

# MATH ON THE MOVE



mathonthemovebook.com | malkerosenfeld.com

## MATH IN YOUR FEET STARTER KIT

**GRADE LEVEL: 3-8**

MATH: Pattern, pattern properties, body-based spatial reasoning, dynamic geometry sameness/similarity, rotations, CCSS.MATH.PRACTICE.MP1, MP5, MP6, MP7, MP8

### OVERVIEW

Have you ever wondered what [Math in Your Feet](#) would look and sound like in your classroom? Here's a low-stakes opportunity, adapted by Malke Rosenfeld (@mathinyourfeet) and wellness teacher Deb Torrance (@Mrs\_Torrance) as a way for you to see what a #movingmath classroom is all about. The full Math in Your Feet program is described in great detail in [Math on the Move: Engaging Students in Whole Body Learning \(Heinemann 2016\)](#).



This “lesson” is not really a lesson at all. It’s more of an “exploration” of math and dance where you, as the teacher, (traditionally at the front of the classroom) take on the role of facilitator and encourager from the sidelines. In this role, all you need to do is gather a few

materials, clear a little open space, present the activity expectations, and watch students become immersed in the activity.

## SET-UP

1. **Buy a roll of low tack blue painter's tape** from a big box or hardware store. In Canada this kind of tape is also green! Do NOT, under any circumstances, use duct tape or masking tape.
2. **Tape out at least two sets of blue tape squares.**
3. Each set of two squares need an **edge lengths of 22" to 24" with 3" between the two boxes.** You can also create a recess version by using sidewalk chalk on the cement/blacktop to mark out the squares.
  - a. A set of two squares can be used by teams of two or four.
  - b. If four people play, then two are in the squares dancing while the other two say/chant the pattern words.
4. **Print out:**
  - a. The [pattern cards](#) (set to "grayscale" if you don't want it to print in color) on white cardstock, at least two sets. The pdf includes cut lines for your convenience.
  - b. The [Movement Variables](#) document, as a poster if possible, placed within view of the dance spaces, or on regular paper for reference.
  - c. The Math in Your Feet [pattern template](#) so kids can make more patterns to for themselves and their friends.

## FACILITATION

- Instead of facilitating math-and-dance work in a formal way, your overall role is to encourage students to work WITH their partners and support them in figuring things out themselves, even if they feel challenged or confused.
- Introduce this activity to the whole class with the following information:
  - This game is about making rhythm and patterns in your feet **INSIDE** your blue tape square! (The square provides spatial and measurement cues to help kids make their dancing the same.)
  - The Movement Variables poster tells you three things:
    - Where your **feet** can be positioned in the square in the square (together, split, etc.)
    - How you can **move** in the square (jump, step, etc.) and
    - What **direction** you'll be moving...all at the same time.
  - Remind dancers to dance at the same time, in the same way.
- Encourage perseverance

- This game is about working together with a friend to figure out how to decode the little pattern maps. Other kids who have played this game say they feel really proud of themselves when they finally figure out the pattern by themselves!
- Each card is a little puzzle for **BOTH** partners to figure out and use **together**.
- When you're done with the cards you have the option to make and map out your own moving patterns!

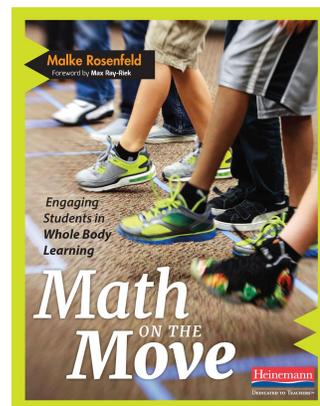
## EXTEND

Once students get started you will probably see them line up the cards on the ground to do all the patterns in one long sequence. If this happens you can also encourage them to

- Try dancing different combinations of cards.
- Create and dance different sequences of 3-4 cards
- Make up their own patterns while they dance and record their new patterns on the blank card template for others to try.

## NEXT STEPS & MORE RESOURCES

- Malke's book [Math on the Move: Engaging Students in Whole Body Learning](#) (Heinemann 2016) is a thorough resource of information about the #movingmath approach including 40 videos of classroom action.
- The [Math on the Move Facebook group](#) is a resource for conversation, brainstorming, and book study.
- The [Math on the Move book blog](#) is an ongoing resource for learning more about whole-body math learning.



## PLEASE NOTE:

This lesson/activity is licensed under the Creative Commons “Attribution + Noncommercial + ShareAlike” category which means you are free to use, remix, and distribute this activity with the same permissions, for non-commercial purposes, and with proper attribution to the source.

