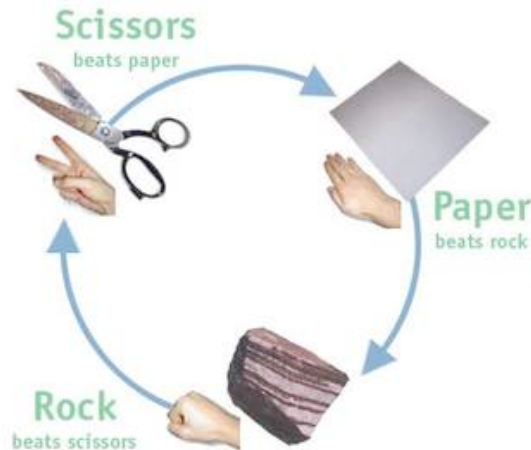


Rock , Paper , Scissors or San Francisco's Roshambo

A Red White and Blue playground tradition.

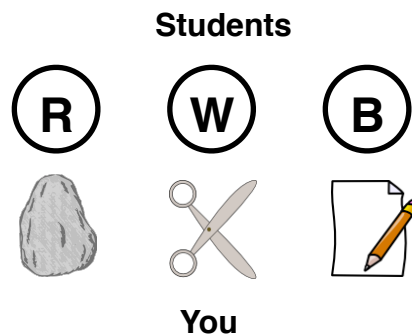
Most students remember playing Rock, Paper and Scissors. Many students also call it **Roshambo** (see the reason for this at the end of the paper). Can you remember standing in a circle on the playground with 2 friends "throwing" your hand out with 1, 2 or 3 fingers showing and then deciding who won the toss?

Rock beats scissors , Scissors beats paper and Paper beats Rock

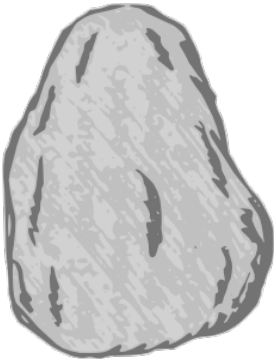


This is a magic effect that recreates the game in a way that allows you to know the outcome of a throw down between 3 players without you even seeing them. It is easy and will baffle your students.

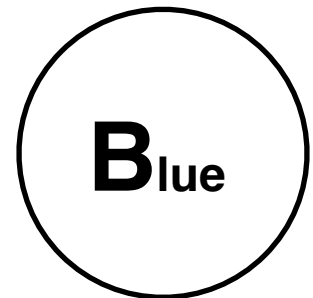
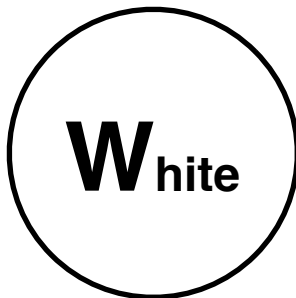
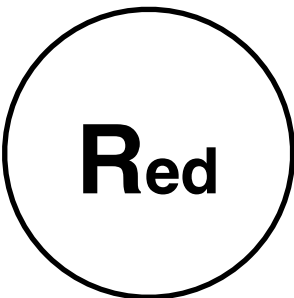
Select 3 students to sit across from you at a table. Lay out the pictures of a Rock, Paper and Scissors. Also lay out the Red , White and Blue dots in front of the students. Tell them the dots will represent the 3 players. Lay out the rock, paper and scissors behind the dots as shown so that Red beats White beats Blue beats Red. The layout is shown below.



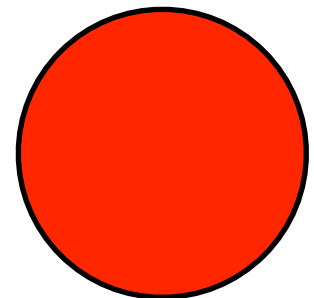
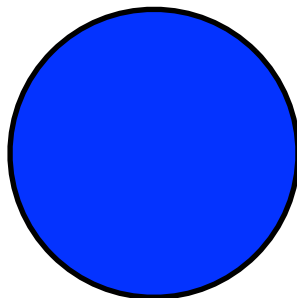
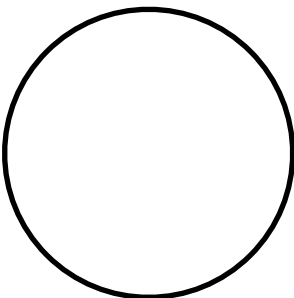
Cut out the Rock, Papers and Scissors below.



Cut out the 3 dots below



Optional: Cut out the 3 colored dots below. (the colored dots are a nice touch if you have a color printer. If not remind them the R , W and B stand for Red, White and Blue.



Cut out the answer states below if you find you need it. Do not show this to the students.

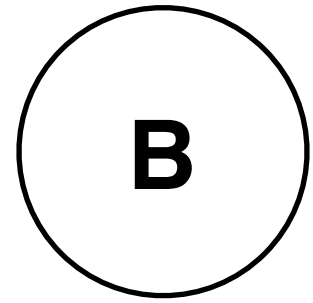
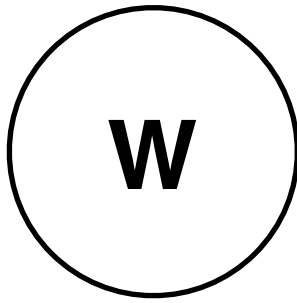
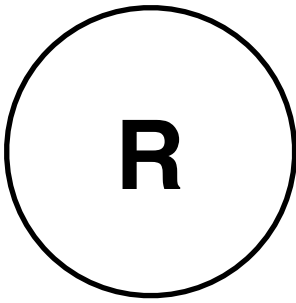
Even State: Red beats White beats Blue beats Red

Odd state: Red beats Blue beats White beats Red

Or print out his abbreviated one

Even: R W B (--> R) **Odd:** R B W (--> R)

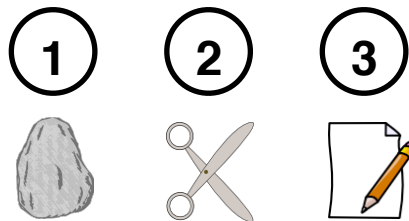
Optional Player Pisces: You may like using just a single letter for each player.



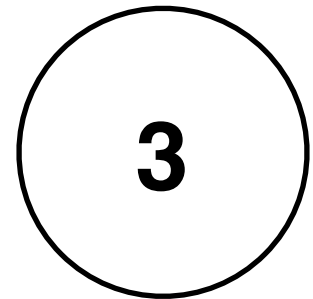
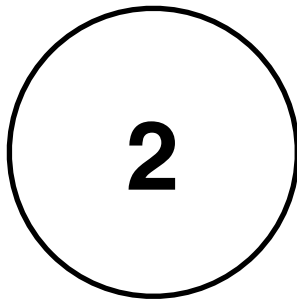
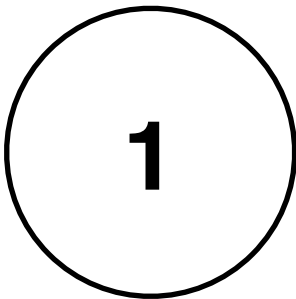
Optional number version

I like using the numbered player pieces with young students. It is easier for them to use numbers. The setup at the start is **1 beats 2 beats 3 beats 1** and is shown below. Then use the answers shown below to predict each outcome.

Students



You



Cut out the answer states below if you find you need it. Do not show this to the students.

Even State: 1 beats 2 beats 3 beats 1

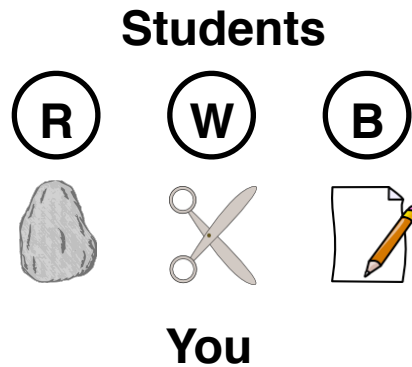
Odd state: 1 beats 3 beats 2 beats 1

Or print out his abbreviated one

Even: 1 2 3 (--> 1) **Odd:** 1 3 2 (--> 1)

Presentation:

Lay out the Red , White and Blue dots in front of the students. Tell them the dots will represent the 3 players: **R** for the **red** player, **W** for the **white** player, and **B** for the **blue** player. Lay out the rock, paper and scissors behind the dots as shown so that Red beats White beats Blue beats Red. The layout is shown below.



Even: R W B (--> R) Odd: R B W (--> R)

Remind the students how the game works. Say “The rock is next to the red dot (with an R) so the red player will throw a rock. The scissors is next to the white dot (with a W) so the white player will throw a scissors. The paper is next to the blue dot (with a b) so the red player will throw a paper. Remind the students that a player that throws a rock beats a player that throws a scissors, a player that throws a scissors beats a player that throws a paper and a player that throws a paper beats a player that throws a rock. Say “rock beats scissors beat paper beats rock”.

Turn 1: Now tell them that you will turn you back and ask them to switch any two of the items (rock, paper or scissors) by switching the locations of 2 of the items. Have them pick any 2 players and tell you which ones they selected. There has been 1 (odd number) of switches so use **R B W (--> R)**
Red beats Blue beats White (beats Red) to tell them which of the 2 players wins without looking.

Keep your back turned.

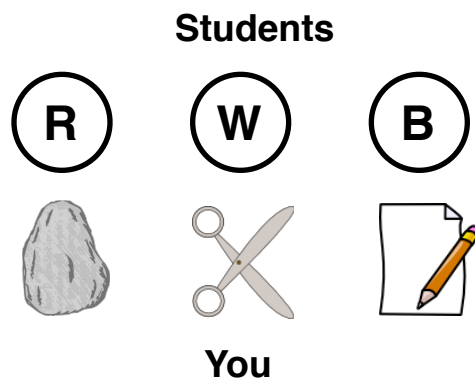
Turn 2: Now ask them to switch any two of the players (red, white or blue) by switching the locations of 2 of the 2 dots. Have them pick any 2 players and tell you which ones the selected. There has been 2 (even number) of switches so use **Even: R W B (--> R)**
Red beats White beats Blue (beats Red) to tell them which of the 2 players wins without looking.

Turn 3: Now ask them to either switch **2 of the players OR 2 of the items** but do not you what they did. There has been 3 odd number) of switches so use **R B W (--> R)**
Red beats Blue beats White (beats Red)

Tell them that you can tell them the outcome of all three players. State that **Red beats Blue beats White (beats Red)**

Switching Extension: You can stop after they have switched in any step and ask them if they are OK where they are or if they want to make another switch. Just keep track of the total number of switches and use the even and odd rules to predict the outcome.

Startup Extension: I use a different set up to lay out the players and item at the start. I then introduce the players and items and show who beats who. I then move 2 players to demonstrate that switch and I also switch 2 items so that I am sure the students have the switches correct. I then move the move the players and items into the correct startup positions and begin the trick



Better Startup Extension: I use a different set up to lay out the players and item at the start. I then introduce the players and items and show who beats who. I then move 2 players to demonstrate that switch and I also switch 2 items so that I am sure the students have the switches correct. I then move the move the players and items into the correct startup positions and begin the trick.

The best start up of all: I use any set up to lay out the players and item at the start. I then introduce the players and items and show who beats who. I then move 2 players to demonstrate that switch and I also switch 2 items so that I am sure the students have the switches correct. I then **LET THE STUDENTS SET UP THE players and items themselves.** I then note whom **red beats** and then whom that player beats.

It must be either **R B W (--> R)** or **R B W (--> R)**

if it is R B W (--> R) then

Even: R W B (--> R) odd R B W (--> R)

which is the same as the original setup

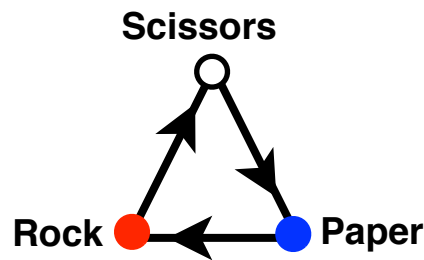
if it is R W B (--> R) then

Evan: R B W (--> R) Odd: R W B (--> R)

Impromptu Version: Just draw the 3 objects and write out Red, White and Blue on slips of paper and do the trick anywhere any time.

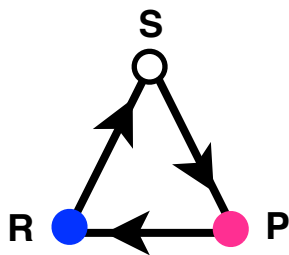
Why It Works

The original set up was **Red beats White beats Blue (which beats Red)** **R W B (--> R)**

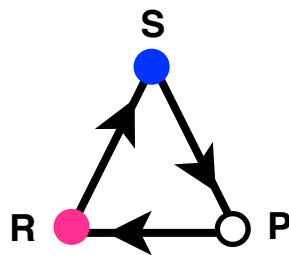


Switching any 2 PLAYERS makes **Red beat Blue beat White (which beats Red)** **R B W (--> R)**

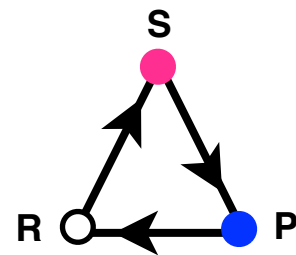
Switch Red and Blue



Switch White and Blue

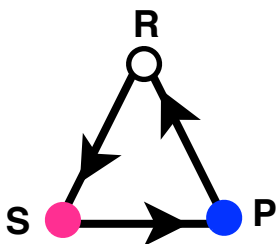


Switch Red and White

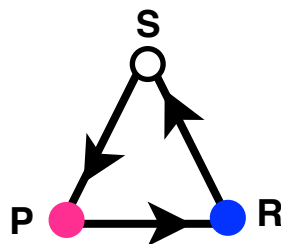


Switching any 2 Objects makes **Red beat Blue beat White (which beats Red)** **R B W (--> R)**

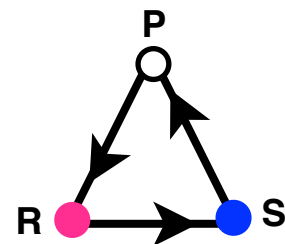
Switch Rock and Scissors



Switch Rock and Paper



Switch Paper and Scissors



FACT: An **ODD** number of switches of 2 players **OR** 2 objects changes the original order of **R W B (--> R)** to **R B W (--> R)**

Let the student make as many switches of players **OR** items that they like.

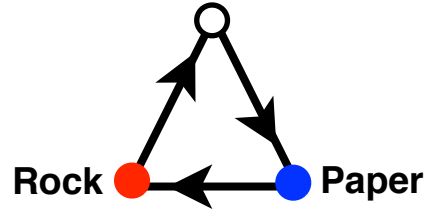
Then the outcome changes from R W B (--> R) to R B W (--> R)

Note: This is not a proof that an even number of switches end up **R W B (--> R)**. That would involve listing all the possible even switches of player or pieces. That could be done for 2 switches as there are not that many. But there could be 4, 6, 8 or more switches. Since there are an infinite number of even switches another method would need to be used to prove an even number of switches end up **R W B (--> R)**. That is what theoretical math people do.

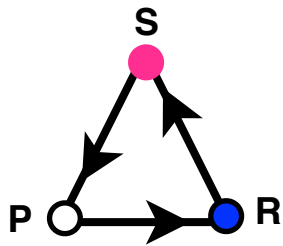
FACT: An **EVEN** number of any number of switches of 2 players **OR** 2 objects keeps the original order of **R W B (--> R)**

R W B (--> R)

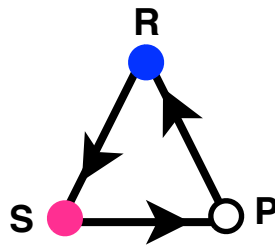
Scissors



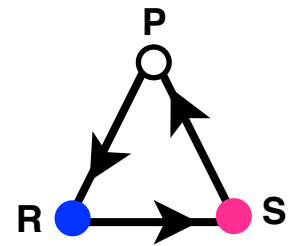
Switch Red and White
and switch Rock and Paper



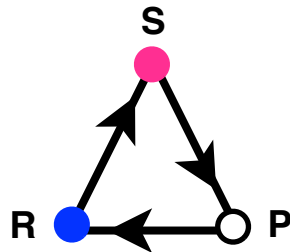
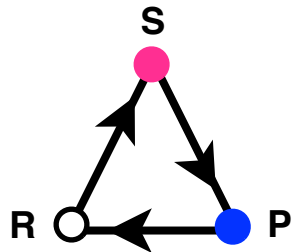
Switch White and Blue
and switch Rock and Scissors



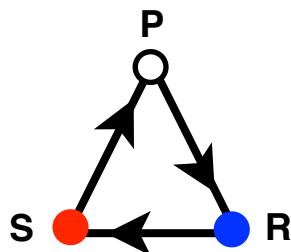
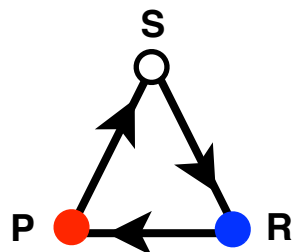
Switch Blue and Red
and switch Paper and Scissors



Switch Red and White **then** Switch White and Blue



Switch Rock and Paper **then** Switch Paper and Scissors



Each of the combination of an even number of switches of 2 players **OR** 2 objects keeps the original order of **R W B (--> R)**

Why is Rock Paper Scissors Called Roshambo

In some circles, the decisive game of Rock, Paper, Scissors goes by another name: roshambo. In the U.S., the term is more commonly used on the West Coast, especially in northern California. According to certain legends, the term dates back to the Comte de Rochambeau, a French nobleman who fought against the British during the Revolutionary War (and gets a shoutout in hit musical *Hamilton*). His name served as a codeword at the battle of Yorktown, where he commanded the French troops.

However, “there’s no historical evidence of it going back to Revolutionary times,” Zimmer tells *Lexicon Valley*. The earliest known use of “roshambo” as a synonym for the game of Rock, Paper, Scissors is found in a 1936 book called *The Handbook for Recreation Leaders*, published in Oakland, California. That mention spelled it “ro-sham-beau.”

Zimmer says that the Comte de Rochambeau had no involvement with the game of Rock, Paper, Scissors. Versions of the game originated in China as far back as 1600 before spreading to Japan, where it was called “*Jon Ken Pon*.” The Japanese game eventually spread to Europe in the early 20th century, and made it to the U.S. in the 1930s.

Because the San Francisco area has long been home to a large population of East Asian immigrants, it’s likely that kids playing the early version of Rock, Paper, Scissors became familiar with the Japanese name *Jon Ken Pon*. While there’s little historical evidence to trace the change, Bay Area kids in the ‘30s ended up Americanizing the name (perhaps with the help of the Revolutionary War knowledge they picked up in history class) and transforming it into a word with similar cadence: “roshambo.”