



## What You Need

- a friend
- paper cup
- 8 pennies

# Penny Cup Game

Two eyes are better than one!

- 1 Have a friend **sit** at a table.
- 2 **Put** a paper cup about three feet in front of your friend.
- 3 **Hold** a penny about six inches above the cup. **Move** your arm slowly toward your friend and then back.
- 4 Tell your friend to say, "**Drop!**" when he or she thinks the penny is over the cup. Does it fall in the cup? **Record** your results on the back of this sheet.
- 5 **Repeat** with the other seven pennies.
- 6 Now ask your friend to **cover** one eye. Repeat the steps above and see how many pennies land in the cup.
- 7 How many pennies fell in the cup when your friend had **both eyes** open? What happened when your friend had **one eye** open?
- 8 Now **switch** roles and experiment with your own vision.



Now it's time to **experiment**. What happens if you keep your **other eye** closed? What happens if you move the cup **farther** away from your friend? Choose **one thing** to change (that's the variable) and **predict** what you think will happen. Then **test it** and **send** your results to ZOOM at [pbskids.org/zoom](http://pbskids.org/zoom)

Sent in by Kim S. of Deltona, FL



The Arthur Vining Davis Foundations



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Illustrations by Stephen Schudlich.

[pbskids.org/zoom](http://pbskids.org/zoom)

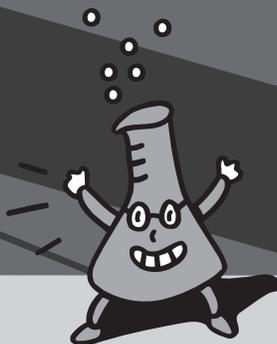


# Penny Cup Game

## Number of Pennies: One Eye vs. Two Eyes

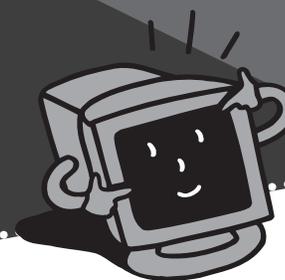
Make a check mark in one of the columns each time a penny is dropped.

Eyes	Pennies in Cup	Pennies Not in Cup
Both open		
Left closed		
Right closed		



### Science Scoop

You probably found that more pennies fell in the cup when you had **both eyes open**. This is because the information your brain gets from each of your eyes is a little **different**. (You can see this for yourself by **holding** up two fingers, one in front of the other, and looking at them with your right eye and then your left eye.) Your brain **compares** what you see from both eyes and **combines** them to form one image. This allows you to judge distance better than if you just used one eye.



### Visit the ZOOM Web Site!

- Keep experimenting with vision by trying **Peripheral Vision** and **Blind Spot** at [pbskids.org/zoom](http://pbskids.org/zoom)
- Send an idea for a new way to experiment with vision to ZOOM at [pbskids.org/zoom](http://pbskids.org/zoom)