

## **AUTHOR:** Ellen Mayer

### **ILLUSTRATED BY:**

Ying-Hwa Hu

Daddy and his little one are cleaning up before dinner. Daddy describes what they are doing using spatial relationship words and phrases like up, down, inside, outside, next to, and under.

Ages: 1 to 3 years

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# Early Math Project

## Clean Up, Up, Up!

Who knew cleaning up could be so much fun?

**Topics:** spatial relationships, positional words

### **Activities To Do Together:**

A child's mastery of spatial relationships helps them make sense of the world around them and supports their mathematical understanding. Use the book *Clean Up, Up, Up!* to explore spatial relationships with your child.

Before reading the book:

- Look at the cover of the book with your child and talk about what's on the top shelf of the bookcase.
- Introduce your child to positional words (under, over, next to, on, etc.) and use them to talk about where things are located in relation to each other.

While reading the book:

- Stop as you read and point out what Daddy and his little one are doing.
- Use positional words to describe what you see, words like up, down, under, beside, on top of, above, and below.
  - Point out spatial relationships of other objects not mentioned by Daddy.
  - Look at the pictures in the book together. Ask your child to describe the location of an object, for example, "Tell me what you see **behind** the chair." "Where do you see the train?"

When you have finished reading the book, try the following:

- As part of your daily routine, talk with your child about where things are located. On a walk, point out the position of cars, street lamps, leaves, etc. to your child.
- Have a scavenger hunt with positional words. Look for examples of objects that are in, on top of, beside, etc.
  The slide is beside the swing. The sand box is beside the tree, etc.
- Play a guessing game with positional words. Say, "I am thinking of something that is **inside** the dishwasher. What do you think it is?" Or, "I am thinking of something that is under the bed. What do you think it is?"

## Extension Conversations During Daily Routines with Infants and Toddlers:

- Tummy Time Place a small group of toys around your baby. Point out the position of the toys to your baby. Use words like in front, beside, on top, etc.
- Meal Time When enjoying a meal, point and talk about the position of the different foods on your baby's plate.
  For example, say, "The broccoli is **next to** the carrots and **behind** the rice."
- 3. Outside Time While outside, notice what is **above** and **below** you.
- 4. Travel Time Talk about the vehicles that are **next to** you. Are they large or small? How many wheels do they have?
- Clean Up Time Like in the story, clean up with your baby and describe what you are doing by using positional words.

### **Early Math Project Resources:**

Visit <u>Clean Up, Up, Up! Activities</u> (earlymathca.org/clean-up-up-up)

Follow this <u>link</u> or visit earlymathca.org/external-resources for additional online resources.



### Vocabulary

Math words found in the story: back, behind, below, beside, down, everything, high, inside, next, on, outside, time, top, under, up

Related math words: above, across, after, along, among, before, between, by, far, from, in, near, through, toward, until, within

Words to build reading comprehension: belongs, set, shelf, squeeze, stacked, station

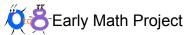
**Spanish Title:** !Arriba, arriba, arriba, a limpiar!

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Related Books: The Yellow Ball by Molly Bang; Flotsam by David Wiesner; Piggies in the Pumpkin Patch by Mary Peterson and Jennifer Rofé; Elephants Aloft by Kathi Appelt

Click this link to the World Catalog or enter https://bit.ly/3v3erZd to find Clean Up, Up, Up! in the public library.



**Math Connections:** A child's understanding of spatial language, how objects fit together, and their position in space are important concepts. These ideas support a child's ability to express themselves, organize things, navigate in their environment, and understand directions in order to get their needs met. These early learning skills are very important for later success.

Spatial language includes positional words, orientation words, and attribute words. Positional words describe the location or position of an object - words like in, on, under, above, between, and underneath. Orientation words such as twist, rotate, turn, move, left, and right help children make adjustments to objects, move objects in space, locate objects, and give directions to others. Attribute words help describe an object according to its characteristics. Words like long, short, tall, wide, narrow, and smooth help to identify, categorize, and sort objects.

Use spatial language to describe the objects around you when you are with your child. Ask open-ended questions about what you see, hear, and touch. If your child is too young to answer your questions, answer the questions yourself so your child is exposed to new words and concepts.

Infants are naturally curious. They make sense of the things they encounter by touching and watching. They learn about objects with their hands and mouths. You may have watched infants explore whether they will fit inside something else. Does their head fit inside a basket? Will their body fit inside a box? You can nurture their understanding of spatial relationships by providing safe objects for them to explore and talking about what you notice them doing. For example, you might talk about what your infant does with a hat. If they put their hand in the hat, you might say, "Your hand fits inside of the hat." If they put the hat on top of a toy, you might say, "The ball is **underneath** the hat" or "The hat is **on top** of the ball." These simple observations help infants develop an understanding of the meaning of spatial language which helps them describe, discuss, and find objects in the world around them.

It's simple to incorporate conversations about locations and positions into daily routines. In the book, *Clean Up, Up, Up!*, cleaning up the room with his little one provides an easy way for Daddy to talk about and give concrete examples for the abstract concepts of **up high**, **down below**, **on top**, **beside**, **under**, **outside**, **inside**, **down**, and **behind**. Making a snack,



folding clothes, taking a bath, washing hair, and getting dressed provide similar opportunities to explore spatial words.

Older infants, toddlers, and preschoolers may enjoy blocks, shape sorters, collections of found objects, puzzles, tangrams, and nesting and stacking containers or toys. All of these activities provide opportunities to explore what fits together, to notice how objects move in space, and to use spatial vocabulary. Pay attention to what your child initiates on their own and has an interest doing. Build upon your child's interests and talk about what you notice. For example, if your child is interested in collecting nature objects, consider providing them with a box in which they can arrange their treasures. Talk about what fits inside of the box, what objects are beside each other, etc. Talk about common attributes of their collection. What is green? What is smooth? If playing with blocks, talk about which block is on top and notice which blocks are under other blocks. Notice how the appearance of a block changes when viewed from another angle. How does the height of a block structure change when the same blocks are stacked differently?

Explain to your child where you are in relationship to other objects, for example, "I am sitting **on** the couch **between** two pillows." Then ask your child to explain where they are in relation to another object.

These types of activities and conversations will strengthen your child's spatial awareness and math vocabulary.



Age Level	Related Infant Toddler Foundations and Preschool Foundations
Infant/ Toddler	<b>Spatial Relationships</b> The developing understanding of how things move and fit in space.
Preschool/ TK	Geometry 2.1 Identify positions of objects and people in space, such as in/on/under, up/down, inside/outside, beside/between, and in front/behind.