

# Hot Dog Pizza: a Messy Lesson on Venn Diagrams

Rhonda Henderson Adams

## Abstract

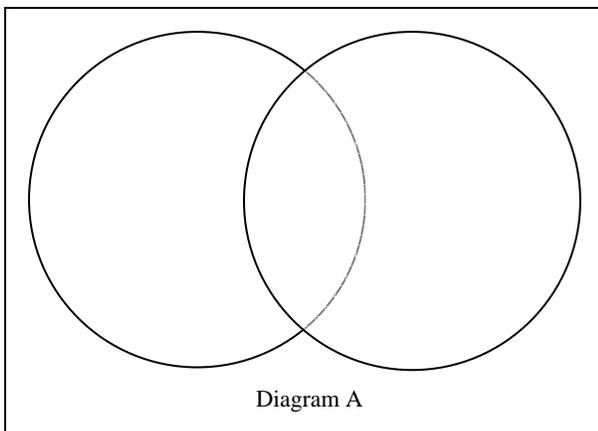
With the increased emphasis on teaching higher order thinking skills to younger children, teachers find themselves scrambling for innovative ways to teach those skills. This article offers an effective, classroom-tested approach to introducing and using the Venn Diagram across the curriculum.

Kids love pizza. Kids love hot dogs. But when I ask my students how many of them like to eat hot dog pizza, the overwhelming response is, “Not me! That’s GROSS!” When I go on to explain that it happens to be one of my husband’s favorite meals, their response is, “Oooh—COOL!” By using this approach, I have earned two things: their eternal respect for being married to a man with a stomach of steel and their undivided attention. Now I can successfully introduce them to the Venn Diagram, which will serve as a valuable learning tool for years to come.

## A Mathematical Introduction

In preparation for the lesson, I post a blank Venn Diagram at the front of the classroom a few days before my introduction in order to generate curiosity. (This also allows students to make their own connections once the discussion is underway.) I begin by telling my students a personal story about a mess I made making pizzas one evening:

“In our house, my husband is the only person who likes to eat hot dog pizza (a cheese pizza with cut-up hot dogs on it) so I bake two at a time: one for him and a pepperoni pizza for

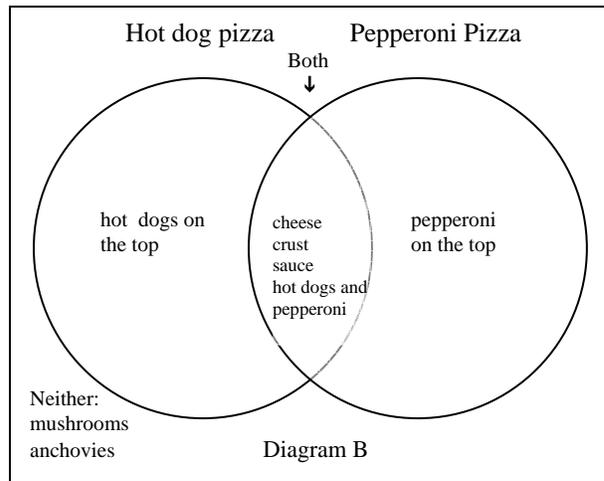


the children and me.” I go to the overhead projector and illustrate two separate circles accordingly. I continue my story, “One evening, I was taking both pizzas out of the oven and I

accidentally dropped his pizza on the edge of our pizza.” I lay a portion of the hotdog pizza circle over a section of the pepperoni pizza circle (see diagram A.)

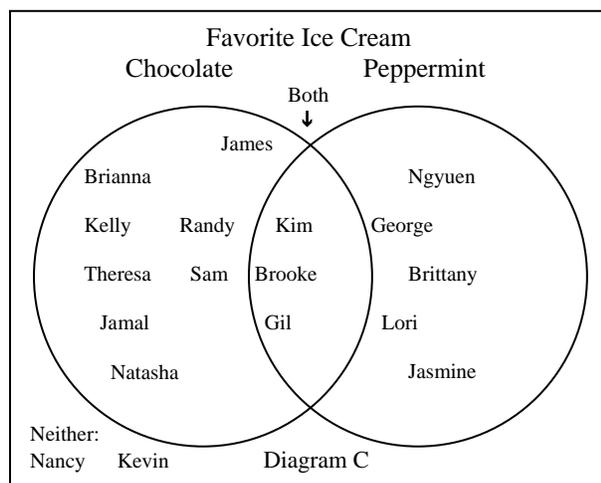
I ask them, “If this circle represents the pepperoni pizza, and this circle represents the hot dog pizza, what kind of pizza do I have in the middle?” Their response: “BOTH!” After letting them know that they are indeed correct, I ask them questions to compare and contrast the two pizzas (see diagram B.)

I also throw in a question about the mushroom (or anchovy) that inadvertently showed up on the side of the pan. “Where does this belong, class?” Generally, the children can’t decide on this one, so I draw the alien object off to the side of my overhead transparency and explain that sometimes there



are items that don’t belong and exist outside of the diagram.

Using the blank diagram strategically placed at the front of the room, I then provide another example based on student ice cream preferences to keep the discussion lively. Making

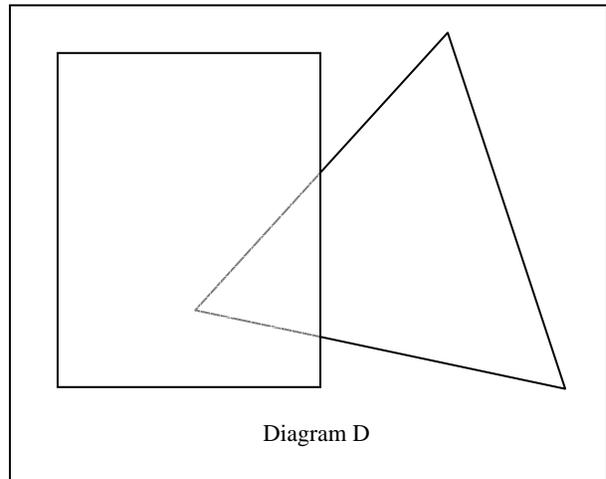


sure to choose one popular and one not-so-popular flavor, I have students write their names on post-it notes and place them under their favorite flavor. If their favorite flavor isn’t shown, I ask them to put their name outside the diagram (see diagram C.)

After the diagram is complete, I ask

students numerous questions concerning our newest creation. For example, I might ask, “How many more students like chocolate ice cream than students who like both flavors?” Or “How many students like chocolate or peppermint ice cream—but not both flavors?” I keep this diagram handy for several days so that students can create a bar graph at a later date using the same information.

After lunch, where pizza is certain to be on the menu, I have students take chalk (or yarn) out to recess so that we can create more Venn Diagrams using the students themselves. One student draws the circles while the other students divide into groups based on the color shirts they’re wearing. Also, to capitalize on the fact that our cafeteria only serves rectangular slices of pizza, students are encouraged to take turns drawing diagrams using different shapes (see diagram D.) In this way, students continue to make concrete connections to the abstract diagram.



### **The Literary Connection**

On the same day, before I begin a read-aloud, I select a book that is unfamiliar to my students. (I always preview the book well in advance to avoid any possible embarrassment.) After talking about the cover, author and illustrator, I do a brief picture walk and ask questions to help build background and generate interest.

Once the reading is finished, I ask questions about the story that range from the characters and setting to plot and summary. Making sure to place myself near the Venn Diagram we completed earlier, I ask the students how we might go about comparing two of the characters

in the story to one another. Usually someone will volunteer the Venn Diagram for the job and I proceed to the chalkboard where the students guide me through the process of making and labeling a new Venn Diagram. Together we come up with things the characters have in common as well as the unique features of each character.

There are numerous alternatives to comparing two characters in the story that I sometimes use. For example, I might ask the students to compare different versions or viewpoints of the same story, such as *Little Red Riding Hood* and *Lon Po Po* or different stories of the same genre, for example *Cinderella* and *Snow White*. One of the most popular comparisons that my students seem to enjoy is comparing the movie versions of classic tales to the books themselves, such as *Shiloh* or *The Borrowers*.

Regardless of the approach I use for the compare/contrast segment of my reading time, I like to end the day with students creating their own Venn Diagrams comparing themselves to a character from one of our selected readings. By doing so I can effectively transition them from the concrete to the abstract concept of the Venn Diagram.

### **Putting It All Together**

The Venn Diagram is one of my favorite tools for teaching everything from math and reading to science, social studies, and language skills. Not only do I enjoy using it as a teaching tool, but also research supports the use of graphic organizers like the Venn Diagram to foster active learning. According to researchers Flood & Lapp (1988) graphic organizers aid comprehension and learning. In addition, Vygotsky (1962) considers visual graphics a mental tool that helps students remember information and ideas. Like most teachers, I really want my students to learn—but I also want them to remember every single pearl of wisdom I have imparted to them when test time rears its' ugly head.

To conclude, by spending a little time up front promoting the usefulness of the Venn Diagram and providing numerous opportunities for my students to practice using it, I can equip students with a tool for a lifetime of learning. And it all begins with Hotdog Pizza!

### **References**

Flood, J., & Lapp, D. (1988). "Conceptual Mapping Strategies for Understanding Information Texts." *The Reading Teacher*, 41(8), 780-783.

Vygotsky, L.S. (1962). *Thought and Language*. Cambridge, MA: MIT Press.

*Rhonda Henderson Adams is a second grade teacher at Southside Primary School in Cleveland, Texas. She can be reached by e-mail at adamsrk@hotmail.com.*