

# ***Moving Through Math***

## ***Homer and Fluffy Finger Play***

Where logic, thinking, and mathematics meet  
music, dance, and drama



Spatial Relationships and Positional Language  
in Pre-K and Kindergarten

by

**Marcia Daft**

# Moving Through Math

*Spatial Relationships and Positional Language  
in Pre-K and Kindergarten*

## **Moving Through Math** Overview **2**

Vertical and Horizontal Order	2
<b>Over</b> and <b>Above</b>	3
<b>Under</b> and <b>Below</b>	5
<b>Under</b> and <b>Underneath</b>	6
Everyday examples of <b>Over/Under</b> and <b>Above/Below</b>	7

## **Finger Play: Homer and Fluffy** **8**

Introducing the Characters	9
<b>Up High at the Top</b> and <b>Down Low at the Bottom</b> of the slide	10
<b>Inside</b> and <b>Outside</b> the sandbox	11
<b>Over</b> and <b>Under</b> the jump rope	12
<b>Near</b> and <b>Far</b> from the door	13
<b>On</b> and <b>Off</b> the rug	14
<b>In front of</b> and <b>Behind</b> in line	15
Story Map Starters	16

### **IMPORTANT NOTICE**

Marcia Daft developed the content and approaches in this handout. This material is copyrighted by Marcia Daft and Missarmia Productions, LLC. No part of this handout may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without permission in writing from the author. **The unauthorized reproduction, publication, distribution, presentation, or modification of this material is prohibited and is in violation of Federal Copyright Law.**

© Missarmia Productions, LLC 2007

All Rights Reserved

# Moving Through Math Overview

## Spatial Relationships and Positional Language

**In Pre-Kindergarten and Kindergarten, children ages 3-5 work on recognizing and comparing shapes**

- Children play with, build with, arrange, and line up objects. They identify the positions and direction of shapes, using words such as: on, off, over, under, on top, on bottom, in front of, behind, above, below, etc.

**It is important to encourage young children to use complete sentences to describe their thinking!**

The \_\_\_\_ is **ON TOP**.

The \_\_\_\_ is **ON THE BOTTOM**.

The \_\_\_\_ is **ON TOP OF** the \_\_\_\_.

The \_\_\_\_ is **UNDERNEATH** the \_\_\_\_.

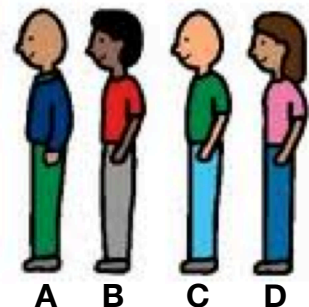


\_\_\_\_ is **FIRST**.

\_\_\_\_ is **LAST**.

\_\_\_\_ is **IN FRONT OF** \_\_\_\_.

\_\_\_\_ is **BEHIND** \_\_\_\_.



## **OVER** and **ABOVE**

- ➔ An adverb describes a verb (an action word). The word **OVER** can be an adverb that describes movement from one location or position to another:

They **climbed OVER** the fence.



He **leaned OVER** to tie his shoe.



I **knocked OVER** a glass of milk.



The baby is learning to **roll OVER**.



Please **move OVER** to make room for me.



Please **come OVER** here for minute.





➔ The adverb **ABOVE** usually describes only location, not movement.

I looked at the moon and stars **shining ABOVE**.



The river looks like a ribbon when **seen from ABOVE**.



➔ As prepositions, both **OVER** and **ABOVE** can mean the same thing: at a place that is higher than something else.

A light hangs **OVER/ABOVE** the table.



She raised her arms **OVER/ABOVE** her head.



My apartment is **OVER/ABOVE** a bookstore.



## **UNDER** and **BELOW**

- ➔ The word **UNDER** can be an adverb that describes movement from one location or position to another:

He **climbed UNDER** the fence.



The car **drives UNDER** the bridge.



- ➔ The word **BELOW** usually describes only location, not movement.

The first floor is **BELOW** the second floor.



The stars look like twinkling lights when **seen from BELOW**.



➔ Both **UNDER** and **UNDERNEATH** *can* mean that something is covered or hidden.

The cat likes to hide **UNDER/UNDERNEATH** the sofa.



The dog is peeking out from **UNDER/UNDERNEATH** the covers.



➔ But we can use the word **UNDER** to describe something that is *NOT* totally covered, or hidden.

The dog likes to sleep **UNDER** the picnic table.



The pot is **UNDER** the bowls.



## So let's Review...

**Above and below** are used with positional images that are static/stationary, or frozen, as if in a photograph. Furthermore, the two items should not be touching, as that would lead us to say, "The \_\_\_\_ is ON the \_\_\_\_."

**Over and under** tend to be used with moving positions, although this is not how most Americans use over and under in our daily speech.

The lamp hangs **above** the kitchen table. The kitchen table is **below** the kitchen lamp.

The clock is **above** the door. The door is **below** the clock.

The cabinets are **above** the sink. The sink is **below** the cabinets.

My hand is **above** my head. My head is **below** my hand. (The head and hand are NOT touching)

The sun is **above** the land. The land is **below** the sun.

The clouds are **above** the lake. The lake is **below** the clouds.

The car is parked **below** the bridge. The bridge is **above** the car.

If I take a photograph, draw a picture, or make a frozen body shape, I can say, "The bird is **above** the tree. The tree is **below** the bird."

If I take a photograph, draw a picture, or make a frozen body shape, I can say, "The butterfly is **above** the branch." "The branch is **below** the butterfly."

If I draw a picture with motion lines, or make a moving body shape, I can say, "The bird flies **over** the tree."

If I draw a picture with motion lines, or make a moving body shape, I can say, "The butterfly **flies** over the branch."

If I draw a picture with motion lines, or make a moving body shape, I can say, "The car drives **under** the bridge."

If I draw a picture with motion lines, or make a moving body shape, I can say, "The dog crawls **under** the log."

## FINGER PLAY: *Homer and Fluffy*



**Overview:** Students are seated cross-legged in a circle on the rug. The teacher uses her face, body, voice, and imagination to tell a short story about *Homer and Fluffy*. The story takes place on the playground. The teacher uses her hands and fingers to make the characters of Homer and Fluffy. The teacher uses her body to make a slide, a tree, a sandbox, and other objects in the story's playground setting.

Children copy the teacher, using their own faces, bodies, voices, and imaginations to tell the story.



**When to use this Strategy:** This activity takes about 10 minutes during circle time. As a follow-up, the teacher can show students how to draw the story. Each student draws his or her own page.

### **Educational Purpose:**

- ➔ Students learn positional vocabulary.
- ➔ Students learn to show spatial positions using their hands and bodies.
- ➔ Students learn to draw and describe pictures that show spatial positions.

### **Assessment Potential:**

- ➔ Use this strategy to teach and draw one pair of spatial opposites on Monday.
- ➔ On Tuesday, invite students to retell Monday's story. If most students demonstrate strong recall, teach and draw a new pair of spatial opposites on Tuesday.
- ➔ On Wednesday, invite students to retell Monday and Tuesday's stories. If most students demonstrate strong recall, teach and draw a new pair of spatial opposites on Wednesday.
- ➔ Continue adding a new pair of spatial opposites each day based on what you observe in student comprehension and retention.



## Introducing the Characters: Homer & Fluffy

- ➔ Explain to your children that people tell stories by using facial expressions, body expressions, and by changing their voices. There are two characters in our story -- sweet Fluffy and sneaky Homer.

"Today we will use our bodies, our faces, our voices, and our imaginations to tell the story of Homer and Fluffy."

- ➔ Use your hand and wiggly fingers to make the Fluffy character. When the Fluffy character is talking, hold her (your Fluffy hand) next to your face. When the Fluffy character is talking, wiggle your thumb to make it look like her mouth is moving. Direct students to copy you.



"Fluffy has curly hair, and is very sweet.

- Copy me to make Fluffy with one hand – this is her curly hair (**demonstrate**).
- Let's all make a sweet, smiling Fluffy face (**demonstrate**).
- Let's make our bodies soft and open – like Fluffy. (**demonstrate**).
- Let's make our voices sound sweet (**demonstrate**).
- Use your hand, your body, your face, and your voice to copy me: 'Hi, my name is Fluffy.' 'Homer is my best friend.' 'I love to play with Homer.' "But sometimes he is verrrry difficult!" 'He doesn't like to do what I do – he likes to do the opposite!'"

- ➔ Use your hand and straight fingers to make the Homer character. When the Homer character is talking, hold him (your Homer hand) next to your face. When the Homer character is talking, wiggle your thumb to make it look like her mouth is moving. Direct students to copy you.



"Homer has straight hair, and is very sneaky.

- Copy me to make Homer with one hand – this is his straight hair (**demonstrate**).
- Let's all make a sneaky, stubborn Homer face (**demonstrate**).
- Let's make our bodies sneaky and twisty – like Homer (**demonstrate**).
- Let's make our voices sound sneaky (**demonstrate**).
- Use your hand, your body, your face, and your voice to copy me: 'Hi, my name is Homer.' 'Fluffy is my best friend.' 'I love to play with fluffy.' "But I like to be verrrry difficult!" 'I don't like to do what she likes to do – I like to do the opposite!'"

"Now that you have met Homer and Fluffy, let's see what happens in today's story..."

**UP HIGH** at the **TOP** of the slide & **DOWN LOW** at the **BOTTOM** of the slide

➔ Hide both hands behind your back.

“Here comes Fluffy! Everyone, bring out your Fluffies!”

➔ Bring out the Fluffy character (curly hair) with one hand. Hold your hand close to your face while Fluffy is talking.”



**FLUFFY VOICE:** “Oh boy. Today I’m going to play with my friend Homer. This will be so much fun!”

➔ Bend one leg and point your knee up high, so that your leg looks like a slide.”

**FLUFFY VOICE:** “Oh boy. I’m going to play on the slide! This is fun. I hope Homer comes soon. I’m going to climb UP the ladder to get to the TOP of the slide. Wee – look at me! I’m UP HIGH at the TOP of the slide!”

➔ Change your facial expression to look sneaky. One hand is still behind your back. Look behind your back as if you are looking for Homer.”

**STORYTELLER VOICE:** “I think Homer is coming...”

➔ Bring out your Homer character (straight hair). Homer is peeking around the corner of your back, like he’s spying on Fluffy from a distance.

**FLUFFY VOICE:** “Homer – look UP HIGH! I’m at the TOP of the slide! Climb up the ladder and come to the TOP with me!”

**STORYTELLER VOICE:** “Homer saw that Fluffy was waiting AT THE TOP of the slide; and just to be stubborn, Homer decided to do the opposite.”

**HOMER VOICE:** “I like to do the opposite, I like to do the opposite. He-he-he! He-he-he! He-he-he! He-he-he! I like to do the opposite! If Fluffy is UP HIGH at the TOP of the slide, I’ll just stay here DOWN LOW at the BOTTOM of the slide. Ha!”

➔ Change your facial expression to look perplexed and exasperated, as if you can’t believe anyone could be so stubborn! Look back and forth between Homer and Fluffy.

**STORYTELLER VOICE:** “So Fluffy is UP HIGH at the TOP of the slide, and Homer is DOWN LOW at the BOTTOM of the slide. Fluffy is at the TOP, and Homer is at the BOTTOM.”

**STORYTELLER VOICE:** “That Homer.... Put them away!”

## **INSIDE the sandbox & OUTSIDE the sandbox**

➔ Hide both hands behind your back.

“Here comes Fluffy! Everyone, bring out your Fluffies!”



➔ Bring out the Fluffy character (curly hair) with one hand. Hold your hand close to your face while Fluffy is talking.”

**FLUFFY VOICE:** “Oh boy. Today I’m going to play with my friend Homer. This will be so much fun!”

➔ Open your legs and touch your heels together, so that your legs make a diamond shape on the floor. We will pretend that this space inside your legs is a sandbox. Put Fluffy inside the sandbox.”

**FLUFFY VOICE:** “Oh boy. I’m going to play in the sandbox! This is fun. I hope Homer comes soon.”

➔ Change your facial expression to look sneaky. One hand is still behind your back. Look behind your back as if you are looking for Homer.”

**STORYTELLER VOICE:** “I think Homer is coming...”

➔ Bring out your Homer character (straight hair). Homer is peeking around the corner of your back, like he’s spying on Fluffy from a distance.

**FLUFFY VOICE:** “Homer – over here! I’m INSIDE the sandbox! Come play!”

**STORYTELLER VOICE:** “Homer saw that Fluffy was playing INSIDE the sandbox; and just to be stubborn, Homer decided to do the opposite.”

**HOMER VOICE:** “I like to do the opposite, I like to do the opposite. He-he-he! He-he-he! He-he-he! He-he-he! I like to do the opposite! If Fluffy is INSIDE the sandbox, I’ll just stay here OUTSIDE the sandbox. Ha!”

➔ Change your facial expression to look perplexed and exasperated, as if you can’t believe anyone could be so stubborn! Look back and forth between Homer and Fluffy.

**STORYTELLER VOICE:** “So Fluffy is INSIDE the sandbox and Homer is OUTSIDE the sandbox. Fluffy is INSIDE the sandbox and Homer is OUTSIDE the sandbox!”

**STORYTELLER VOICE:** “That Homer.... Put them away!”



Jumping OVER the rope & crawling UNDER the rope



**Each child needs a string to represent a jump rope. Direct each child to hide his string behind his back, until it is time to take the strings out.**

➔ Hide both hands behind your back.

“Here comes Fluffy! Everyone, bring out your Fluffies!”

➔ Bring out the Fluffy character (curly hair) with one hand. Hold your hand close to your face while Fluffy is talking.”

**FLUFFY VOICE:** “Oh boy. Today I’m going to play with my friend Homer. This will be so much fun!”

➔ Take your string out from behind your back and place it in front of you.

**FLUFFY VOICE:** “Oh boy. Today I’m going to play with a jump rope! This will be fun! I’m going to jump OVER the rope. I hope Homer comes soon, so he can jump OVER the rope with me!”

➔ Change your facial expression to look sneaky. One hand is still behind your back. Look behind your back as if you are looking for Homer.”

**STORYTELLER VOICE:** “I think Homer is coming...”

➔ Bring out your Homer character (straight hair). Homer is peeking around the corner of your back, like he’s spying on Fluffy from a distance.

**FLUFFY VOICE:** “Homer – look at me! I can jump OVER the rope! Come try it!”

**STORYTELLER VOICE:** “Homer saw that Fluffy was jumping OVER the rope; and just to be stubborn, Homer decided to do the opposite.”

**HOMER VOICE:** “I like to do the opposite, I like to do the opposite. He-he-he! He-he-he! He-he-he! He-he-he! I like to do the opposite! If Fluffy is jumping OVER the slide, I’ll crawl UNDER the rope. Ha!”

➔ Change your facial expression to look perplexed and exasperated, as if you can’t believe anyone could be so stubborn! Look back and forth between Homer and Fluffy.

**STORYTELLER VOICE:** “So Fluffy is jumping OVER the rope and Homer is crawling UNDER the rope. Fluffy jumps OVER and Homer crawls UNDER.”

**STORYTELLER VOICE:** “That Homer.... Put them away!”

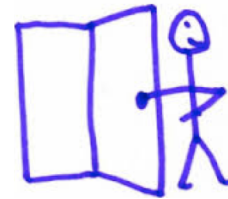
**NEAR** the door & **FAR FROM** the door

Each child needs a block to represent a door. Direct each child to hide his “door” behind his back. We will take out our “doors” as we tell our story.

→ Hide both hands behind your back.

“Here comes Fluffy! Everyone, bring out your Fluffies!”

→ Bring out the Fluffy character (curly hair) with one hand.  
Hold your hand close to your face while Fluffy is talking.”



**FLUFFY VOICE:** “Oh boy. Today I played outside with my friend Homer. We had so much fun! But now playtime is over and we need to line up NEAR the door.”

→ Place your block in front of you. Move your Fluffy hand near the door.

**FLUFFY VOICE:** “Oh boy. I’m right here NEAR the door. I hope Homer comes soon so that he can line up NEAR the door with me!”

→ Change your facial expression to look sneaky. One hand is still behind your back. Look behind your back as if you are looking for Homer.”

**STORYTELLER VOICE:** “I think Homer is coming...”

→ Bring out your Homer character (straight hair). Homer is peeking around the corner of your back, like he’s spying on Fluffy from a distance.

**FLUFFY VOICE:** “Homer – over here! I’m waiting NEAR the door!”

**STORYTELLER VOICE:** “Homer saw that Fluffy was standing NEAR the door; and just to be stubborn, Homer decided to do the opposite.”

**HOMER VOICE:** “I like to do the opposite, I like to do the opposite. He-he-he! He-he-he! He-he-he! He-he-he! I like to do the opposite! If Fluffy is NEAR the door, I’ll just stay stand FAR from the door. Ha!”

→ Change your facial expression to look perplexed and exasperated, as if you can’t believe anyone could be so stubborn! Look back and forth between Homer and Fluffy.

**STORYTELLER VOICE:** “So Fluffy is **NEAR** the door and Homer is **FAR FROM** the door. Fluffy is **NEAR** the door and Homer is **FAR FROM** the door.”

**STORYTELLER VOICE:** “That Homer.... Put them away!”

**ON the rug & OFF the rug**

**Each child needs a fabric square to represent a rug. Direct each child to hide his rug behind his back. We will take out our rugs as we tell our story.**

➔ Hide both hands behind your back.

“Here comes Fluffy! Everyone, bring out your Fluffies!”

➔ Bring out the Fluffy character (curly hair) with one hand.  
Hold your hand close to your face while Fluffy is talking.”



**FLUFFY VOICE:** “Oh boy. Today we are going to have a dance party! We get to dance ON the rug!”

➔ Place your fabric square in front of you. Move your Fluffy on the fabric square.

**FLUFFY VOICE:** “Oh boy. I’m right here ON the rug, ready to dance. I hope Homer comes soon so that stand ON the rug and dance with me!”

➔ Change your facial expression to look sneaky. One hand is still behind your back. Look behind your back as if you are looking for Homer.”

**STORYTELLER VOICE:** “I think Homer is coming...”

➔ Bring out your Homer character (straight hair). Homer is peeking around the corner of your back, like he’s spying on Fluffy from a distance.

**FLUFFY VOICE:** “Homer – over here! I’m waiting ON the rug!”

**STORYTELLER VOICE:** “Homer saw that Fluffy was standing ON the rug; and just to be stubborn, Homer decided to do the opposite.”

**HOMER VOICE:** “I like to do the opposite, I like to do the opposite. He-he-he! He-he-he! He-he-he! He-he-he! I like to do the opposite! If Fluffy is ON the rug, I’ll just stand OFF the rug. Ha!”

➔ Change your facial expression to look perplexed and exasperated, as if you can’t believe anyone could be so stubborn! Look back and forth between Homer and Fluffy.

**STORYTELLER VOICE:** “So Fluffy is ON the rug and Homer is OFF the rug. Fluffy is ON the rug and Homer is OFF the rug.”

**STORYTELLER VOICE:** “That Homer.... Put them away!”

## **IN FRONT OF & BEHIND**



➔ Hide both hands behind your back.

“Here comes Fluffy! Everyone, bring out your Fluffies!”

➔ Bring out the Fluffy character (curly hair) with one hand. Hold your hand close to your face while Fluffy is talking.”

**FLUFFY VOICE:** “Oh boy. It’s time for recess. We get to go outside! I’d better get in line.”

➔ Position your Fluffy character in front of you so that she faces the students.

➔ Change your facial expression to look sneaky. One hand is still behind your back. Look behind your back as if you are looking for Homer.”

**STORYTELLER VOICE:** “I think Homer is coming...”

**FLUFFY VOICE:** “Homer! Over here! I’m lining up. Come on -- get in line. You can stand IN FRONT OF me!”

**STORYTELLER VOICE:** “Homer saw that Fluffy going to let him stand IN FRONT OF her; and just to be stubborn, Homer decided to do the opposite.”

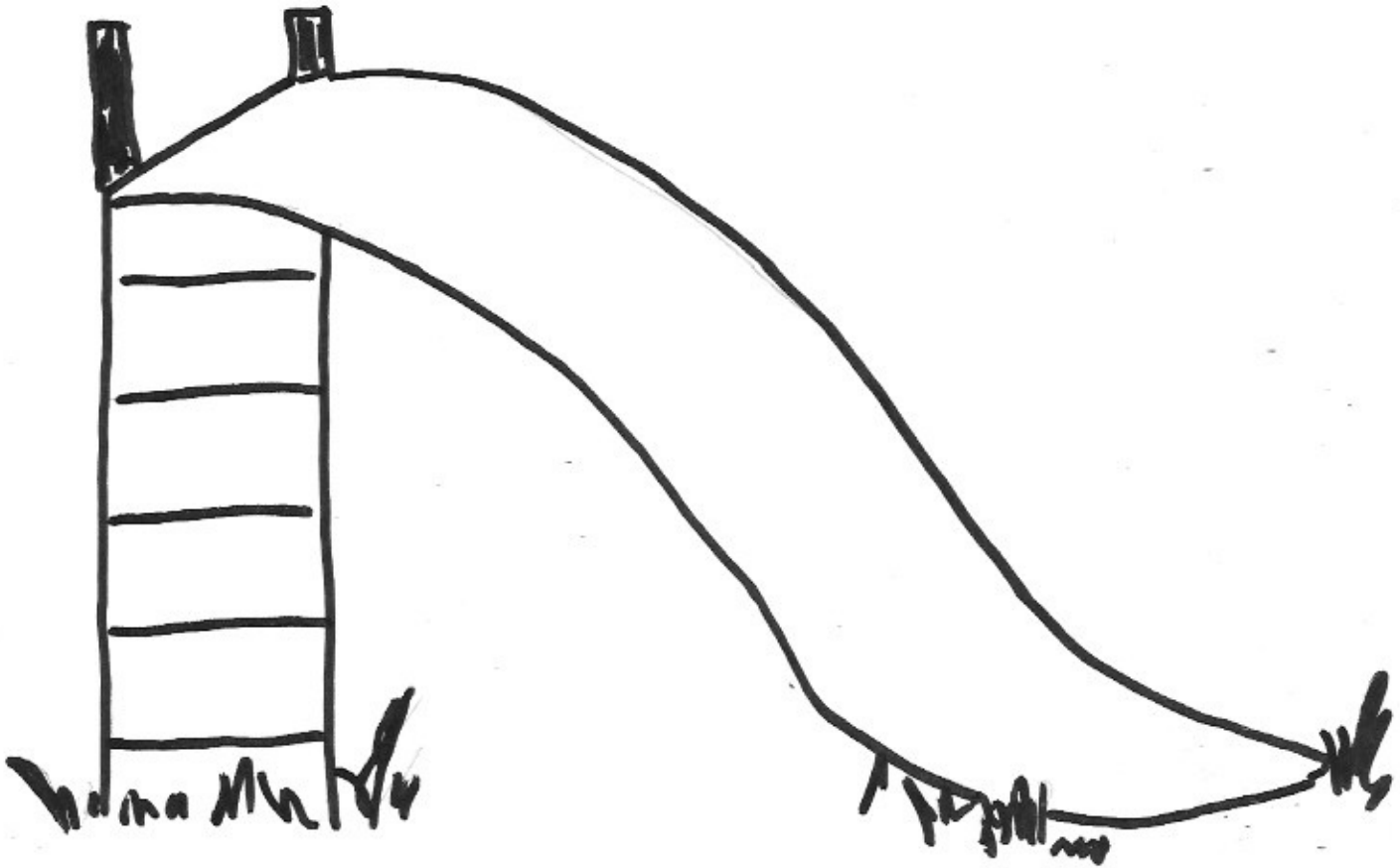
**HOMER VOICE:** “I like to do the opposite, I like to do the opposite. He-he-he! He-he-he! He-he-he! He-he-he! I like to do the opposite! If Fluffy wants me to stand IN FRONT OF her, I’ll stand BEHIND her. Ha!”

➔ Change your facial expression to look perplexed and exasperated, as if you can’t believe anyone could be so stubborn! Look back and forth between Homer and Fluffy.

**STORYTELLER VOICE:** “So Fluffy is IN FRONT OF Homer, and Homer is BEHIND Fluffy. Fluffy is IN FRONT OF Homer, and Homer is BEHIND Fluffy. ”

**STORYTELLER VOICE:** “That Homer.... Put them away!”

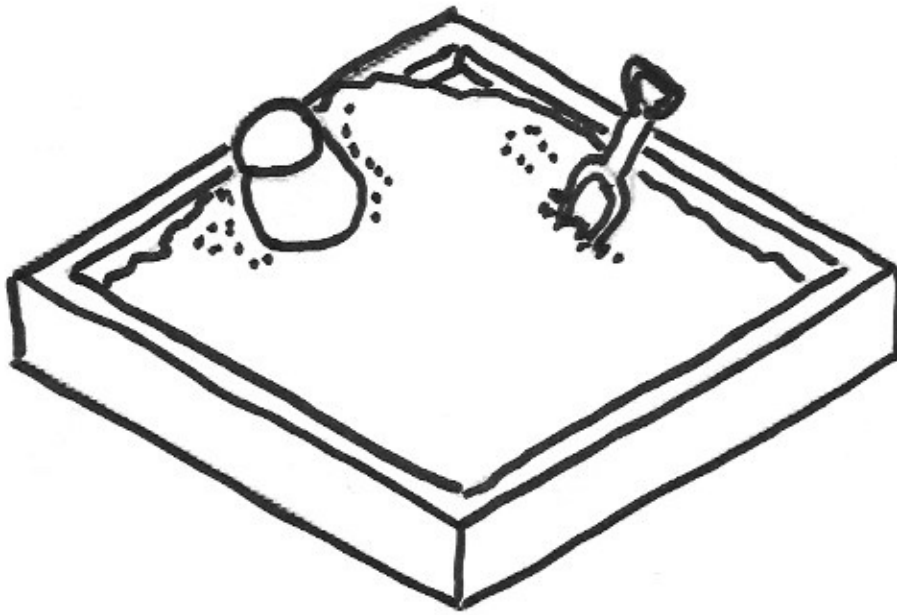
## HOMER AND FLUFFY



Fluffy is **UP HIGH** at the **TOP** of the slide

Homer is **DOWN LOW** at the **BOTTOM** of the slide

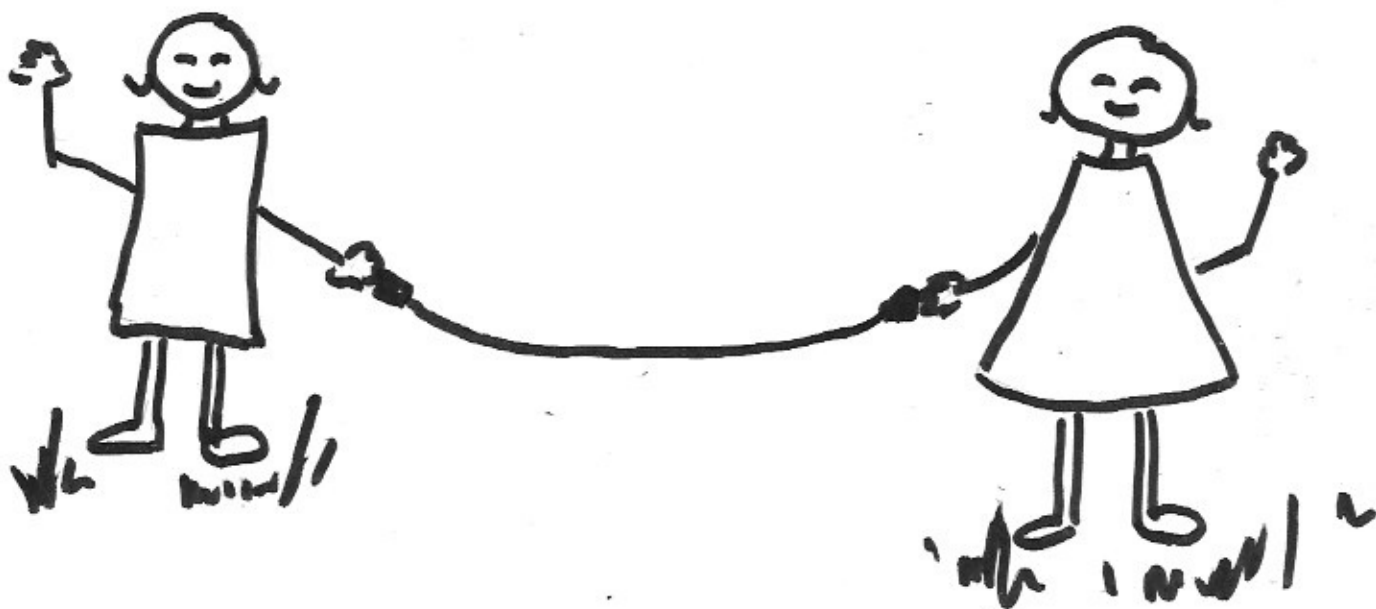
## HOMER AND FLUFFY



Fluffy is **INSIDE** the sandbox

Homer is **OUTSIDE** the sandbox

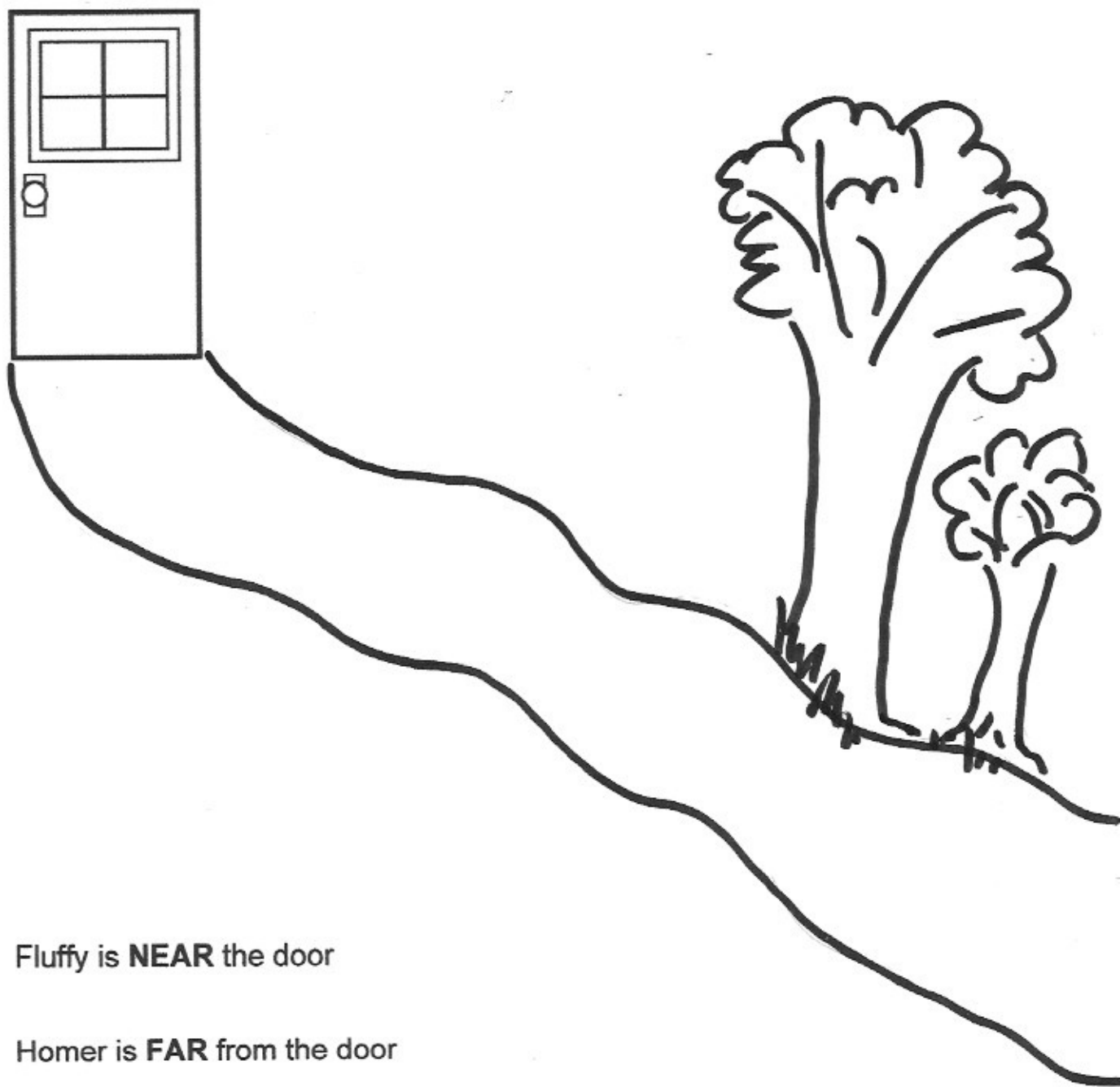
## HOMER AND FLUFFY



Fluffy jumps **OVER** the rope

Homer crawls **UNDER** the rope

## HOMER AND FLUFFY



Fluffy is **NEAR** the door

Homer is **FAR** from the door