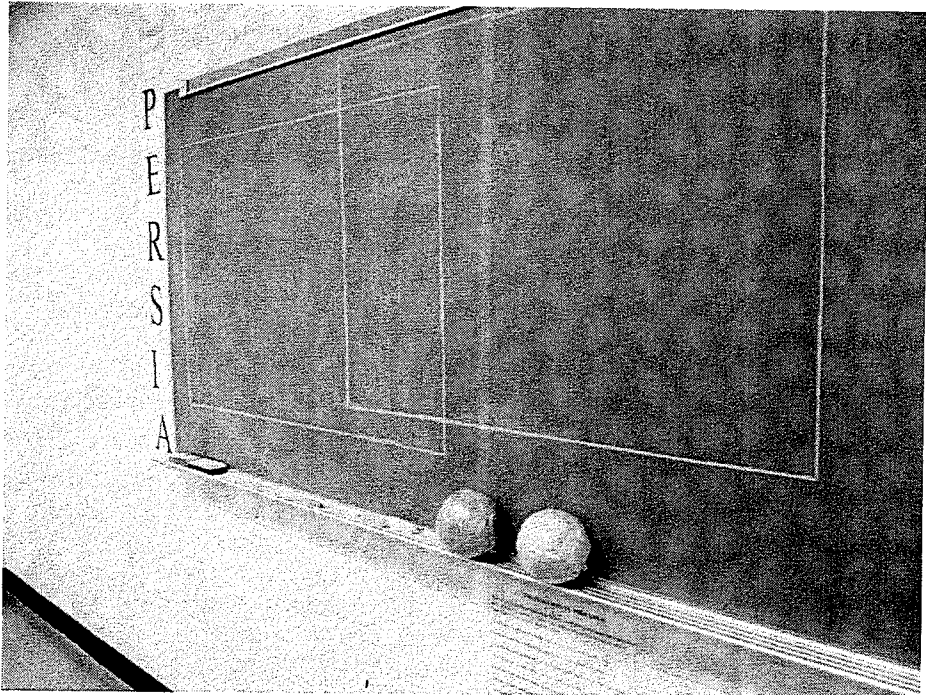


Chapter Seven

Interactive Venn Diagrams

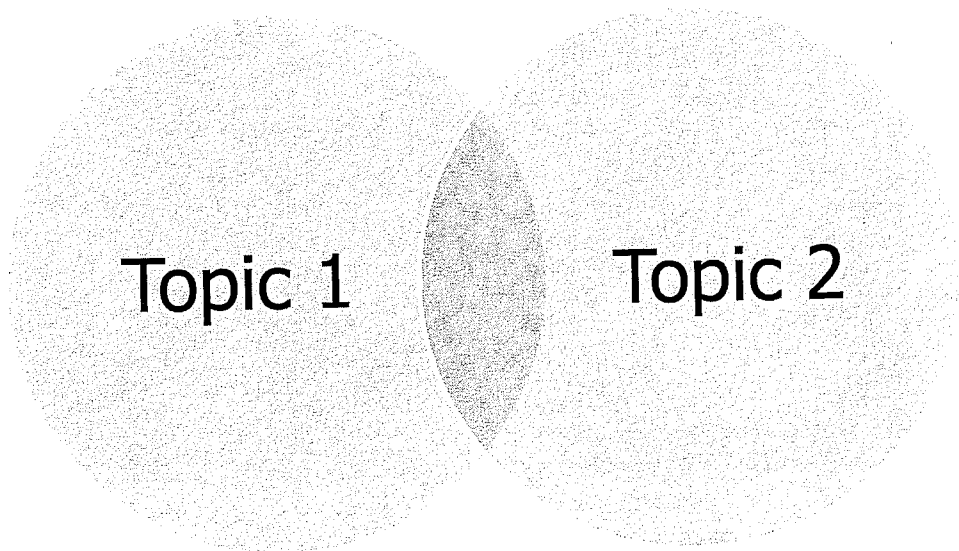


Venn diagrams are an excellent way to teach comparing and contrasting skills which are a critical piece of proper historical analysis. Many educators are familiar with these diagrams and likely already use them

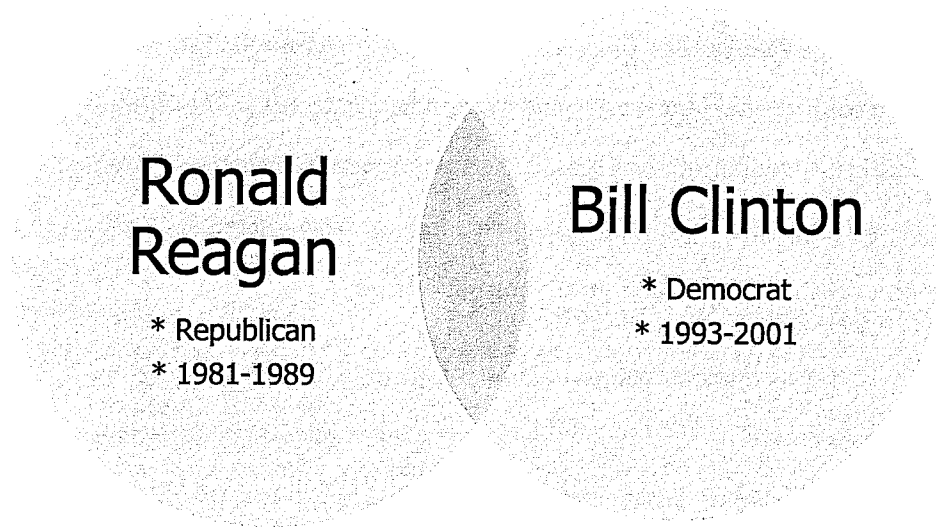
in their daily classrooms activities. Because Venn diagrams are an old teaching concept; many students are already familiar with this educational strategy. Here is, however, a brief description for those readers who have never used Venn diagrams or have forgotten about this instructional method.

At the most basic level a Venn diagram is a collection of circles drawn together on the same horizontal plane. The purpose of the diagram is to show a logical relationship between two possible topics. In a Venn diagram, the grouping of common traits or features within a given circle means that these items have a logical connection to each other. The following image is an example of a Venn diagram with historical information added to each Venn's circle. For example:

An empty Venn diagram . . .



Changes to . . .

A simple Venn diagram (with two topics) . . .

The Venn's left "circle" list information about President Reagan, while the right "circle" displays information about President Clinton. The common features that Reagan and Clinton share w displayed where the two circles overlap. For example, both were U.S. Presidents who were elected for two consecutive terms. In addition, both of their second terms were increasingly troubled by scandals (Iran-Contra & Lewinsky scandal).

Venn diagrams can compare and contrast any subject matter. Take for example an introductory to a general physics class. The circles of a Venn diagram could compare and contrast classic mechanics versus quantum mechanics. In biology, a teacher could compare and contrast the characteristics of plant cells as opposed to animal cells. A literature class could compare and contrast romanticism versus realism. Ultimately, when using Venn diagrams the possible topics for a teacher are nearly limitless.

Venn diagrams are a useful teaching strategy, but there is a drawback in the way this activity is traditionally applied in the classroom. As a strategy, the traditional Venn diagram is fairly teacher-centered in its classroom application. Problems occur due to the fact that some students may have a difficult time staying focused on the teacher and information presented in a Venn diagram. The traditional approach is to have students sit passively at their desk and “get” the information (sit and get).

Any diagram placed on a board or projector screen is still basically a lecture format, with students becoming passive receivers of the information. The goal, however, of an interactive Venn diagram is to move the focus of the information closer to the students. In this way, students need to actively engage and focus on the information, as well as interpret and explain the information presented in the Venn diagram.

How an interactive Venn diagram works:

Here is a short explanation of the activity. To illustrate the point the previous Venn diagram of Ronald Reagan and Bill Clinton will be used:

1. A large Venn diagram in two colors is drawn on the chalk board. For example, one Venn circle is drawn in red while the other circle is drawn in green.
2. On the board, inside the red Venn circle, write the name Reagan; while inside the green Venn circle write the name Clinton. Briefly inform the students that they will have to catch the ball and state an important fact about their topics written inside the circles on the

board. In this case the topics which are being compared are Ronald Reagan and Bill Clinton. After they have stated a correct and relevant fact about their individual topic, they are to politely toss the ball to somebody else in the classroom who has not yet answered a question. The person who catches the ball now also has to cite a fact about Reagan or Clinton.

3. Toss two balls out into the classroom. The balls should match the colors of the Venn diagram on the chalkboard, so in this case one should be yellow while the other is pink. If the Venn diagram has a yellow circle, then the student who catches the yellow ball has to explain a relevant fact about the topic written the Venn's circle.
4. As each student catches the ball, they must state a historically relevant fact about their topic. Some possible examples are Clinton was a Democrat, Reagan advocated supply-side economics, etc.
5. At random intervals, the teacher should ask students to list features that both Presidents had in common (Both were former state governors, both served two consecutive terms, both were former state governors, etc.).

Remember

Encourage students to confront and discover what they "think" they know versus what they "actually" know.

Remember

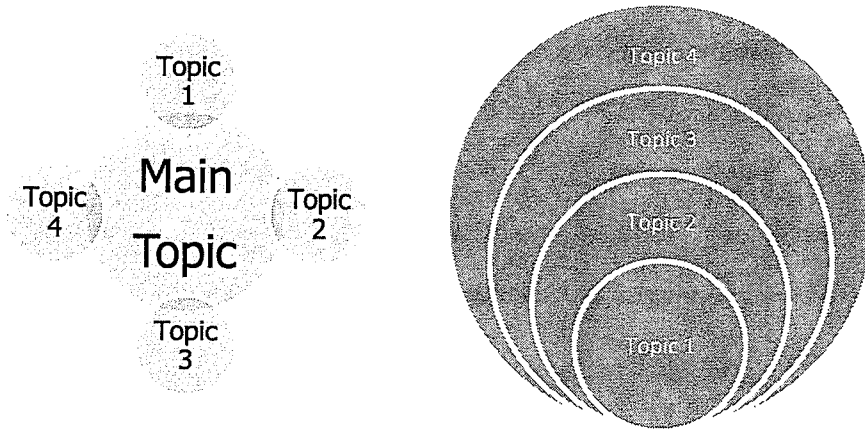
The interactive Venn diagram strategy moves quickly, so even students with shorter attention spans stay focused. More importantly, a teacher is able to check the level of student understanding as the overall class participates in the activity. In other words, the activity utilizes the principle of micro assessment. By throwing the ball to each student in the classroom and then following each “catch” with a question, in a few minutes a teacher quickly finds out what they actually know.

The circulation of the “Venn” balls around the classroom even creates a slight level of anticipation which simulates a feeling of test anxiety in students. Catching and answering questions in this manner gives students practice at not “freezing-up” during a “testing of their knowledge” situation. If students are unable to correctly answer questions during this activity, then they likely do not really know the information.

The goal for any teaching strategy is for students to actively engage in the instructional activity, while being able to correctly recall and analyze previously learned information. The addition of a quick moving ball toss activity with a Venn diagram generates energy and engages most students. The catching of the ball and being placed on the “spot” forces students to test their ability to retrieve knowledge. If students are unable to recall previously learned information – they have not really learned that information!

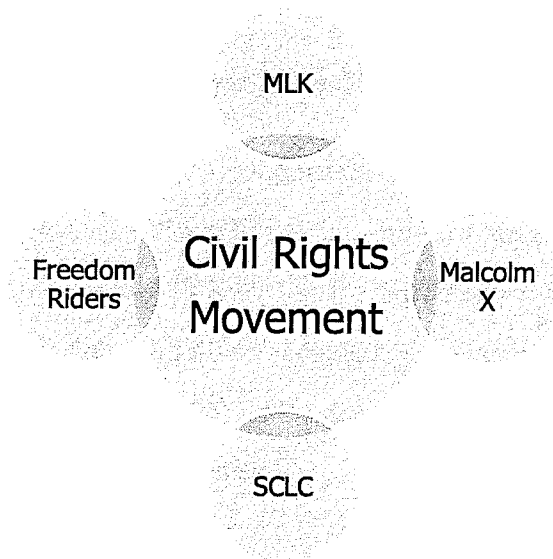
The next few images display the many different ways to construct a Venn diagram. Teachers should remember that Venn diagrams are extremely flexible in their application. The features and relationships of the topics being compared will dictate the style and shape of the Venn diagram. There really is

no one “best” diagram, only numerous options. However, a two-topic Venn diagram is the simplest one to use and is the easiest for students to understand. Creativity and variety will encourage classroom learning and will remind students to view information in as many different ways as possible.

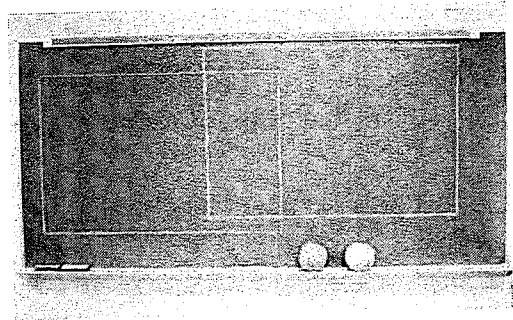
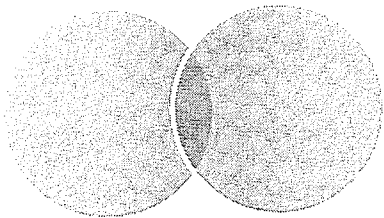


Examples of different types of Venn diagrams

A two-subject Venn diagram is one of the easiest ways to compare and contrast topics, but with practice one can start using three or four topics.



The guiding principle behind the interactive Venn diagram strategy is to actively engage students while encouraging analytic reasoning and information recall. Again, a teacher should explain to the students that the colored balls actually represent the individual circles of a Venn diagram. The strategy utilizes the movement of colored balls in order to create a sense of motion and create an interactive learning experience. As simple as it sounds, motion in a classroom fires the brain's neurons, making students less likely to "tune out" and daydream. The use of different colored chalks, along with matching colored balls; physically models the thought process that is required when comparing and contrasting academic information.



Venn diagram and an "Interactive" Venn diagram

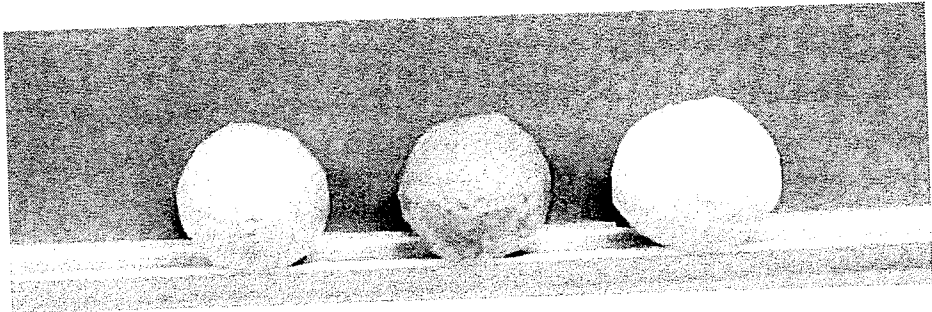
As the above picture demonstrates, the pink ball (left) corresponds to the part of the Venn diagram drawn with pink chalk, while the blue ball (right) connects to the portion of the Venn diagram drawn in blue chalk. Keep in mind that any color chalk may be used for this strategy. Just make sure that the Venn diagram is easily visible for all of the students in the room. If a teacher is using a white board, then have the ball's color match the color of the white board markers.

Remember

A central principle of micro assessment -- check for learning and reinforce past concepts (myelination).

Remember**How to make interactive Venn diagram balls:**

1. Select a colored paper that closely matches the chalk or dry erase marker in the classroom.
2. Take old newspapers or similar disposable paper and crumple it into a ball. Keep layering the paper around the paper wad until it is roughly about the size of a grapefruit.
3. For the final outside layer, crumple the selected colored paper around the paper wad. When you are finished with this step, none of the newspaper layers should be showing.
4. Wrap the grapefruit-sized paper wad with transparent tape. Cardboard box sealant tape works well for this task. When finished, the colored paper should resemble the ones in the picture below.



Finished "interactive" Venn diagram balls

The driving goal behind this strategy is to extend the logic of the Venn diagram out into the classroom. So if a blue and pink diagram is on the board, then the accompanying blue and pink balls will project the diagram out among the students. Using colored balls to physically extend a Venn diagram out into a classroom engages more students and encourages participation of the information within the Venn diagram's circles. The ultimate goal is to have all students in the classroom to actively engaging, analyzing and remembering academic content.

Warning

This strategy works better if an educator already knows the answers to the comparisons. If a teacher has to pause to look up the answers – it breaks the lesson's rhythm.

Warning

Initially, a teacher should quickly write down the student responses inside the appropriate Venn diagram's circle. Eventually, however, after students become familiar with this strategy, a teacher can skip writing the classroom's responses on the board. Using a Venn diagram in this manner allows a teacher to quickly evaluate previously learned academic material,

which means that speed and coverage of the information is essential. In about five or ten minutes, a teacher can quickly and easily discern whether a class knows the subject matter or not. In addition, this act of “micro assessing” provides the class with an additional review of the information. This quick check of a student’s “learning” actually reinforces previous student “learning”!

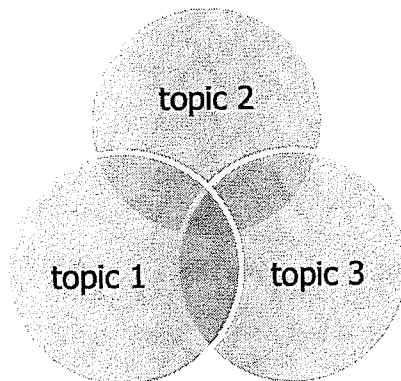
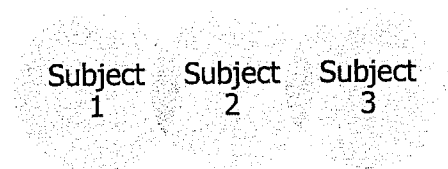
Note: Be aware of students with special needs. If the tossing of balls in the classroom creates problems -- change the action. Instead of throwing a ball to facilitate questioning, pull the student’s name from a hat. Simply have all of the students in your class place their name on a slip of paper or an index card. When a teacher is leading the class through an interactive Venn diagram strategy, simply pull the student’s name from a hat or box. The act of pulling a student’s name out of a hat will replace the “ball toss” aspect of the interactive Venn diagram. Instead of students being selected by the act of catching a ball, they are selected when their name is pulled from the hat. By not using the “Venn” balls, some of the energy may dissipate from the activity, but now all students can participate regardless of their circumstances.

Additionally, some of students in a class may suffer from color blindness, but this issue is easily remedied by using colors that are visible for these students. Individuals with color blindness often have difficulty distinguishing between dark or light greens, reds, and browns. If this the case, simply pick a color for the Venn diagram balls that all students can easily recognize such as yellow and blue or black and white.

Beyond the two-subject Venn diagram:

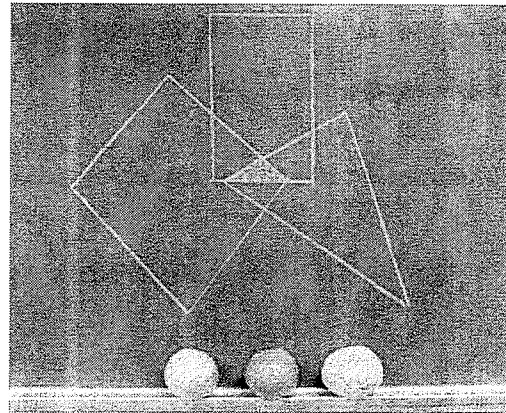
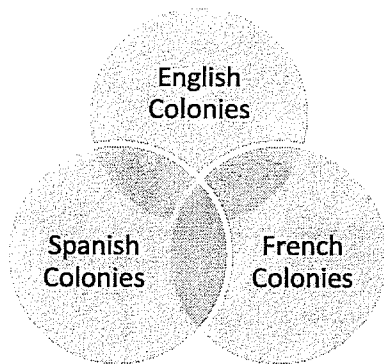
The following images display some typical three-topic Venn diagrams, which are similar to the two-topic diagrams only more complex. The previously explained interactive Venn diagram strategy works with three-subject Venn diagrams, but the overall activity is more challenging for an instructor. When correctly using this strategy, the classroom literally becomes an orchestra with the teacher acting as a maestro.

However, if the teacher has not sufficiently practiced using the two-topic Venn diagram strategy, then there is a risk that the classroom will literally turn into an out of control three-ring-circus, with the teacher becoming a struggling ringmaster. Educators should not attempt the three-topic interactive Venn diagram until they have mastered the two-topic interactive Venn diagram.

Example 1**Example 2****Three-topic Venn diagrams**

In the previous diagrams, example 1 (to the left) is useful when comparing and contrasting topics that all share a similar trait. Example 2 (to the right) is valuable for comparing and contrasting topics that possess a cause and effect relationship or chronological order.

The next image illustrates the interactive Venn diagram strategy applied to a three-topic Venn diagram.

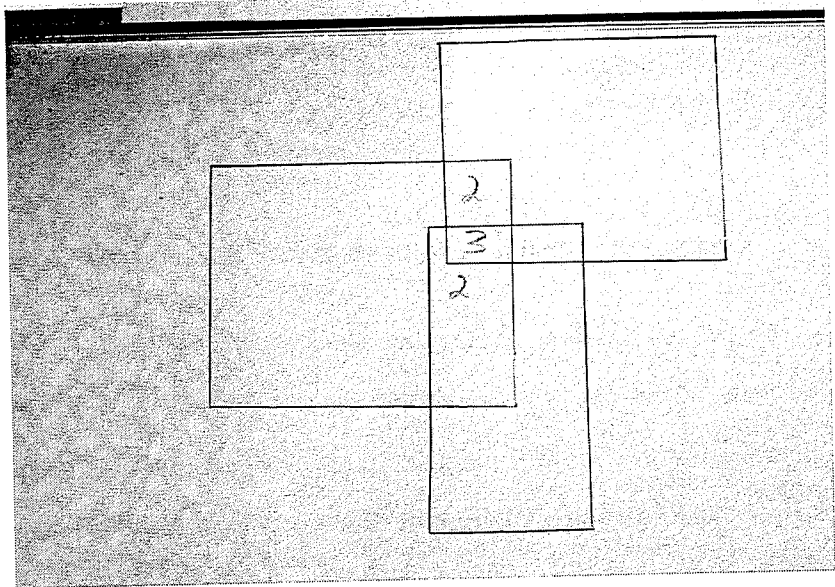


Example of a three-topic interactive Venn diagram

To use this teaching strategy an educator will need three different colored balls. Otherwise, the three-topic interactive Venn diagram moves and looks like a two-topic Venn diagram. In the previous images, the picture on the right displays Venn diagram circles that have been replaced with different geometric shapes. This is an individual style choice for a teacher, just so students can differentiate between the three topics being compared. However, irregularly shaped diagrams are more difficult for a teacher to write information into, due to the odd shapes of the diagrams.

As an instrument for review, when this strategy is done well, it is a beautiful thing to behold. The class and the teacher become fully engaged with the topic at hand, with all eyes and attention focused on the moving balls and the classroom analysis. Again, as a reminder, the educator needs to have a firm understanding of the topics being compared in order for this strategy to flow smoothly. If a teacher stops during the teaching activity to look up answers to questions – the activity’s energy will quickly dissipate. This means that instructors need to possess thorough knowledge of their academic discipline.

Variation of the three-topic Venn diagram:



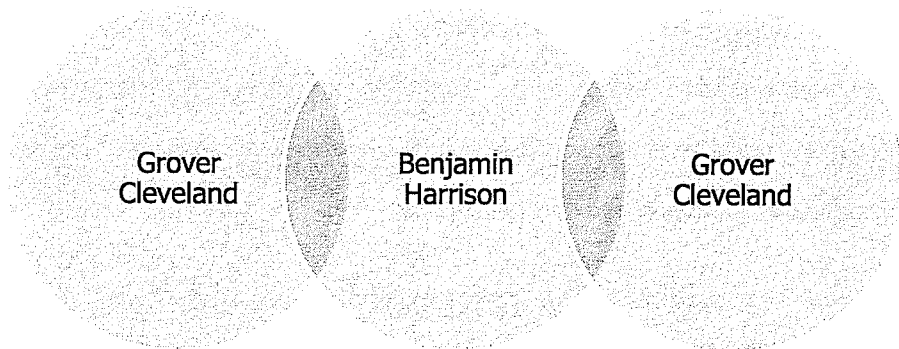
For example:

- Venn topic -- the European powers that were the most successful at colonizing/invading the North American continent: the “3” could

represent 18th century England which was a Protestant-dominated country. While the “2”s could represent 18th century Spain and France which were Catholic-dominated countries.

- Venn topic – early United States political factions and leaders: the “3” could represent Thomas Jefferson as a Democrat-Republican while the “2”s could represent the Federalist ideals. One “2” is John Adams (Federalist) while the other “2” would represent the concepts relating to Alexander Hamilton (Federalist). Or the diagram could represent the political factions during the Civil War such as the Republicans, Southern Democrats, and Northern Democrats.

The next diagram incorporates an element of “chronological flow” or sequence of events. This type of Venn diagram comparison works particularly well when analyzing lines of succession between historical eras, presidents, kings, etc.



A Venn diagram showing historical sequence

The type of Venn diagram displayed above is great for showing sequence and change over time. In this case, students could analyze why there was a change from Democrat (Cleveland) to Republican (Harrison) president, and then back to a Democratic (Cleveland) president.

In the end, there are numerous variations of the three-topic Venn diagram, with the choices for a teacher being almost limitless. All that is required is a little forethought and creativity.

Warning These strategies are not the same as a drill and kill approach! If any strategy or activity is overused it will become boring. ***Warning***

Compare and Contrast Charts – Sample Topics:

Sample lists of historical comparisons have been provided in order to assist with the implementation of the interactive Venn diagram teaching strategy. The lists of topics mentioned in these charts are far from complete. However, once an educator gets the feel for this strategy, it is easy to create additional historical comparisons. The following charts provide general, overall historical events, individuals, and concepts that work well for any Venn diagram compare and contrast activity.

Chart 1

<p>Compare and contrast the important events, trends and concepts that occurred during certain decades.</p>	<p>Compare and contrast the historical themes for a decade (P.E.S. or P.E.R.S.I.A.)</p>
--	--

Examples:		Example: the 1880s
1790s v. 1800s	1830s v. 1840s	P (political) v. E (economic)
1850s v. 1860s	1930s v. 1950s	S (social) v. I (Intellectual)
1960s v. 1970s	1980s v. 1990s	R (religious) v. A (artistic)
1930s v. 1960s	1770s v. 1860s	P (political) v. S (social)
1870s v. 1960s	1920s v. 1960s	
1750s v. 1770s	1890s v. 1930s	

Chart 2

Compare and contrast the historical eras and topics:	Compare and contrast the events and concepts that occurred during Presidential terms in office.
1 st Great Awakening v. 2 nd Great Awakening	Ronald Reagan v. William Clinton
American Revolution v. Civil War	Abraham Lincoln v. Andrew Johnson
Broad Constitutional interpretation v. Narrow Constitutional interpretation	John Adams v. Thomas Jefferson
New Deal v. Great Society	Calvin Coolidge v. Franklin D. Roosevelt
Manifest Destiny v. Imperialism	

Abolitionism v. Civil Rights	Thomas Jefferson v. Andrew Jackson
Reconstruction v. the New South	Richard Nixon v. Jimmy Carter
Federalist Era v. Common Man Era	James Polk v. Millard Fillmore
Camelot v. Reagan Revolution	William Taft v. Woodrow Wilson
Mexican War v. Spanish-American War	Grover Cleveland v. William McKinley
World War I v. World War II	Harry S. Truman v. Lynden B. Johnson
Korean War v. Vietnam War	H. Hoover v. George W. Bush
Gilded Age v. Roaring 20s	F.D.R. v. L.B.J.
Progressive Era v. Civil Rights	T.R. v. F.D.R.
Square Deal v. New Deal	W. Wilson v. W. Harding
Old Southwest v. New Southwest	

(Historical Eras and Topics)	(Presidential Terms)
<p>Democrats v. Whigs</p> <p>1860 Democrats v. 1960 Democrats</p> <p>Canals v. Railroads</p> <p>Capitalism v. Communism</p>	<p>George H. W. Bush v. George W. Bush</p> <p>William Henry Harrison v. Benjamin Harrison</p> <p>Jimmy Carter v. Ronald Reagan</p>

Chart 3

18th Century Topics	19th Century Topics	20th Century Topics
<p>Federalist v. Democrat-Republican</p> <p>Mercantilism v. Capitalism</p> <p>Anti-Federalist v. Federalist</p> <p>Loyalist v. Patriot</p>	<p>Dred Scott Case v. Plessy Case</p> <p>Missouri Compromise v. 1850 Compromise</p> <p>Field slaves v. House slaves</p> <p>Whigs v. Democrats</p>	<p>Black Panthers v. A.I.M.</p> <p>DeJure v. Defacto</p> <p>Fascism v. Communism</p> <p>1980 Democrats v. 1980 Republicans</p> <p>Jazz Age v. Rock & Roll</p>

(18th Century)	(19th Century)	(20th Century)
Shay's Rebellion v. Whiskey Rebellion	B. T. Washington v. W.E.B. Dubois	Malcolm X v. Martin Luther King
Old Lights v. New Lights	1861 Democrats v. 1861 Republicans	Liberal v. Conservative
Articles of Confederation v. U.S. Constitution	Old immigrants v. New immigrants	Left-wing v. Right-wing Rust Belt v. Sun Belt
French-Indian War v. American Revolution	1896 Populist v. 1896 Republicans	Isolationism v. Multilateralism
1763 Treaty of Paris v. 1783 Treaty of Paris	Millerites v. Mormons	Red Scare v. McCarthyism
Upper Southern Colonies v. Lower Southern Colonies	War of 1812 v. Mexican War	Beatniks v. Hippies Dixiecrats v. Democrats
Chesapeake v. Plymouth	Social Gospel v. Social Darwinism	New Deal v. Great Society

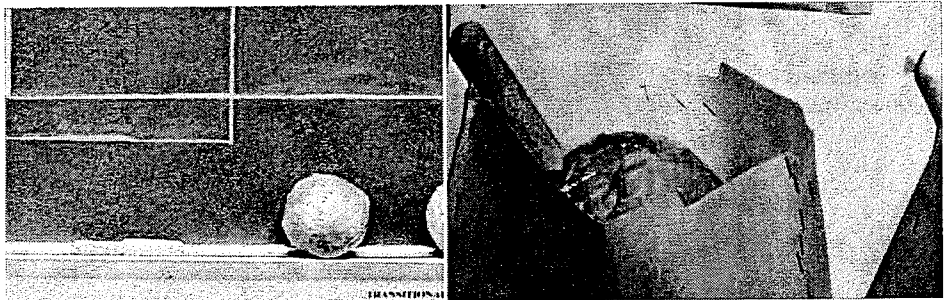
Iroquois v. Algonquin	Silverites v. Goldbugs	W.E.B. Dubois v. M. L. King
French (and/or Spanish) Colonies v. English Colonies	Romanticism v. Realism	Korean War v. Vietnam War
Paxton boys v. Regulators Movement	Republican Motherhood v. Cult of Domesticity	Evolution v. Creationism
Stono Rebellion v. Leisler's Rebellion	Early Industrial Revolution v. Late Industrial Revolution	Lost Generation v. 1960s Counterculture
Sugar Act v. Stamp Act		D-Day v. TET

Ultimately, numerous historical combinations and comparisons are possible, but teachers should look at the requirements of their curriculum and the needs of their students. Remember, it is not what the teacher knows, but what the students can remember.

Summary

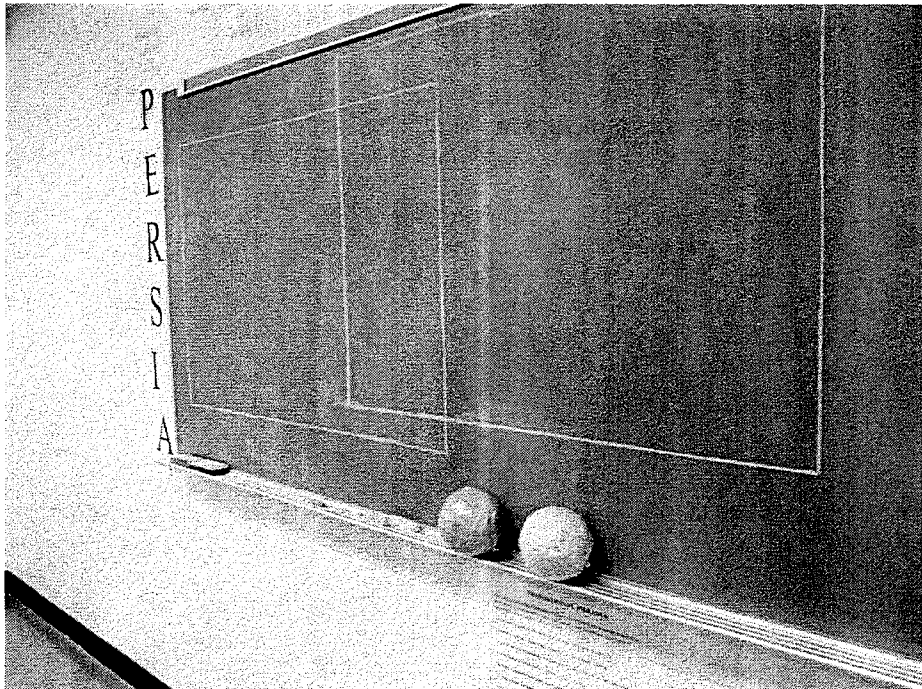
- A traditional Venn diagram is very teacher-centered with students recording notes off of a board while the teacher explains.

- Interactive Venn diagrams create engagement by having students catch balls and answer questions while analyzing a teacher-directed comparison.
- The motion of the Venn diagram balls, when combined with student responses, is more student-centered and engaging than a traditional Venn diagram teaching strategy.
- The interactive Venn diagram is an excellent review activity as well as a way to sharpen comparing and contrasting skills.
- There are numerous variations of the traditional Venn diagram.
- This strategy reinforces the principle of micro assessments and the action of brain myelination.



Chapter Seven

Interactive Venn Diagrams



Venn diagrams are an excellent way to teach comparing and contrasting skills which are a critical piece of proper historical analysis. Many educators are familiar with these diagrams and likely already use them