

Close the gap with Learning Together™

In today's results-oriented educational environment, no school can afford to let at-risk students fall behind. But how can schools and community organizations develop effective support systems? Learning Together has already created one — a flexible, affordable tutoring system that has been tested and proven successful with student or adult tutors, in school or during extended days.

Our supplemental math interventions target the below-grade-level students who impact whole-school performance. Schools can expect higher student achievement, improved state and standardized test scores, enhanced school/family/community relations, and lower overall costs due to reduced rates of absenteeism, retention and special education placement.

Each Learning Together program is built on the same framework: one-on-one instruction, scripted lessons, extensive tutor training and continuing supervision by a trained coordinator. Tutors get the tools and confidence they need to make a real difference in student outcomes.

Tutorials last about 45 minutes, including time at the end for an enjoyable enrichment activity related to the focus of the lesson. Tutors then reflect, write in their journals and debrief with the coordinator.

This sample lesson gives a taste of Learning Together's scripting and structure, but cannot fully convey the progression of strategies that builds over each 30-lesson program. Please call us to review complete program materials.

Together we can help students succeed in school and prepare for life.



Math Together™ (Grades Three, Four and Five) helps students think critically, solve word problems and master basic facts. Students build competence and confidence in math as they improve their reading, writing and understanding of U.S. history.

Raising student achievement by the power of 2.



Success x 2

Math Together/Grades Three and Four was developed to build confident mathematicians and thinkers who go beyond memorization to understand the processes for solving word problems.

The lessons, built on the objectives and standards of the National Council of Teachers of Mathematics, emphasize problem solving, estimation, fact mastery, calculator use and writing. They address all math strands — numeration, geometry, measurement, pre-algebra and data analysis. Many lessons start with a hands-on launch activity that lets tutees explore the concepts to be covered.

Math Together also incorporates the successful comprehension strategies and writing activities of Reading Together. Passages, based on key events in U.S. history, are written on the third-grade level. Lessons are appropriate for some fifth graders.

In **Phase I**, tutors and tutees take turns reading aloud from passages about historical figures and events. Tutors introduce SOLVE, a paradigm that prompts tutees as they solve word problems. Tutees then write their own problems based on the passage. At the end of each lesson, tutors and tutees write in their journals, reinforcing math concepts and writing skills. (15 lessons)

In **Phase II**, tutors and tutees follow the same format, with higher-level problem solving. (15 lessons)

LESSON FOCUS

Phase I

Lesson One: "Meet the M Team"

Main Math Concept: Overview

Launch Activity: Nice to Meet You

Lesson Two: "The M Team Rides with Paul Revere"

Main Math Concepts: SOLVE, measurement

Launch Activity: How long is a minute?

Lesson Three: "The M Team Meets George Washington"

Main Math Concepts: SOLVE, measurement (money)

Launch Activity: What could you do with \$100?

Lesson Four: "The M Team at the Constitutional Convention"

Main Math Concepts: SOLVE, measurement

Launch Activity: How long is a kilometer?

Lesson Five: "The M Team Visits the Louisiana Purchase"

Main Math Concepts: SOLVE, measurement (money), multiplication concepts, fact families

Lesson Six: "The M Team Meets Lewis and Clark"

Main Math Concepts: SOLVE, fact families

Launch Activity: Word pronunciation

Lesson Seven: No Story

Main Math Concept: fact families

Lesson Eight: "The M Team at the Alamo"

Main Math Concepts: SOLVE, graphing

Lesson Nine: "The M Team and the California Gold Rush"

Main Math Concepts: SOLVE, graphing

Lesson 10: "The M Team Meets Harriet Tubman"

Main Math Concepts: SOLVE, coordinate grids

Lesson 11: "The M Team and the First Transcontinental Railroad"

Main Math Concepts: SOLVE, probability

Launch Activity: Probability

Lesson 12: "The M Team Meets Thomas Edison"

Main Math Concepts: SOLVE, graphing, probability

Lesson 13: "The M Team and the Wright Brothers"

Main Math Concepts: SOLVE, graphing, measurement

Lesson 14: "The M Team Meets George Washington Carver"

Main Math Concepts: SOLVE, congruent shapes

Launch Activity: Grid pictures

Lesson 15: "The M Team at the Panama Canal"

Main Math Concepts: SOLVE, polygons, congruent shapes

Launch Activity: Build polygons

Phase II

Lesson 16: "The M Team, Together Again"

Main Math Concept: Multiplication facts

Lesson 17: "The M Team Flies with a World War I Ace Pilot"

Main Math Concepts: SOLVE, polygons and polyhedrons

Launch Activity: Build a pyramid

Lesson 18: "The M Team Attends a Woman Suffrage Parade"

Main Math Concepts: SOLVE, polygon and polyhedron patterns

Launch Activity: Build polyhedrons

Lesson 19: "The M Team at Pearl Harbor"

Main Math Concepts: SOLVE, perimeter and area

Launch Activity: Measure perimeter of desk

Lesson 20: "The M Team on D-Day"

Main Math Concepts: SOLVE, building and using pictographs

Launch Activity: Build a real graph

Lesson 21: "The M Team Visits a MASH Unit"

Main Math Concepts: SOLVE, odd and even numbers

Launch Activity: Sorting chips for odd and even

Lesson 22: "The M Team Rides with Rosa Parks"

Main Math Concepts: SOLVE, expanded notation, place value

Launch Activity: Building place value mats

Lesson 23: "The M Team Hears Martin Luther King, Jr."

Main Math Concepts: SOLVE, sets, empty sets

Launch Activity: Sorting sets of letters

Lesson 24: "The M Team Witnesses the Kennedy Assassination"

Main Math Concepts: SOLVE, pictographs, bar graphs, sets

Launch Activity: Finding empty sets

Lesson 25: "The M Team Over Vietnam"

Main Math Concepts: SOLVE, measurement, scale

Launch Activity: Exploring measurement and scale

Lesson 26: "The M Team on the Moon"

Main Math Concepts: SOLVE, measurement, area and perimeter

Launch Activity: Discovering square units

Lesson 27: "The M Team Aboard the Exxon Valdez"

Main Math Concepts: Solve, place value, expanded notation

Launch Activity: Writing expanded numbers

Lesson 28: "The M Team and Operation Desert Storm"

Main Math Concepts: SOLVE, expanded notation

Launch Activity: Building larger numbers

Lesson 29: "The M Team Meets George W. Bush"

Main Math Concepts: SOLVE, rounding, bar graphs

Launch Activity: Rounding smaller numbers

Lesson 30: "The M Team Meets a Future President"

Main Math Concepts: SOLVE, using bar graphs

Launch Activity: Review bar graph checklist

Sample: Phase I, Lesson Eight

- Repeated practice builds fact mastery.
- Sample bar graph prepares tutees for the lesson.
- Answers, including sample graphs, support tutors.
- Journal pages prompt tutors and tutees to reflect on math concepts.

8

“The M Team at the Alamo”

Materials needed:

- *SOLVE cards*
- *Pencil*
- *Envelope of tutee materials*

Master the Facts materials needed:

- *Crayons*
- *Addition grid*
- *Completed fact cards*
- *Blank fact cards*
- *Markers or chips*

Warm Up

Greet your tutee and have a short, friendly chat.

Review the fact family cards with your tutee. As you go through each card, have your tutee say the number sentences and give the sums and differences.

Review the fact cards as many times as possible in the four-minute warm-up period.

Master the Facts

say

Let's make some more fact families. Look for open spaces on the addition grid. Pick one you would like to make.

Help your tutee create four more fact family cards.

For today's lesson, you will help your tutee create a bar graph of "The M Team at the Alamo." Your tutee will graph the number of men in three groups of soldiers.

Read the Story

Today we are going to read an exciting story about the Alamo. Do you know what the Alamo is? I really want to know what is going to happen. Look at the title and picture. Can you predict what the story will be about?

Accept reasonable responses based on the title and picture.

If there are any words you don't know, please ask me as you read. Are you ready?

Read "The M Team at the Alamo." Be sure to follow the Math Together procedure for correcting mistakes.

Do you have any questions about the story?

We are going to solve problems using a bar graph. You have probably seen one before, but I want to go over a sample with you.

say

Turn to the bar graph, "Attendance in Mrs. Smith's Class."

What do you think this bar graph is about? That's right, it's about student attendance. You can always tell what a bar graph is about by its title.

Show your tutee the labels on the graph, "Number Present" and "Days."

Look at the labels on the sides of the graph. What do they tell us? They tell us what information we will find in the graph. Why do you think we are counting by two's? If we counted by one's, the graph would not fit on the page. The way we count is decided by how large the numbers are. It is called the scale.

What do these bars tell us? They tell us how many students were present each day that week. We would need to know those numbers before we could build a graph.

Let's build a bar graph that shows the number of soldiers in each group at the Alamo. We can use this checklist to help us.

Turn to "Checklist to Construct a Bar Graph." Point to step one.

say

Let's make a list of the number of soldiers.

Go back to the story and highlight the necessary information. Help your tutee list the following information on the "Checklist" Activity Sheet:

- *William Travis had 145 men*
- *44 volunteers arrived*
- *Colonel Fannin had 400 men*

Point to step two.

Next we have to make a number scale. The attendance graph used a scale of two. Since our largest number in this graph will be 400, we have to pick a scale that will fit our page. Even a scale of 10 would not fit in our graph. Let's try 25.

say

What do we do next?

Point to number three on the list.

We have to label the sides of the graph. Let's label the vertical side — the one that goes up and down — with "The Number of Men." Now we'll number the grid with our scale of 25.

Show your tutee how to number the grid by 25's.



say

Which one is the horizontal side? That's the one that goes left to right. We can label it to show each group.

Help your tutee label the graph and fill in the blanks for number three on the "Checklist" Activity Sheet.

Now we can fill in the bars. We will fill in a bar over each group to show the number of men. Let me show you with William Travis. He had 145 men. We can fill in the bar up to 145.

Show your tutee the 145 mark on the grid. Let him/her color in the bar.

What should we do for the volunteers? That's harder, because there were 44 men. It's more than 25 and less than 50.

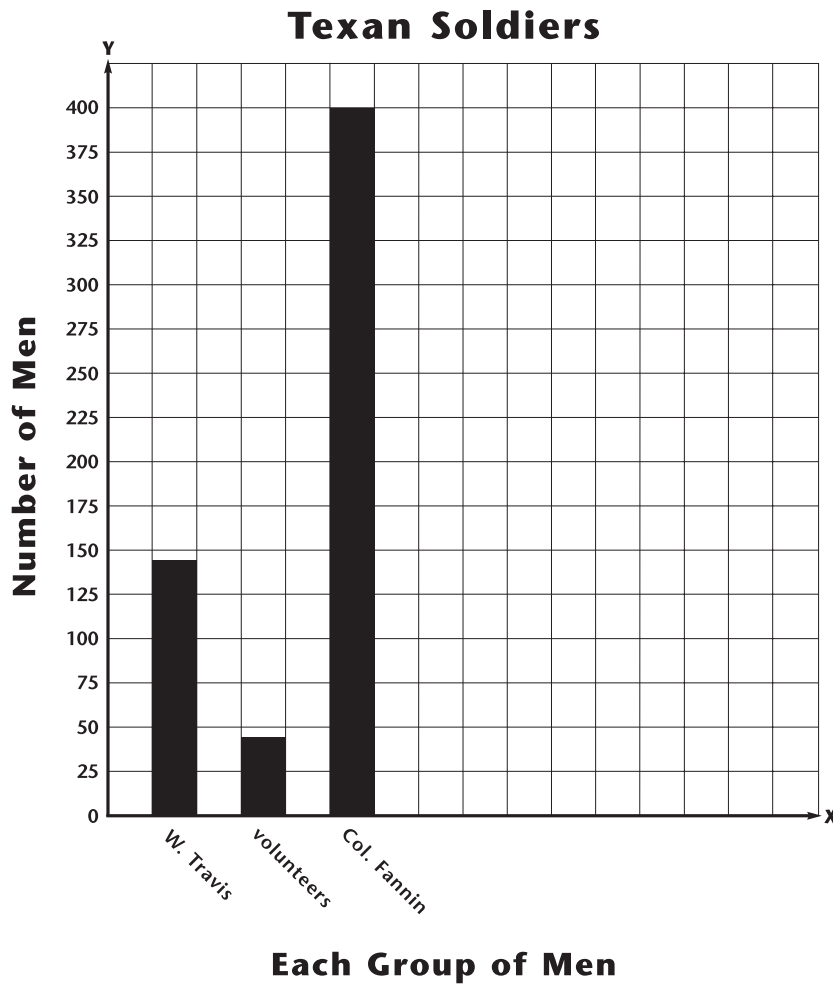
Estimate the 44 mark and have your tutee fill in the bar.

You try to do the bar for Colonel Fannin.

The bar should go to 400. Praise your tutee for his/her effort.

All we have to do now is to write a title for the bar graph. What do you think we should call it?

Accept reasonable responses. Your tutee's graph should look like the sample below:



say

That was great. Now we can use this bar graph to solve a problem. Whenever you see a bar graph, you will be able to use the data to solve other problems. Let's look at a problem on the SOLVE Sheet.

SOLVE the Problem**say**

I would like for you to work by yourself on the problem using the bar graph. If you need me, I'll be right here. I'll give you all the help you need.

Have your tutee place the SOLVE cards face down in order.

O.K., let's get started. Rewrite the question in your own words.

Make sure your tutee uses the clue cards. As he/she works, use the Progress Form to check off each step. Offer advice as needed. Continue to encourage your tutee as he/she works. At the end of each step, say,

Let's check off this step when you finish it. Remember, if you have a question, just ask me.

Make sure your tutee checks off all five SOLVE steps on the Activity Sheet. Praise your tutee at each step.

ANSWER: There were 189 Texans at the Alamo.

Let's do another problem using the bar graph. You SOLVE the problem and I will watch. I'll help you if you need me. Let's start.

Have your tutee place the SOLVE cards face down in order.

Make sure your tutee uses the clue cards. As he/she works, use the Progress form to check off each step. Offer advice as needed. Continue to encourage your tutee as he/she works.

ANSWER: There would have been 589 Texans at the Alamo.

Record in the Journal

Open to your journal page and think about what you have accomplished today. What did you learn about bar graphs? Can you list the steps to create a bar graph?

Allow your tutee time to fill in the journal blanks. Help only as needed.

Look at the timeline. Can you fill in the mark for the visit to the Alamo? What will you write on the line above the timeline? What will you write on the line below?

Allow your tutee time to think about how he/she will fill in the timeline. Make sure the title mentions the Alamo and that the date is March 1, 1836.

What a super job you have done today! Next time, we'll make another graph. See you then!

say

THE M TEAM AT THE ALAMO

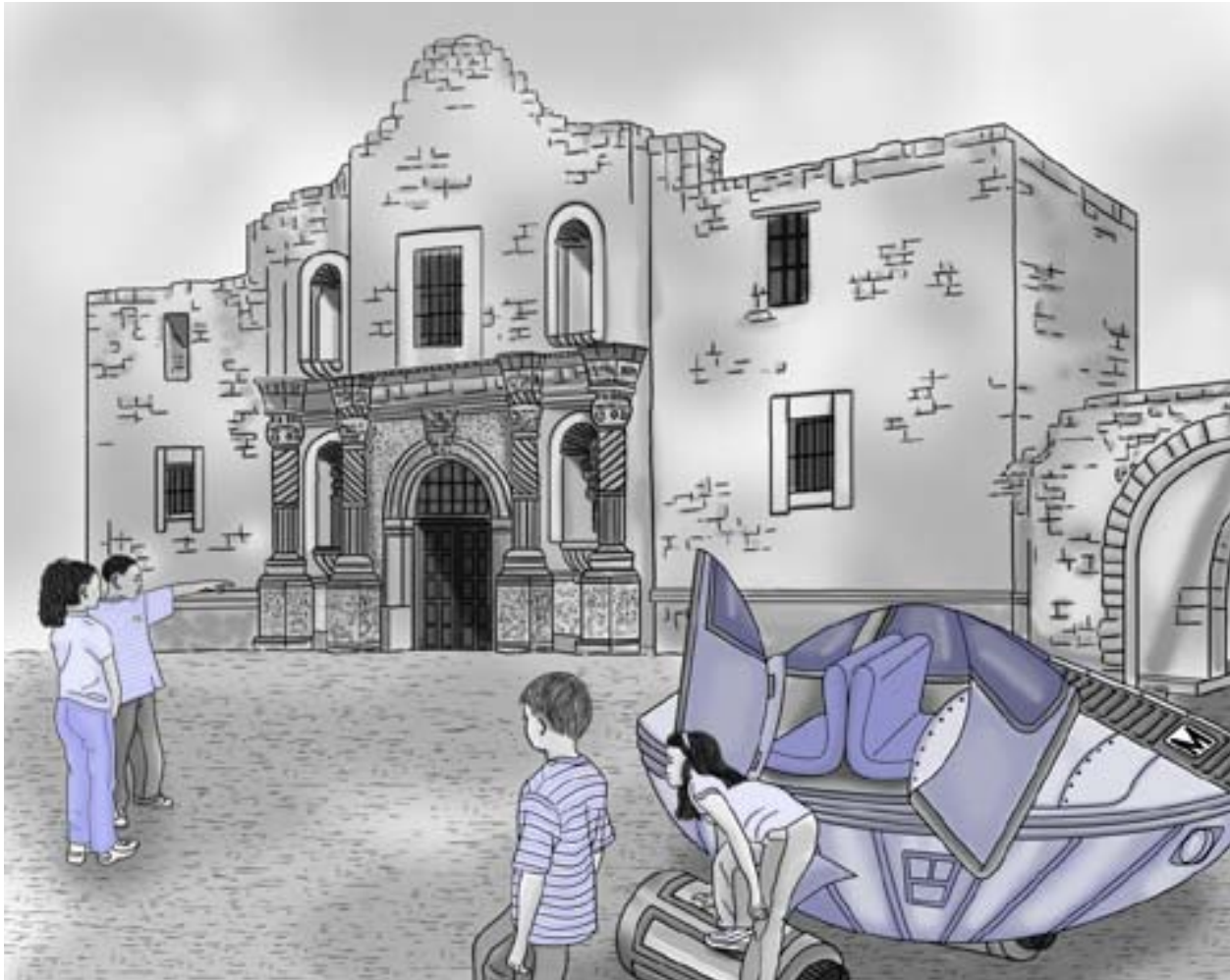
Progress Form – Lesson Eight

	Tutee used plan correctly	Tutee corrected him/herself	Tutor assistance provided
S Studied the problem Identified the question to be solved			
O Organized the facts			
L Lined up a plan			
V Verified the plan			
E Examined the results			

How did my tutee do building bar graphs and solving problems using bar graphs?

Are there any problems I need to bring up during debriefing?

Name _____ Date _____



“Malcolm, you won’t believe it!” Maria exclaimed.

Malcolm, Miko and Mike had just arrived to find Maria and Professor Protractor already planning for their seventh trip back into history.

“We are going to one of my favorite cities — San Antonio, Texas!” Maria said. “With its beautiful River Walk and El Mercado, the Spanish market, it is the most beautiful place I know.”

“But San Antonio in 1836 was very different from today, Maria,” Professor Pro explained. “And the Alamo was the city’s last defense. Did you buy the food we discussed?”

“Si, Professor,” Maria answered. “But it doesn’t look like much for all those men.”

- “Food? What men? And what is an Alamo?” Mike’s questions came out faster than anyone could answer them.

- “Maria, would you like to explain?” Malcolm asked.

“The Alamo was built as a Spanish Catholic mission about 1718 in San Antonio. ‘Alamo’ is the Spanish name for the cottonwood trees surrounding the mission,” Maria said.

- “So what was the reason for all the fighting?” Miko asked.

“The people of Texas wanted to end their relations with Mexico and form their own country, but the Mexican government did not want to give up Texas,” Maria continued. “My grandfather told me stories of how the Mexican general Santa Anna marched on the Alamo with 2,000 soldiers.”

- “How many men defended the Alamo?” Malcolm asked.

“The city had a force of 145 Texans under the command of William B. Travis, including the famous James Bowie and Davy Crockett. After Santa Anna attacked, Travis sent out a call for help. Another 44 men volunteered to help,” she said.

“You’re right, Maria,” Professor Pro added. “There was also a Colonel Fannin, who got the call for help and started to the Alamo with 400 men. They had equipment trouble on the way and had to turn back. Maria has bought food for the Texans with this trip’s funds, so you kids are off to the Alamo — March 1, 1836.”

The four friends hopped aboard the time travel machine, knowing this trip carried urgent supplies. “Miko, set the time destination indicator,” Malcolm called.

- “Check!” Miko said.

“Ditto!” replied Mike, recording the date Professor Pro had given them.

- “Quad pinkie shake!” Malcolm directed.

“M Team, set your watches,” Miko called. “10:00 a.m. — October 1, 2021!”

“Hold on!” commanded Malcolm, as he moved the power switch to “GO.”

Gunfire could be heard in the distance as the M Team emerged from the time machine behind the safety of the Alamo walls. "Hurry!" Malcolm whispered, as they all grabbed the boxes of food and headed for the old mission's open courtyard.

A young man in uniform walked from a side room to the center of the courtyard. "Keep your eyes open, men," he called up to the top of the fort walls. "Santa Anna could attack again at any time."

Malcolm stepped forward. "Mr. Travis, sir, we thought you and your men could use some more food." The M Team stacked the boxes in the courtyard.

- "Well, son, my men are hungry and food will do just fine," Travis replied. "Thanks for helping the cause, kids."

Malcolm and the M Team turned to leave. Just then, a young Texan atop the wall called down, "Remember the Alamo!"

"Yes! Remember the Alamo!" shouted the men beside him.

"We will!" called Malcolm, as he and the team waved good-bye. Malcolm noticed tears on Maria's cheeks as the M Team prepared for their return trip home. "Maria, what's wrong?" he asked gently.

"Tell you when we get back," she whispered.

"Miko, the time destination indicator," Malcolm called. "Quad pinkie shake, team. Now let's go!"

A quiet group stepped from the time machine into Professor Pro's lab moments later. Malcolm, Mike and Miko sat with puzzled looks beside Maria as she wiped her tears. "I see Maria hasn't told you the rest of the story," Professor Pro said.

- "Why don't you tell us, Uncle Pro?" Malcolm asked.

"Well, by March 5, 1836, the Texans had run out of ammunition and could not return the Mexican gunfire," Professor Pro began. "Early the next morning, March 6, Santa Anna's men stormed the Alamo and all the Texan defenders died in the battle."

- “All of them?” Mike asked.

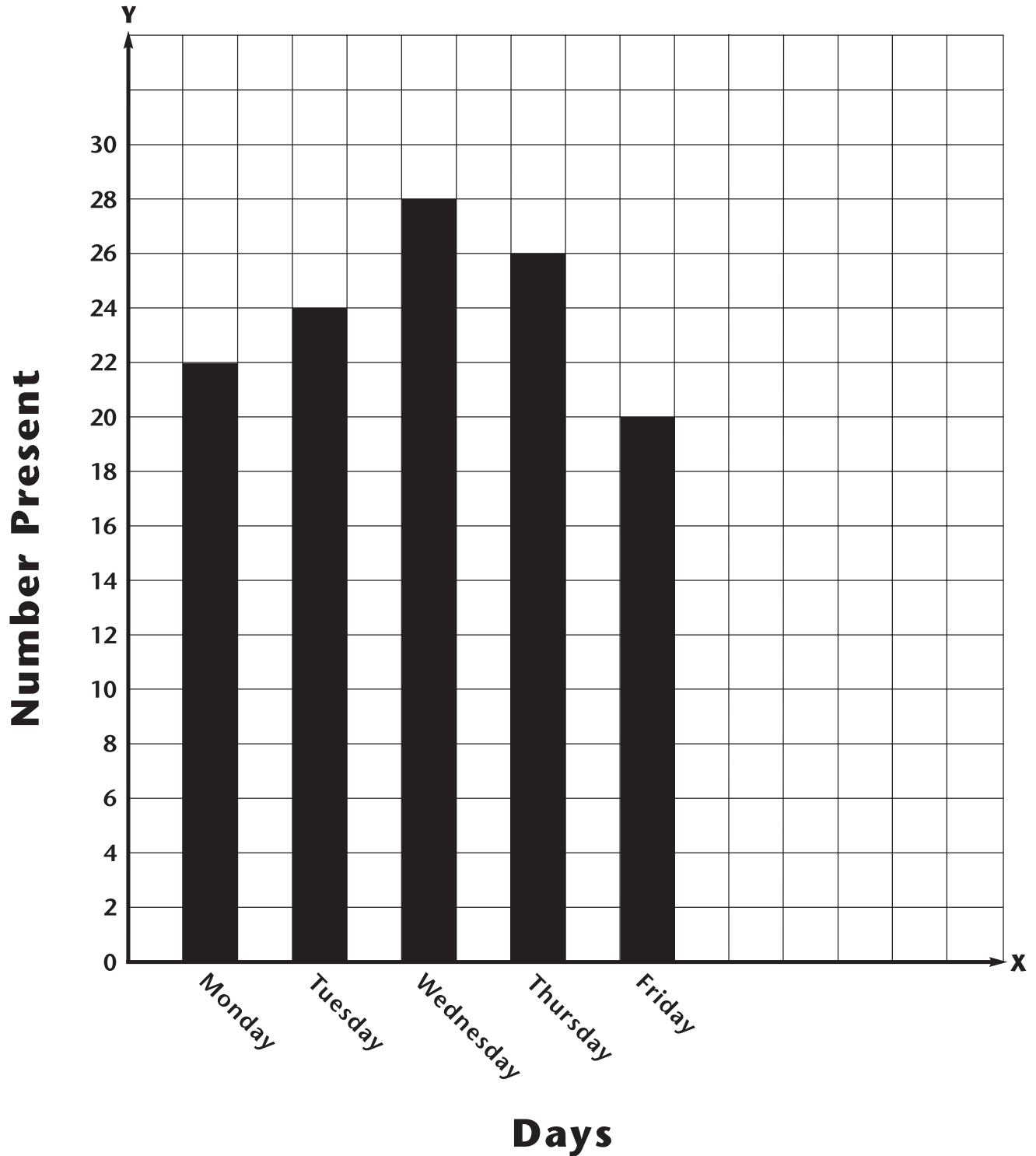
“I’m afraid so,” the professor replied. “But the news of the brave Alamo defenders traveled fast, and soon, ‘Remember the Alamo’ became the battle cry for all Texans. By the way, Santa Anna surrendered to General Sam Houston on April 21 of that same year, and Texas was finally free.”

“Wow!” Malcolm whispered. “Remember the Alamo — I definitely will.”

sample graph

8

Attendance in Mrs. Smith's Class



Name _____ Date _____



activity

Name _____ Date _____

Checklist to Construct a Bar Graph

1. Make a list of the data:

2. Choose a number scale to show your data: _____

3. Label the sides of the graph.

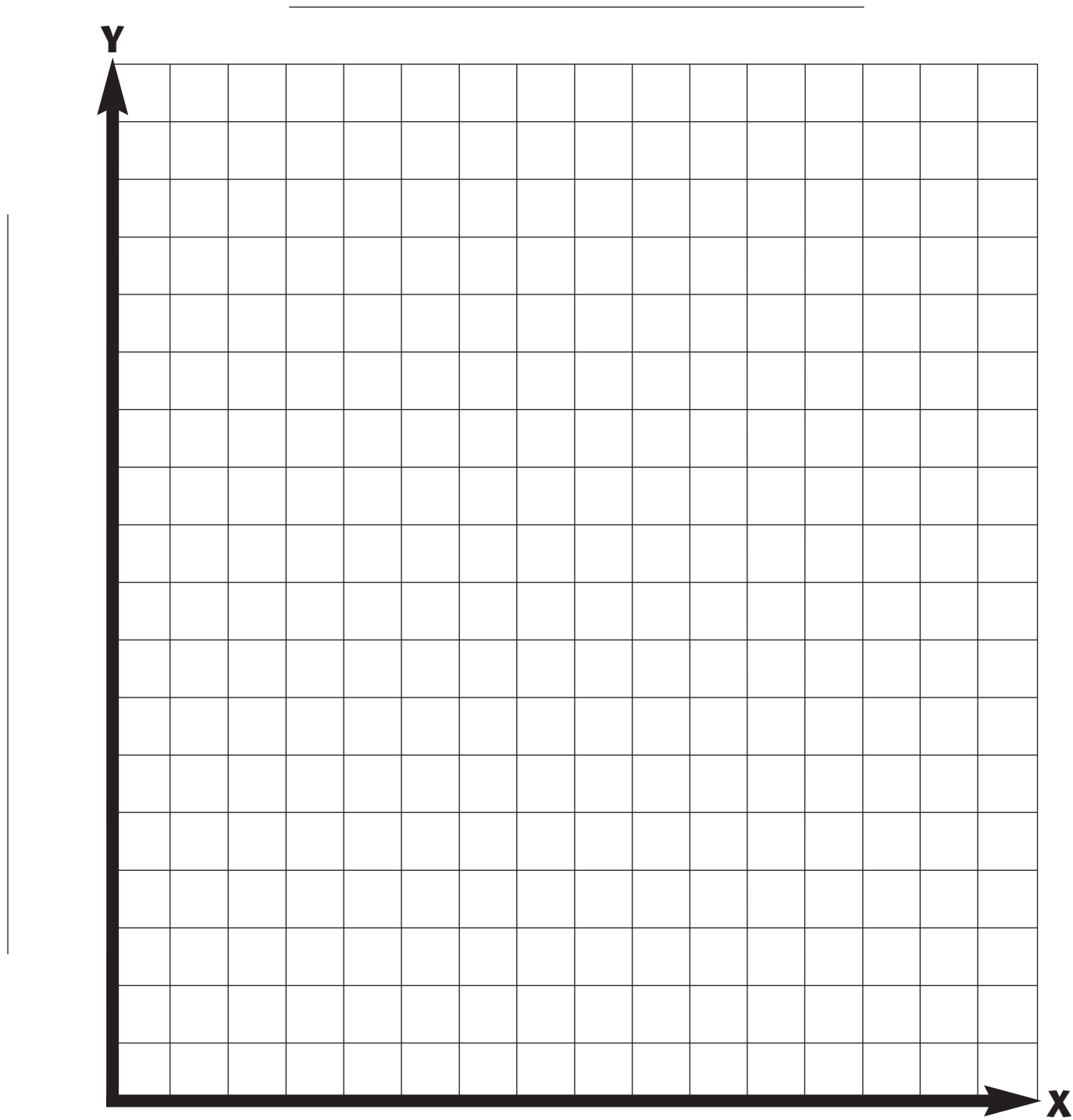
Vertical: _____

Horizontal: _____

4. Draw bars to show the data.

5. Write a title:

activity



Name _____ Date _____

Name _____ Date _____

S _
O _
L _
V _
E _

How many Texans defended the Alamo after the volunteers came to help?

S

O

L

V

E

Was my answer reasonable? Yes No
Did I estimate? Yes No
Did I check my answer? Yes No

Name _____ Date _____

S __
O __
L __
V __
E __

If Colonel Fannin's men had made it to the Alamo, how many Texans would there have been?

S

O

L

V

E

Was my answer reasonable? Yes No
Did I estimate? Yes No
Did I check my answer? Yes No

8 journal

Name _____ Date _____

How can I use bar graphs to solve problems?

Why is the graph's title important to me?

What does the scale tell me?

Why do you label each part of a bar graph?

Which new fact families did I learn today?

Raise student achievement by the power of 2.

In the small and nurturing environment Learning Together programs provide, struggling students can show the kind of academic achievement that raises whole-school performance. Our programs combine the power of one-on-one tutoring with content and materials based on best practices and scientific research. In school or in the community, with student or adult tutors, Learning Together provides a cost-effect solution for:

- Bridging the gap for low-achieving students
- Meeting AYP-mandated goals
- Nurturing at-risk students by fostering emotional and social growth
- Connecting schools, families and communities
- Improving attendance rates
- Lowering rates of retention, special education placement

"One-on-one tutoring is the instructional strategy that makes the largest impact on student achievement."

Robert J. Marzano (2003)
*What Works in Schools:
Translating Research Into Action*

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