



**THIRD SPACE  
LEARNING**

# Election Math Activities For Kindergarten To 8th Grade

Math activities to help students  
connect math to real life.

**K to 8th Grade**

## How to use this resource

Relating math to real life situations increases student engagement and helps them build a conceptual understanding of what they are learning. Use these election day math activities to relate math to real world scenarios.

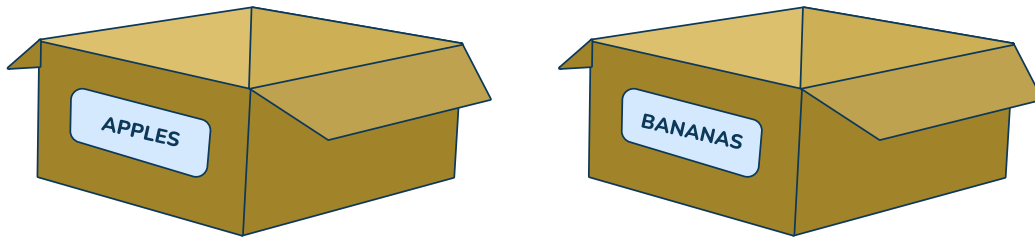
These election math activities are divided into those more suitable for elementary school and those more suitable for middle school. But you'll know the level your students are working at so start where it seems appropriate.

The Common Core Math Standard links are recommendations only.

Many of these math resources have differentiation opportunities for different grade levels.

You can adapt each activity to meet your individual classroom needs and state standards.

## Kindergarten: counting votes with objects



- **Duration:** 30 minutes
- **Common Core State Standard:** K.CC.B.4 – Understand the relationship between numbers and quantities.
- **Task:** Students vote on a classroom decision using objects to represent votes and practice counting.

### You will need:

- Voting topic (e.g. favourite fruit)
- Colored blocks or counters
- Two containers labeled with choices (e.g., “apple” and “banana”)

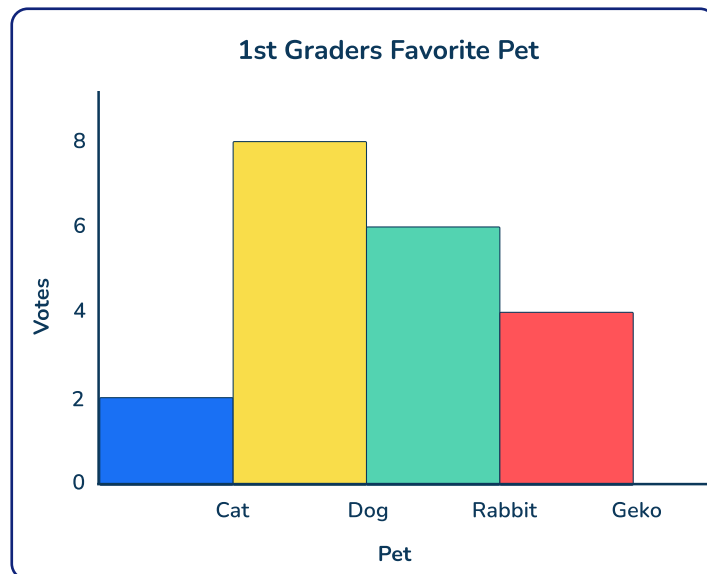
### Instructions:

- Introduce the concept of voting as making a choice.
- Pose a question to the class. For example, what is your favourite fruit?
- Show learners that the two containers have labels for their answers.
- Ask each student to place a block in the container showing their answer.
- Together count the blocks in each container.
- As a class, decide which choice has the most votes.

### Discussion:

- Talk about counting and quantities.

## 1st grade: simple bar graphs of classroom votes



- **Duration:** 1 class period
- **Common Core State Standard:** 1.MD.C.4  
Organize, represent, and interpret data.
- **Task:** Students create a simple bar graph representing votes on a classroom topic.

### You will need:

- ☐ Voting topic (e.g., favorite pet)
- ☐ Chart paper or graph paper
- ☐ Stickers or markers

### Instructions:

- Share your chosen voting topic with the class.
- Have students vote by raising their hands or placing stickers under their favorite pet.
- Record the number of votes for each option as a tally.
- Talk about bar graphs and what they show.
- Guide students to draw bars representing each option.

### Discussion:

- Ask questions about which option is most or least popular and have students explain how they know this.



## 2nd grade: even and odd voting

- **Duration:** 30 minutes
- **Common Core State Standard:**  
2.OA.C.3 – Determine whether a group of objects has an odd or even number of members.
- **Task:** Students determine if the total number of votes is even or odd and discuss implications in tie scenarios.

### You will need:

- Voting topic (e.g., choosing between two storybooks)
- Counters or small objects for each student (e.g., tokens, blocks)
- Two containers or areas labeled with the choices
- Paper and pencils



### Instructions:

- Review the concepts of even and odd numbers. Explain that even numbers can be split into two equal groups, and odd numbers have one left over.
- Present two storybook options for a class decision.
- Ask students to vote by placing a counter in the container representing their choice.
- Count the total number of votes for each option and write the totals on the board.
- For each total, have students pair up counters to see if any are left without a pair. Identify whether each total is even or odd.

### Discussion:

- Explain how an even total can lead to a tie. Discuss what the class can do in the event of a tie (e.g., teacher decides, revote).

### Extension Activity:


























- Change the total number of voters (add a pretend student or remove a vote) and observe how it affects whether the total is even or odd.
- Discuss how adding or subtracting one vote changes the outcome.

### Example:

- If 21 students vote and 11 choose option A while 10 choose option B, discuss how 21 is odd and how that affects the possibility of a tie.

# 3rd grade: election results pictograph

- **Duration:** 1 class period
- **Common Core State Standard:**  
3.MD.B.3 – Draw a scaled picture graph and a scaled bar graph
- **Task:** Students use maps to represent election results, linking geography with data representation.

Elephants	  
Tigers	      
Dogs	   
Parrots	     
Horses	    

You will need:

- Voting topic (e.g., favorite animal)
- Tally charts or blank paper
- Graph paper
- Markers or pencils

Instructions:

- Discuss with students how data can be represented in different ways, such as tally charts and picture graphs.
- Discuss tally charts, including how to represent 5 in a tally.
- Pose the voting topic to the class.
- Gather the data and display it as a tally chart.
- Together, count the votes (skip counting where possible).
- Create a picture graph of the data. This could be as a whole class, in small groups or individually.
- Students could use concrete resources to create the picture graph.

Discussion:

- Compare the totals and identify which option received the most votes.
- Discuss any patterns observed in the data.

Extension Activity:

- Introduce rounding the total number of votes to the nearest 10.
- Discuss why rounding might be useful in estimating large numbers.

Example:

- If option A has 23 votes and option B has 17 votes, practice skip counting and rounding with these numbers.

## 4th grade: election timeline math



- **Duration:** 1 class period
- **Common Core State Standard:** 4.MD.A.2 – Solve problems involving intervals of time.
- **Summary:** Students create a timeline of significant election events, calculating intervals between dates.

### You will need:

- ☐ List of election-related dates
- ☐ Rulers, pencils

### Instructions:

- Discuss the sequence of events in an election cycle.
- Provide real or example dates for key events in the election cycle.
  - Example events:
    - Campaign Start: January 15
    - Primary Elections: March 3
    - National Convention: July 20
    - Election Day: November 5
- Students plot these dates on a timeline and calculate the number of days or weeks between events.

### Discussion:

- Discuss why certain events are spaced as they are.

### Extension Activity:

- Include historical election events for comparison.

## 5th grade: decimal representation of votes

- **Duration:** 1 class period
- **Common Core State Standard:** 5.NBT.A.3 – Read, write, and compare decimals to thousandths.
- **Summary:** Students convert vote counts into decimals and percentages to understand decimal representations.

### You will need:

- Voting data from a class vote
- Calculators (optional)

### Instructions:

- Review the relationship between fractions, decimals, and percentages.
- Explain how election results are reported using percentages.
- Conduct a vote using a chosen topic with multiple options (e.g. favourite drink).
- Record the number of votes each option receives.
- Write each total number of votes as a fraction of votes. For example, option A:  $\frac{12}{25}$  votes.
- Convert the fractions to decimals by dividing the numerator by the denominator.

For example,  $12 \div 25 = 0.48$

- Convert the decimal to percentages by multiplying by 100. For example,  $0.48 \times 100 = 48\%$
- Create a table with columns for option, votes, fraction, decimal, and percentage.
- Compare the decimals and percentages to determine which option was most popular.

Option	Votes	Fraction	Decimal	Percentages
Water	3			
Orange Juice	9			
Apple Juice	5			
Blackcurrant juice	8			
Total	25			

### Discussion:

- Discuss how decimals and percentages provide precise information.

### Extension Activity:

- Round decimals to the nearest hundredth or thousandth.
- Explore repeating decimals if applicable.

### Example:

- **Example Voting Results:**
  - Option A: 12 votes ( $12 \div 25 = 0.48 = 48\%$ )
  - Option B: 8 votes ( $8 \div 25 = 0.32 = 32\%$ )
  - Option C: 5 votes ( $5 \div 25 = 0.20 = 20\%$ )

## 6th grade: understanding mean, median, and mode with election data

- **Duration:** 1 class period
- **Common Core State Standard:** 6.SP.B.5 – Summarize numerical data sets.
- **Task:** Students calculate mean, median, and mode using election-related data to understand measures of central tendency.

### You will need:

- ☐ Data sets (e.g., voter ages, number of votes per precinct)
- ☐ Calculators

### Instructions:

- Review the meaning of mean, median and mode.
- Present students with the data set. For example the number of votes from different polling stations.
- Calculate the mean, median and mode for the data set.
  - Mean:  $(\text{sum of all data points}) \div (\text{number of data points})$
  - Median: middle value when data is ordered
  - Mode: most frequently occurring value
- Discuss what each measure tells us about the data.

### Discussion:

- Compare the measures and discuss which is most representative of the data set.

## 7th grade: campaign budget planning

- **Duration:** 2 class periods
- **Common Core State Standard:** 7.EE.B.3 – Solve multi-step real-life problems.
- **Summary:** Students plan a mock campaign budget, allocating funds to various activities while staying within a set budget.

### You will need:

- Budget table
- List of campaign activities with costs (e.g., advertisements, rallies)
- Calculators

### Instructions:

- Discuss the importance of budgeting in general.
- Then discuss the importance of budgeting in running a campaign.
- Set a budget for an imaginary campaign (e.g. \$10,000).
- Set a list of expenses such as:
  - TV Ad: \$2,000 each
  - Radio Ad: \$500 each
  - Campaign Rally: \$1,000
  - Flyers: \$100 per 1,000 copies
- Students work individually or in groups to decide how to allocate funds to different activities, ensuring that they do not exceed the budget.
- Students present their budget plans and justify their choices.
  - For each activity chosen, explain why it is important for the campaign.
  - Discuss how it will help reach voters and contribute to winning the election.
  - Explain how you prioritized activities to stay within the budget.
  - Mention any activities you wanted to include but couldn't due to budget constraints.

# 7th grade: campaign budget planning

Discussion:

- Compare the measures and discuss which is most representative of the data set.

Example:

Campaign activities and costs

Campaign activity	Cost per unit	Quantity planned	Total cost
TV advertisement	\$2,000 per ad	3	\$6,000
Radio advertisement	\$500 per ad	4	\$2,000
Social media campaign	\$300 per campaign	2	\$600
Printed flyers	\$100 per 1,000 flyers	4	\$400
Campaign rally	\$1,000 per rally	1	\$1,000
Promotional buttons	\$50 per 100 buttons	0	\$0
Website development	\$800 one-time fee	0	\$0
Volunteer training session	\$200 per session	0	\$0
Phone banking	\$150 per day	0	\$0
Door-to-door canvassing	\$100 per day	0	\$0
Subtotal			\$10,000

# 7th grade: campaign budget planning

Budget Table

Campaign activity	Cost per unit	Quantity planned	Total cost
TV advertisement			
Radio advertisement			
Social media campaign			
Printed flyers			
Campaign rally			
Promotional buttons			
Website development			
Volunteer training session			
Phone banking			
Door-to-door canvassing			
Subtotal			



# 8th Grade: linear functions and election trends

- **Duration:** 2 class periods
- **Common Core State Standard:** 8.F.B.5 – Describe qualitatively the functional relationship between two quantities by analyzing a graph
- **Summary:** Students use linear functions to model and predict election trends, analyzing relationships between variables.

You will need:

- Historical election data  
(e.g., campaign spending vs. votes received)
- Graphing calculators or software

Instructions:

- Introduce linear relationships and functions.
- Discuss independent and dependent variables in the context of elections.
- Provide data sets, such as:

Campaign spending (in millions of dollars)	Votes received (in thousands)
2	50
3	70
5	110
7	150
9	190

- Students plot the data on a coordinate plane.
- Use methods to draw a line that best fits the data and calculate the slope (rate of change) and  $y$ -intercept.
- Write the equation of the line in  $y = mx + b$  form. For example:  $y = 20x + 10$
- Explain what the slope and  $y$ -intercept represent and discuss the relationship between campaign spending and votes received.
- Use the function to predict votes received for different spending amounts.

Discussion:

- Analyze the limitations of the model.
- Discuss other factors that could influence election results.

Extension Activity:

- Explore nonlinear models if the data suggests a different relationship.

## Do you have a group of students who need a boost in math?

Each student could receive personalized lessons every week from our specialist one-on-one math tutors.




- ✓ Differentiated instruction for each student
- ✓ Aligned to your state's standards
- ✓ Scaffolded learning to close gaps

“We just had our first session and it went great! The kids really liked it and felt like they were learning! One even said he finally felt like math was making sense.”



Michelle Craig, Instructional Coach,  
Sherwood Forest Elementary, Washington

## Speak to us

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