

RANKED CHOICE VOTING

TABULATION WORKSHOP TOOLKIT 2-WINNER RACE



ARLINGTON
VIRGINIA



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TABULATION WORKSHOP TOOLKIT

About this Toolkit

This Toolkit is a guide for community members to conduct workshops to help explain ranked choice voting tabulation. The Toolkit is specifically designed for contests where 2 candidates win, and a surplus fraction is calculated. Using this Toolkit, a workshop facilitator can lead participants through a hand tally of a pre-marked deck of ranked choice ballots.

The facilitator should have a strong understanding of ranked choice voting tabulation and be able to explain terms like election threshold and surplus fractions. Participants should have a basic understanding of what ranked choice voting is and how to mark a ballot.

The workshop is designed to be run with small groups of 1 to 10 participants and takes 15 to 20 minutes to complete. It is ideally suited for fairs or farmer markets.

Activity Summary (1-10 Participants):

Participants will hand tally a pre-marked deck of ranked choice ballots.

Learning Objectives

Participants will gain a deeper understanding of how ranked choice voting ballots are tabulated including how to calculate the election threshold and how to redistribute surplus votes by calculating the surplus fraction when a candidate exceeds the election threshold.

Supplies Needed:

Included in Toolkit:

- Pre-marked ballots (20 total)
- 6 ice cream tent labels
- RCV Formulas & Terms Sheet
- Blank Tally Sheet

Not Included in Toolkit:

- Calculator
- Small dry erase/chalk board
- Dry erase markers/chalk/pens

THE BASICS

Background information for facilitator.

What is Ranked Choice Voting?

Ranked choice voting (RCV) is a voting method in which voters rank candidates in order of preference (1st choice, 2nd choice, 3rd choice). Ranking multiple candidates allows you to still have a choice in who gets elected even if your top choice candidate does not win.

Why is Arlington Implementing Ranked Choice Voting?

The Virginia General Assembly passed a bill to amend Code of Virginia § 24.2-673.1 in July 2020 to allow localities to implement ranked choice voting in elections of members of a county board of supervisors or a city council. In fall 2021, the Arlington Electoral Board conducted public engagement with a Q&A session, a “mock election,” and held a joint work session with the County Board to discuss this method of voting. In December 2022, the Arlington County Board adopted the use of ranked choice voting for the June 20, 2023 County Board primary election, making Arlington the first locality in Virginia to implement ranked choice voting.

Benefits of using RCV include:

- Candidates have to appeal to people who might initially vote for someone else, improving civility in campaigns.
- Ensures candidates with the broadest support win the election.
- Supports more diverse candidates.

How RCV Ballots are Counted

All 1st choice votes are counted. If no candidates receive the required number of votes to win, the candidate with the fewest votes is eliminated and ballots for that candidate are transferred to the voter's next choice. This process continues until candidates have enough votes to win.

If your 1st choice candidate is eliminated, your vote is transferred to your 2nd choice candidate. If your 2nd choice candidate is eliminated, your vote is then transferred to your 3rd choice candidate.

SET UP

Set up six ice cream tent signs to help sort ballots. Place the signs in the order they appear on the ballot.

Prepare the Tally Sheet (page 8) or Board.

Provide copies of RCV Formulas & Term Sheets (page 12) to participants.

Assign Roles. Depending on the number of participants, some might be asked to do all or 1 role.

1. Caller - Calls out how ballots are marked and distributes them to counters.
2. Counter - Assigned to one or more flavors. Receives ballots from caller. Counts ballots marked for their flavor.
3. Recorder - Records the number of ballots for each flavor as ballots are tabulated across rounds on the Tally Sheet.

RUNNING THE WORKSHOP

Facilitators can read prompts in gray boxes.

Arlington County will be implementing Ranked Choice Voting for its County Board Race in the June 20, 2023 Democratic Primary for the first time. The County Board race has 2 open seats in this election.

Together, we're going to hand tally a stack of ballots to determine Arlington's top 2 favorite ice cream flavors so we can see how ranked choice ballots will be counted in the upcoming election.

Ranked Choice Voting is tabulated in rounds – with 1st choice votes counted first. 2nd and 3rd choice votes are only counted if a 1st choice candidate is eliminated. Before we can begin tabulating the results, we first need to calculate the election threshold, which is the total number of votes needed to win.*

Using the RCV formula sheet, let's calculate the election threshold needed to win as one of Arlington's Top Ice Cream flavors.

First, the group should count the total number of ballots in the deck.

There should be 20 total ballots in the deck.

Next, using the RCV formula sheet the group should calculate election threshold

- Election Threshold = 7

*Virginia Administrative Code 1VAC20-100-10

Now that we know how many votes are needed to be elected one of Arlington's Top Ice Cream Flavors, we can start counting the ballots by sorting them into the corresponding ice cream stacks.

Remember, we count 1st choice rankings FIRST!

Group should now sort ballots into the appropriate ice cream stacks based on the ice cream ranked in the first rank column.

Now that all of the 1st choice rankings have been sorted into their ice cream stack, lets count the ballots in each stack and tally how many votes each flavor has.

Group should count the number of ballots in each ice cream stack and the participants keeping track of the tally should write the vote totals for each ice cream under the Round 1 column on the tally sheet. If you're working with a large group, you can assign each participant an ice cream to tally.

Correct totals can be verified using the Results Sheet (page 9).

Now that we've counted all the votes for each ice cream flavor – has any flavor reached the threshold required to win?

If no flavor has reached the required threshold of votes, we need to eliminate the flavor with the least amount of votes and redistribute those ballots to the 2nd choice ranking.

Also, keep an eye out for ballots that may have a skipped ranking or only one ice cream ranked. These ballots still count!

Have participants determine which ice cream should be eliminated and where the 2nd ranked votes from the eliminated ice cream will be redistributed.

Rocky Road should be eliminated because it has the least number of votes. Pistachio and Chocolate should each receive one more vote from the ballots being redistributed from Rocky Road.

Now let's count the stacks of ballots again and see if a flavor has reached the threshold to win. If no flavor has reached the threshold, we'll eliminate the flavor with the least number of votes.

This process should be repeated until an ice cream reaches or exceeds the election threshold.

Once participants reach the 4th round of tabulation – Vegan Matcha will exceed the election threshold with 8 total votes. Vegan Matcha has won enough votes to win one of the seats in the election.

Next, explain surplus fractions to participants.

If an elected candidate has a surplus of votes, which means the candidate has received more votes than needed to win, exceeding the threshold, a fraction of those votes is transferred to the next rankings on those ballots.

This fraction is calculated using the Surplus Fraction formula.* This ensures the candidates with the broadest support wins.

Using the RCV Formula & Terms Sheet, have participants calculate the surplus fraction.

- The surplus fraction = 0.125 or 1/8

Now that we've calculated the surplus fraction, we can redistribute a fraction of all the votes from the Vegan Matcha stack to the next ranked candidate on each ballot.

Make sure you pay attention to the candidates ranked on each ballot since we've eliminated some already. Any ballots that have only eliminated candidates ranked become "inactive" which means they will no longer be counted. These ballots should be set aside.

Participants should now transfer a fraction of all Vegan Matcha votes to the next ranked active candidates.

Now that we've redistributed a fraction of all of Vegan Matcha's votes, let's count the new vote totals for Pistachio and Vanilla.

After transferring the votes from Vegan Matcha – Pistachio should now have 6.5 total votes and Vanilla has 6.

None of the remaining candidates have reached the required election threshold to win. However, when there are 2 candidates remaining in a round of tabulation the candidate with the greatest amount of votes wins and tabulation ends.**

Participants should then eliminate the ice cream with the least amount of votes - this is Vanilla.

Since only Pistachio remains, it is the next winner even though it did not reach the threshold. Our two winners are Vegan Matcha & Pistachio!

*Virginia Administrative Code 1VAC20-100-10

**Virginia Administrative Code 1VAC20-100-50

Tally Sheet

Election Threshold:_____

Surplus Fraction:_____

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Vanilla						
Pistachio						
Chocolate						
Cookies & Cream						
Vegan Matcha						
Rocky Road						

Results

Election Threshold: 7

Surplus Fraction: 0.125 or 1/8

	Round 1	Round 2	Round 3	Round 4	Round 5	WINNERS!
Vanilla	5	5	5	6 (+1 from eliminated chocolate)	6	X (eliminated after 5th round)
Pistachio	3	4 (+1 from eliminated Rocky Road)	5 (+1 from eliminated Cookies & Cream)	6 (+1 from eliminated chocolate)	6.5 (+0.125 x 4 surplus fraction votes from Vegan Matcha)	6.5
Chocolate	3	4 (+1 from eliminated Rocky Road)	4	X (eliminated after 3rd round)		
Cookies & Cream	3	3	X (eliminated after 2nd round)			
Vegan Matcha	4	4	6 (+2 from eliminated Cookies & Cream)	8 (+2 from eliminated chocolate)	7 (at threshold)	7
Rocky Road	2	X (eliminated after 1st round)				

Vanilla

Vanilla

Pistachio

Pistachio

Chocolate

Chocolate

Cookies & Cream

Cookies & Cream

Vegan Matcha

Vegan Matcha

Rocky Road

Rocky Road