Need

- An open, clear space
- A scarf or soft blindfold (optional)
- Paper and crayons

Mai's Tips

1. **Safe Bat Zone:** Clear the floor before the game. The "bat" walks slowly with hands in front, and a grown-up stays close. Closed eyes work as well as a blindfold.
2. **Bust the Myth First:** Many children (and grown-ups!) think bats are blind. Starting there makes the real answer exciting.
3. **Bats Are Friends:** Many bats help by eating insects. Keep the tone curious, not creepy.

1 Blind as a Bat? 4 Min



Ask: "Can bats see?" and "How do you think bats fly in the dark without bumping into trees?" Let your child guess first.

Know Before You Teach

- **Good to know:** Bats are not blind. They can see, but many bats also use sound to find their way. This is called echolocation.
- **If they ask:** Then why do people say "blind as a bat"? *It's an old saying that isn't true. Bats can see, and they have an extra superpower too.*

- **Easier:** Yes or no: "Do you think bats can see?" Stuck? Ask how they find their way when the lights are off.
- **Harder:** Come up with two different ideas for how bats find their way.

 **Done when:** Your child has guessed how bats find their way in the dark.

2 Echo Hunt 5 Min



Clap or say "Hello!" in different rooms: a bathroom, a hallway, a room with a rug and pillows. Where does the sound bounce back the most?

Know Before You Teach

- **Good to know:** An echo is sound that bounces off a surface and comes back. Hard surfaces bounce sound well; soft things soak it up.
- **If they ask:** Where does the sound go in the soft room? *The pillows and rugs soak it up, so less bounces back.*
- **Key words:** **Echo:** sound that bounces back. **Echolocation:** finding things by listening to echoes.
- **Easier:** Compare just two rooms, starting with the bathroom.
- **Harder:** Rank the rooms from most echo to least, and explain why.

 **Done when:** Your child has found the room with the best echo.

3 Bat and Moth Game 8 Min



One player is the "bat" with eyes closed. The other is the "moth." When the bat calls "Bat!", the moth answers "Moth!" The bat follows the sound to tag the moth. Then switch.

Know Before You Teach

- **Good to know:** Bats send out high sounds through their mouth or nose and listen to the echoes, which tell them the size, shape and even texture of what's around them.
- **If they ask:** Does the moth really talk back? *No. The bat's own sound bounces off the moth, and the bat hears that echo. In our game, the moth's answer plays the echo.*
- **Easier:** The moth stays in one place. Stuck? The moth answers louder.
- **Harder:** The moth takes one step after each answer.

 **Done when:** Your child has played both the bat and the moth.

4 Bat Sound Science 5 Min



Hum the lowest sound you can, then squeak the highest. Most bat calls are even higher than the highest squeak.

Know Before You Teach

- **Good to know:** People hear sounds up to about 20 kHz (less as we get older). Bat calls range from about 9 kHz to 200 kHz, so most bat echolocation is too high for us to hear. Scientists use special bat detectors to listen.
- **If they ask:** So bats are shouting and we can't hear them? *Many of them, yes! The night is much noisier than we think.*
- **Easier:** Just play with high and low sounds, like a deep drum and a tiny whistle.
- **Harder:** Why might a very high sound help a bat spot tiny insects?

Done when: Your child explains that most bat calls are too high for people to hear.

5 Bat Fact Card 3 Min



Your child draws a bat with sound waves going out and echoes coming back, then finishes: "Bats find their way in the dark by..."

- **Easier:** Draw the bat and say the sentence out loud.
- **Harder:** Label the "call" and the "echo."

Done when: Your child explains echolocation in their own words.

Beyond the Spark

Fuel their curiosity beyond the Spark with bonus extras.



Table Talk

If you could have one bat superpower, would you pick flying or hearing echoes? Why?



Did You Know?

There are more than 1,500 kinds of bats. Many fruit bats don't use echolocation at all; they find fruit with their sharp eyes and noses.



Challenge

At dusk, go outside with a grown-up and look for bats swooping after insects. Watch from a distance, and never touch a bat.

★ Quick Recap Quiz 4 Min

Each question has a Parent Tip to help your child find the answer without giving it away.

1. Are bats blind?

- ☐ Yes
- ☒ No, they can see

👤 Ask: "Which old saying about bats did we find out isn't true?"

2. What is an echo?

- ☒ Sound that bounces back
- ☐ A very quiet sound

👤 Clap in the bathroom together: "What came back to us?"

3. How do many bats find food in the dark?

- ☐ By smelling the moon
- ☒ By listening to echoes

👤 Ask: "In our game, how did the bat find the moth?"

4. Why can't we hear most bat calls?

- ☒ They're too high for our ears
- ☐ Bats whisper

👤 Squeak as high as you can: "Are bat calls higher or lower than this?"



Know a family who'd love this pack? Pass it along.

Color the Pumpkin Patch



 Your Notes

More Notes

Loved these Sparks?

There's a lot more curiosity where these came from.



Scan or visit mai.school

More Sparks, every day

Find more free Sparks and Mai's Daily Spark at mai.school

Meet Mai

Mai can guide a Spark with your child, step by step.

Download the [Mai app](#) and start free with 10 Sparks, no credit card needed.

Feel free to share this pack with friends you think would enjoy it.

Share your Sparks with us on Instagram [@meetmaischool](#) or Facebook (Mai School) with [#MaiHolidaySparks](#)