

# Got Rhythm

## Grades 3-5

### The Big Idea

This week you'll discover the **math in music** by making your own music with **pencils and paper!** Then you'll **test your memory skills** by playing our own version of the game Simon!

### Supplies

- ★ Construction paper in red, blue, green, yellow\*: 1 sheet of each color per kid  
*\*You can use any 4 colors or just plain paper, if needed.*
- ★ Markers: 2-4 to share
- ★ Masking tape
- ★ Music on a smartphone or CD player
- ★ Unsharpened pencils: 2 per kid (or any items that'll work as drumsticks)
- ★ **To print:** Keeping the Beat chart, 1 per kid

### Room Set-up

- ★ You'll need enough space for kids to move around.

### Other Key Prep

- ★ **Make a sample drum mat** as shown on page 4.
- ★ **Make sure you watch the overview video** for this session and **try "We Will Rock You"** (pg. 3) a few times so you're ready to demo to the group!
- ★ Find some **upbeat music on your smartphone or on CD!** We recommend downloading "We Will Rock You" by Queen for the **We Will Rock You** section plus another fun song for the **Silly Simon** section, like "Happy" by Pharrell Williams, "Try Everything" by Shakira, "Can't Stop the Feeling" by Justin Timberlake.

### What's the Math?

- ★ Counting, skip counting
- ★ Pattern recognition
- ★ Multiples
- ★ Sequencing

## Kickoff

**Intro to the kids:** “Has a song ever gotten stuck in your head? What song was it?” (Discuss.) “Music has a lot of math in it, especially when you count out the beats. Today we’ll use math to make music!”

## Drum Major (5-10 minutes)

**Intro to the kids:** “Let’s start by making music with our pencils as drumsticks, using math to find the beat.”

1. Hand each kid a **Keeping the Beat** chart and 2 pencils (or other drumsticks). Show kids the quarter notes measure

**To the kids:** “Music is written in sets of notes called ‘measures.’ Most measures are a total of 4 beats, so each beat is  $1/4^{\text{th}}$  or a quarter of that measure. We call these **quarter notes**. Let’s hear what a measure of quarter notes sounds like by striking our pencils 1 time for each beat.”

2. Have the kids strike their pencils together in an even beat while saying a number on each strike: ‘1…2…3…4’ ‘1…2…3…4’  
‘1…2…3…4’
3. Have the kids practice until they get the rhythm down pat.
4. Then, show kids the eighth notes measure on the **Keeping the Beat** chart.

**To the kids:** “Now let’s see how it sounds when we **shorten the notes** to only last half a beat. When we shorten the length of the notes, we divide the measure into 8 parts. These are called **eighth notes**. They’re each  $1/8^{\text{th}}$  of the whole set.”

5. Kids will strike their pencils 8 times, but instead of counting to 8, everyone should be saying: “1 and 2 and 3 and 4 and.” Kids should strike their pencils on each number and every time they say ‘and.’

**Ask the kids:**

- ★ “How many times did we say a number?” (Answer: 4.) “And how many times did we say the word ‘and’?” (Answer: 4.)
- ★ “So, how many total numbers and words did we say?” (Let the kids figure out it’s 8.)

## We Will Rock You (5-10 minutes)

“Now that we’ve mastered the beat, let’s try a fun rhythm with our hands and feet.”

1. **Show** them the following **rhythm**, which you might recognize as the stadium song “We Will Rock You.” On a steady beat, stomp your feet twice, clap once, then pause; then repeat. You can say the words out loud while you’re doing the action:

stomp stomp clap (rest) stomp stomp clap (rest)

2. **Invite the kids** to try it slowly. Repeat until everyone is doing it in sync!
3. Now have them **count out the beat** while stomping/clapping:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<i>stomp</i>	<i>stomp</i>	<i>clap</i>	<i>(rest)</i>	<i>stomp</i>	<i>stomp</i>	<i>clap</i>	<i>(rest)</i>

### Ask the kids:

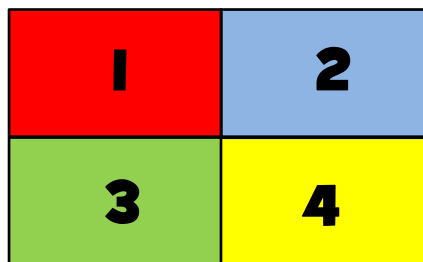
- ★ “Does this beat fall in 3s or 4s?” (Discuss. Even though there are 3 motions, the pattern repeats every **4 beats**. Why?)
- ★ “What move will do you on the **12<sup>th</sup> beat**?” (Let them figure out that they will do **nothing!** All multiples of 4 are quiet.)
- ★ “What move will you do on the **25<sup>th</sup> beat**?” (Let them figure out that it will be a **stomp**: 1 move *after* a multiple of 4.)

**A Touch of Class:** “Music class and math class have lots of overlap! If you have 8 beats, but you do 2 claps for every beat instead of just 1 clap, you’ve multiplied your sounds by 2. And if our rhythm takes up 8 beats, how many beats of the song will it take to play it 6 times?” (Answer: 48 beats, since  $8 \times 6 = 48$ .)

## Silly Simon (20-30 minutes)

*To the kids:* “Who has played the game Simon? Simon is an electronic game that plays a set of musical notes, and your goal is to press the right buttons to play it back. When you do it correctly, Simon adds 1 more note and you play the whole thing again. The song keeps getting longer, and you see how much of it you can remember. We’re going to play our own version of Simon!”

1. Give each kid 1 sheet of paper of **each color** – red, blue, yellow and green – for a total of **4 sheets**.
2. Show the kids how to **tape together the sheets** to make a drum mat. They place **red** in the top left corner, **blue** in the top right, **green** in the lower left and **yellow** in the lower right:



3. The kids then **number the sheets** as shown: red = 1, blue = 2, green = 3 and yellow = 4.
4. Then have all the kids sit with their squares in front of them.

*To the kids:* “Now I’m going to say a number, and you **bang it with one of your drumstick pencils**. Use the stick in your **left hand** for the odd numbers (1 and 3), and the stick in your **right hand** for the even numbers (2 and 4). Then I’m going to say that same number with a 2<sup>nd</sup> number after it, and you’re going to bang on both numbers, one after the other, in the order I told them to you. Then I’ll add a 3<sup>rd</sup> number, and a 4<sup>th</sup>, and we’ll see how long a string you can remember. Make sure you wait until I finish the string of numbers to hit your drumset!”

5. Say the number “1.” Each kid strikes the “1” square.
6. Now say “1, 4.” The kids strike the 1 and 4.

7. Add whatever digit you want as the 3<sup>rd</sup>, and have them try it. Then add a 4<sup>th</sup>. Each time, say the pattern, but don't say it while they do it. They have to remember it!
8. Once they've mastered your 4-step routine, **add music!** Choose a song from your phone (or cd) that doesn't have too fast a beat (see notes in Other Key Prep). Play the song and see if the kids can drum their routine in time with the music!

**To the kids:** “Now that we have the hang of this, let's try a longer string!” Start over and see if you can get to an 8-digit combo. Keep going as long as there's interest.

**Bonus (optional):** “Let's really get drumming with some **2-step combos.**”

1. “What 2 numbers on your drum mat can you add to make 5?” (Let the kids figure out it's either 2 and 3, or 1 and 4. You can let the kids strike both numbers at once!)
2. “How about 6?” (Let them figure out it's 2 and 4.)
3. “And 7?” (Let them figure out it's 3 and 4. Let them try it again.)
4. Once everyone has mastered that, make a **new 8-digit routine** mixing in 5s, 6s and 7s, building up 1 digit at a time like before. Practice until the kids can remember all 8 steps. Then try it with music!

**A Touch of Class:** “Again, we're seeing how music and math tie together. If you clap on every 4<sup>th</sup> number starting with 4, will you clap on 30?” (Answer: no since it isn't a multiple of 4!) “And next time you listen to your favorite song, count out the beats and find out when your favorite parts play!”