



## GOLDSLOCKS AND THE THREE BEARS

retold and illustrated by  
Jan Brett

Because their porridge was too hot, the three bears went for a walk in the woods. We know what happened while they were gone. Goldilocks entered their house, **uninvited**, and ate their porridge, broke one of their chairs, and fell asleep in one of their beds. (An interesting side trip is to talk to your children about what would happen if a real person did that!) We know what happened in the house while they were gone, but what happened on their walk? Where did they go? What did they see?

Ask your children, "Where do you think the three bears went on their walk while they were waiting for their porridge to cool? What do you think they saw?" After you talk about what the three bears might have done, tell them that they are going to go for a walk just like the three bears did. But they are not going to decide which direction to go, the flip of a coin will decide for them. They are going to learn about pennies and then go on a Penny Walk".

**MATERIALS:** one penny per child, one magnifying glass per child, lemon juice, table salt, several sets of measuring spoons, one clear plastic cup and two Q-tips per child, clipboard, tally sheet for recording tally marks on their walk, pencils, paper. These might be good activities to do around Lincoln's birthday in February, if your weather permits.

### ACTIVITIES:

**Activity #1.** Distribute pennies, one to each child. Have them measure equal parts lemon juice and salt (one teaspoon each) into their cups. Have each child add his/her penny to the solution and stir with a Q-tip. This will clean and shine the penny, and make it easier for them to examine. Talk to them about why they think this happened. Does the copper in the penny react with the acid in the lemon juice and the base in the salt? Have them use their magnifying glasses to look closely at their pennies. Teach them to use the magnifying glass by holding the glass up to their eye and moving the penny in and out until its image becomes sharp and clear. Talk about the various things they see. Can they see Lincoln sitting inside the Memorial? Can they see the bushes at its base?

**Activity #2:** This activity could be broken into two parts.

**Part A.** Remind them that all coins have two sides; one side is called "heads" and one side is called "tails". Indicate which side of a penny is its "head" (the one with Lincoln's profile); and which side is its "tail" (the one with the Lincoln Memorial). Practice flipping the pennies and see which way they land, "heads" or "tails". After the children become relatively proficient at flipping their pennies, ask them to predict which way they think it will land next. Were their predictions correct? This is a perfect way to introduce probability. Each time they flip the coin, the odds are one in two that "heads" will come up. Have each child keep a tally record of five flips (You may need to teach how to keep a tally record at this point!). Have each child flip his/her coin five more times, but predict each time whether it will land "heads" or "tails". Discuss their results. How accurately were they able to predict the probability of each flip?

**Part B.** Now that they are expert flippers, it's time to take a Penny Walk. This can be done any where. I would start on the playground, and maybe graduate to your school's neighborhood (If you walk heads/tails around the neighborhood, you may have to "control" some of the final flips or you'll never get back!). Have the children line up in one straight line. The first two people in line will be the first set of "dippers" and "tally-ers"; these turns will rotate as they walk. Explain that they are going to walk in one direction for some steps, then stop, flip a coin, and change direction. If the coin is "heads" they will turn left; if the coin is "tails" they will turn right. Each time a coin is flipped and tallied, the "flipper and the "tally-e" will go to the end of the line and the walk will continue with the two new children taking over their positions. Try to allow enough changes of direction so that each child gets a turn at one or the other. When you return to the classroom, evaluate your tallies. Were there more "heads" or "tails"? Compare and speculate on how these tallies conform to the laws of probability. See how much of where they went and what they saw the children can remember.

**STANDARDS:**

**BSL:** 1.2, 1.3, 1.8, 3.3, 9.1, 9.4, 9.5, 9.7, 12.1 12.2, 12.4, 12.7, 12.12

**NCTM:** 4a, 4d, 6a, 6d, 11a, 11c, 11d

**SCS:** A1, A2, H2, H4

Galdone, Paul. The Three Bears. NY: Clarion Books, c1972. ISBN#0-8991-9401-X.

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