CASE FILE: MISREPRESENTATION

AUDITING DEPARTMENT OF GRAPHS - YOUTH DIVISION

We've uncovered a troubling situation — five graphs have been submitted to the City Data Archives... but something doesn't add up.

The scales are suspicious, labels are missing, and the stories the graphs tell don't seem to match the data they claim to represent.

We suspect graph misrepresentation. Your team has been assigned to investigate the case and restore public trust in the data!

🚨 **IMPORTANT: DO NOT WRITE ON THE GRAPH FILE OR STORIES**
All graphs and data stories are evidence. Treat them like artifacts. You may discuss and reference them, but do not write on them or alter them in any way. Use your own paper for drafts and notes.

🕵️‍♀️ **YOUR MISSION:**
Work together to audit the evidence, uncover what's gone wrong, and fix the issues with clarity and honesty.

You'll begin as a **full team of 5 detectives**, but each of you will eventually be responsible for correcting and submitting one graph.







🗓️ DAY 1: ANALYZE & DRAFT (Paper-Based Work Only)

✅ Step 1: Organize the Evidence

Work as a team to match each of the 5 graphs to its correct data story.
Use clues like the shape of the graph, scales, axis labels, and patterns in the data to make your match.

❌ Step 2: Identify the Violations

What makes each graph misleading?

As a team, discuss:

- Is the scale distorted?
- Are labels missing?
- Is the graph type incorrect?
- Is anything visually misleading?

Record your thoughts on a separate sheet of paper.

📝 Step 3: Rough Draft Your Fix

Each detective selects one graph to fix.

Use blank paper to:

- Sketch a corrected version of the graph.
- Draft your Correction Ticket (template enclosed in file) explaining:
    - What was wrong with the original graph?
    - What changes are you making to correct the graph?
- Hold on to your draft – you'll finalize it digitally tomorrow!

DAY 2 & 3: FINALIZE & SUBMIT (Electronic Submission)

Today, you'll access the Google Classroom assignment and complete your work electronically.

✅ Create Your Final Graph
Use a computer to recreate your graph to better represent the information. Be sure to include:

- Title
- Axis labels
- Scale
- Proper Type (bar, pie, line, etc.)
- Make it clear, honest, and informative.

Links to graph creating software is posted on Google Classroom

📝 Submit Your Correction Ticket
Each student will fill out the Correction Ticket Form on Google Form posted to Classroom.

📦 FINAL SUBMISSION PACKAGE
Your group must electronically submit:

✅ 5 Corrected graphs (1 per person)
✅ 5 Correction Tickets (1 per person)

📅 Due Date: End of Day
🗂️ Submitted via: Google Classroom



REMINDER DO NOT WRITE ON ANYTHING IN THIS CASE FILE!

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CASE FILE #1 - HEALTHY FIZ

Filed by: Audit Department, Graph Integrity Division
Suspect: Fizz Pop Co. Marketing Department

🗂️ BACKGROUND

Fizz Pop Co. recently launched a “healthier image” campaign and released a graph in their annual report to show it was wildly successful. But when the Audit Department took a closer look, the graph raised more questions than answers. Fizz Pop claims their new branding caused a major jump in soda sales throughout the year. But is that the full story?

Use data to support your findings.

REPORTED SALES DATA (Cans Sold Per Month)

Month	Cans Sold
January	9,078
February	9,234
March	9,256
April	9,046
May	9,879
June	10,001
July	10,045
August	10,645
September	10,699
October	10,799
November	10,843
December	10,901



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CASE FILE #2 - SNACK STATS

Filed by: Audit Department, Graph Integrity Division
Suspect: SnackTrak Services. Inventory Department

🗂️ BACKGROUND

SnackTrak Services installed two vending machines in the school — one Upstairs and one Downstairs. They were asked to provide a report on snack popularity to help restock based on location-specific preferences.

SnackTrak Services submitted their official report after a full week of tracking purchases from both the Upstairs and Downstairs vending machines.

But something about the report doesn't sit right with the Graph Audit Department. The graph looks clean, colorful, and official… but our instincts say something's off. Is this graph really telling the full story?

Before any restocking decisions are made, we need to ensure the graph accurately represents the data. Your job is to investigate the case file, analyze the evidence, and determine whether this graph holds up under scrutiny — or whether it needs a full audit correction.

📈 ACTUAL SALES DATA (Last Week)

Snack Item	Upstairs Sales	Downstairs Sales
Chips	10	50
Fruit Snacks	33	27
Chocolate Bars	41	39
Granola Bars	48	12
Juice Boxes	15	45



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CASE FILE #3 - STICK TO THE FACTS

Filed by: Graph Audit Department – Intra-Mural Sports Branch
Location: Lakeshore School

🗂️ BACKGROUND

The spring season of Lakeshore's co-ed Floor Hockey League try outs have begun! Coaches submitted player goal totals for both boys and girls – in order to choose the top players for the team.

But something's off...

A graph was created to show scoring patterns across Grades 6-9. However, concerns have been raised about whether the graph clearly and accurately compares performance between groups.

Your audit team has been asked to review the data and determine the most appropriate way to represent it so that comparisons between boys and girls are fair, clear, and meaningful.

Before any decisions are made, the data must be examined carefully.

🏑 Sample Data - Number of goals scored:

Grade	Boys	Girls
6	48	52
7	61	58
8	73	69
9	81	97



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CASE FILE #4 - FUNDRAISING FIASCO

Filed by: Graph Audit Department – Student Council
Location: Lakeshore School

🗂️ BACKGROUND

The Grade 8 class has been hard at work raising money for their upcoming field trip. With support from staff and families, they organized four major fundraising events: a Bottle Drive, a Bake Sale, a Popcorn Sale, and a Raffle Ticket campaign, car wash and hot lunch. Each event ran on a different week, and students tracked the money collected in order to choose which was more effective for future fundraising events.

When the results were submitted to the City Data Archives, the graph provided seemed cheerful and fun – full of symbols and color – but something about it caused concern among the data integrity staff. A flag was placed on the report, and the Audit Department was called in.

According to submitted documents, the final earnings for each event were as follows:

Bottle Drive $420
Bake Sale $345
Popcorn Sale $290
Raffle Tickets $100
Car Wash $380
Hot Lunch $550

The graph was intended to summarize this for the public records. But does it do the job? That's what you're here to figure out.



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CASE FILE #5 - FITNESS FIB

Filed by: Graph Audit Department – Public Health Division
Location: Lakeshore Community News Desk

🗂️ BACKGROUND

A local news outlet recently published a report claiming that Lakeshore students are "hardly getting any exercise." The article included a graph showing how many minutes of physical activity students reported getting each day.

At first glance, the graph looks alarming. The title suggests that most students barely exercise. Certain bars are highlighted in bright colours, and are there only 4 categories?

However, when reviewing the raw data submitted by the survey team, something doesn't quite add up. The data appears evenly distributed across several activity ranges, yet the graph suggests a dramatic imbalance.

Your audit team has been called in to determine whether the graph accurately represents the data — or if design choices are exaggerating the story. Is this a fair visual summary of student activity levels, or is the public being misled?

📊 Daily Exercise - Teens at Lakeshore:

Minutes of Activity Per Day	Number of Students
0–10	120
11–20	180
21–30	140
31–40	210
41–50	180
51–60	170



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CORRECTION TICKET - TEMPLATE

🚨 SECTION 1: Audit Findings

What was wrong with the original graph? Check all that apply:

- ☐ Misleading scale
- ☐ Inappropriate graph type
- ☐ Missing labels or titles
- ☐ Data doesn't match the story
- ☐ Inconsistent intervals
- ☐ Axis errors (e.g., doesn't start at 0, incorrect units)
- ☐ Other: _____

Describe the problem in your own words:
(What specific issue made the graph misleading or unclear? Use data to support your answer)

🔧 SECTION 2: Correction Plan

What changes are you making to correct the graph?

- ☐ Changed the graph type to: _____
- ☐ Adjusted the scale or spacing on the axis
- ☐ Added or corrected labels/titles
- ☐ Reorganized the data layout
- ☐ Replotted the correct data

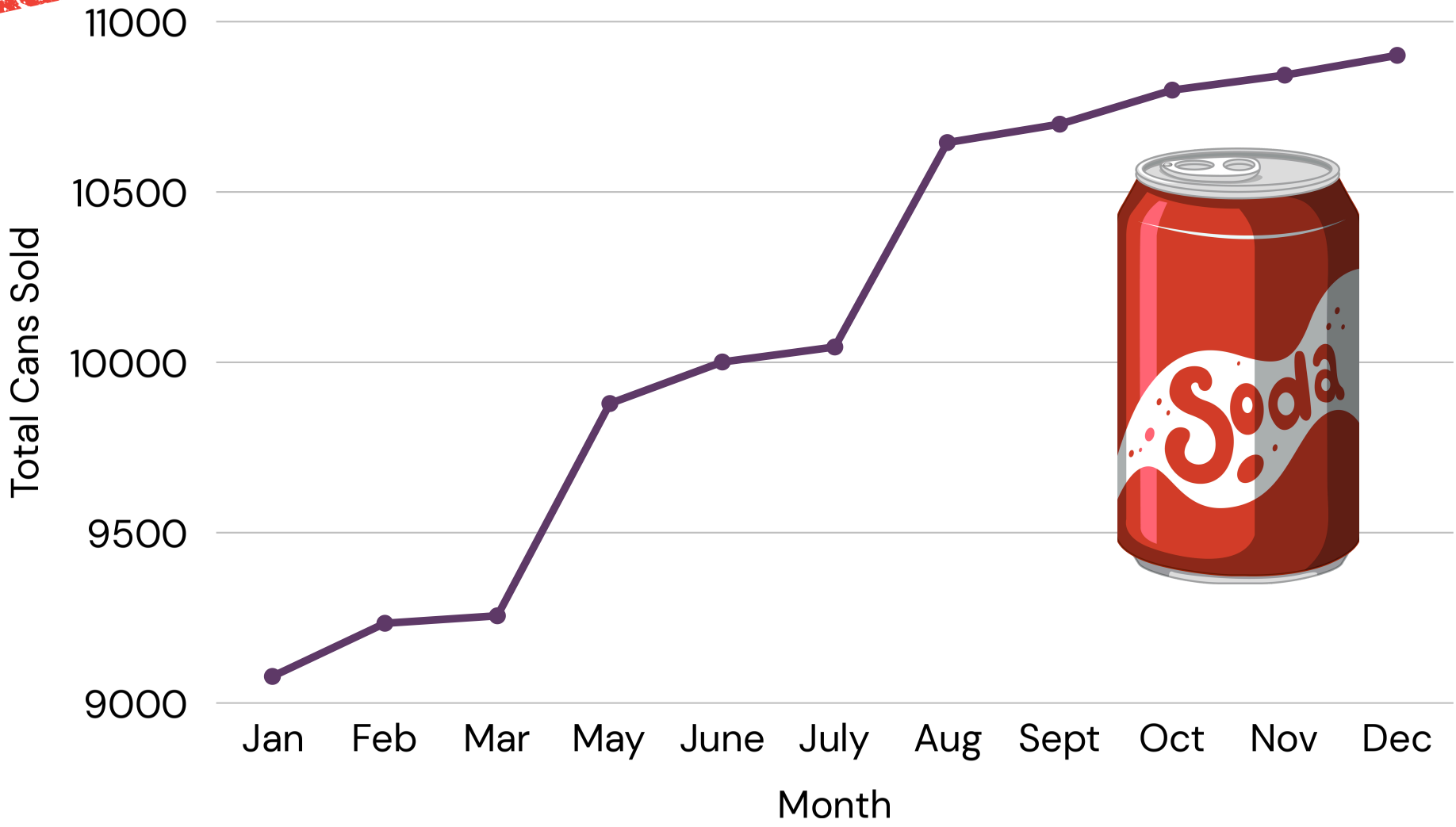
Explain what you did to fix the graph and why it's better now:
(Be specific about your changes and how they improve accuracy or clarity, use data to support your answer)





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SOARING SUCCESS: SALES JUMP DRAMATICALLY!



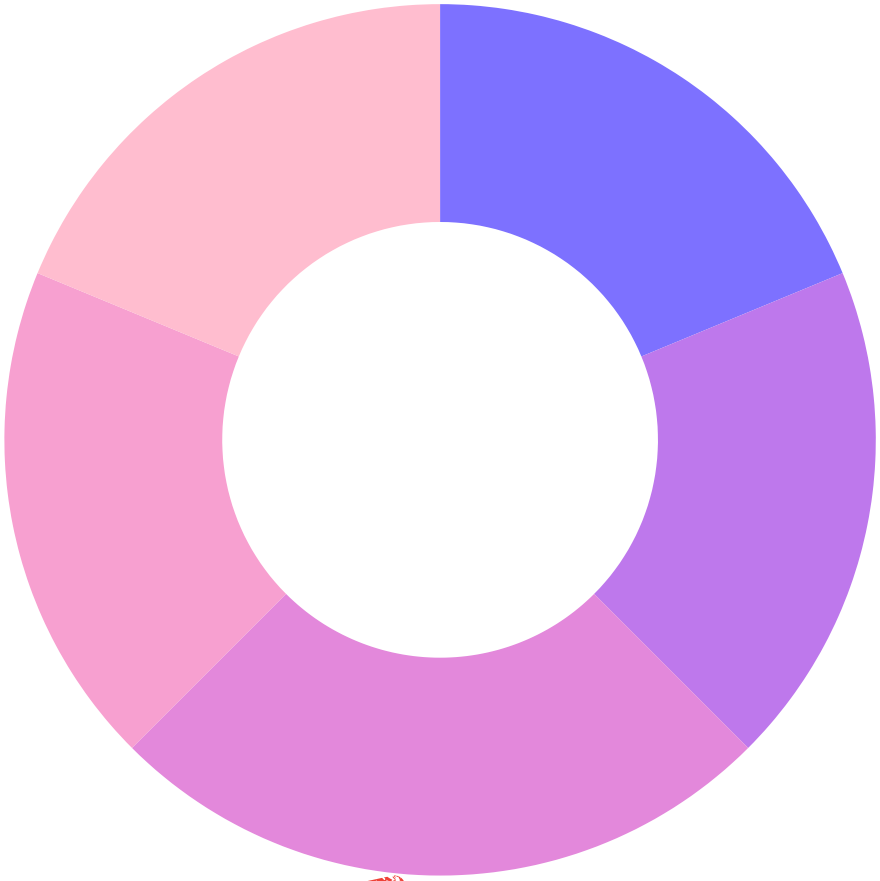
Number of Goals Scored



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VENDING MACHINES

Week April 27 - May 3



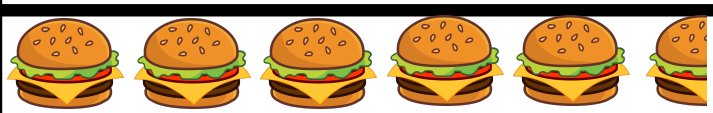
- Chips - 18.8%
- Fruit Snacks - 18.8%
- Chocolate Bars - 25%
- Granola Bars - 18.8%
- Juice Boxes - 18.8%



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Fundraising Results

Symbol = $100

Bottle Drive	
Bake sale	
Popcorn	
Raffle	
Car Wash	
Hot Lunch	







Lakeshore LazyTeens

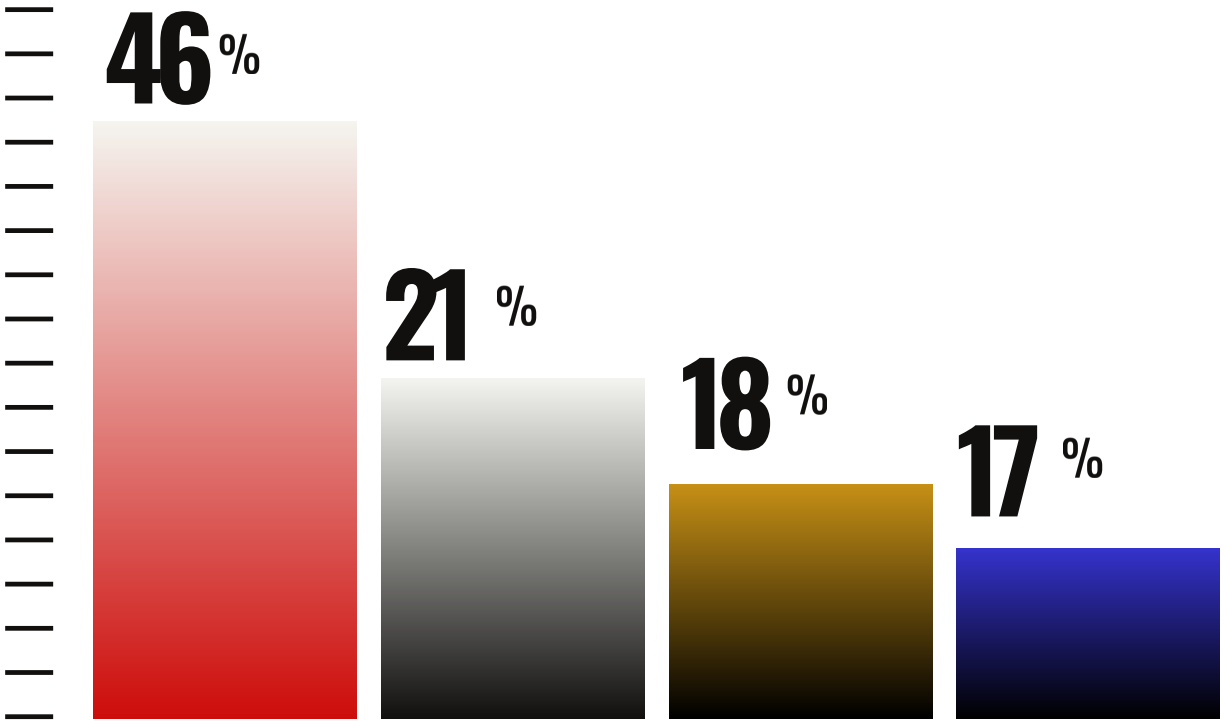


PUBLICE HEALTH

- 0-30 MINUTES /DAY

Half of Lakeshore teens are hardly getting any exercise!

- 31-40 MINUTES/DAY
- 41-50 MINUTES/DAY
- 51-60 MINUTES/DAY



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