

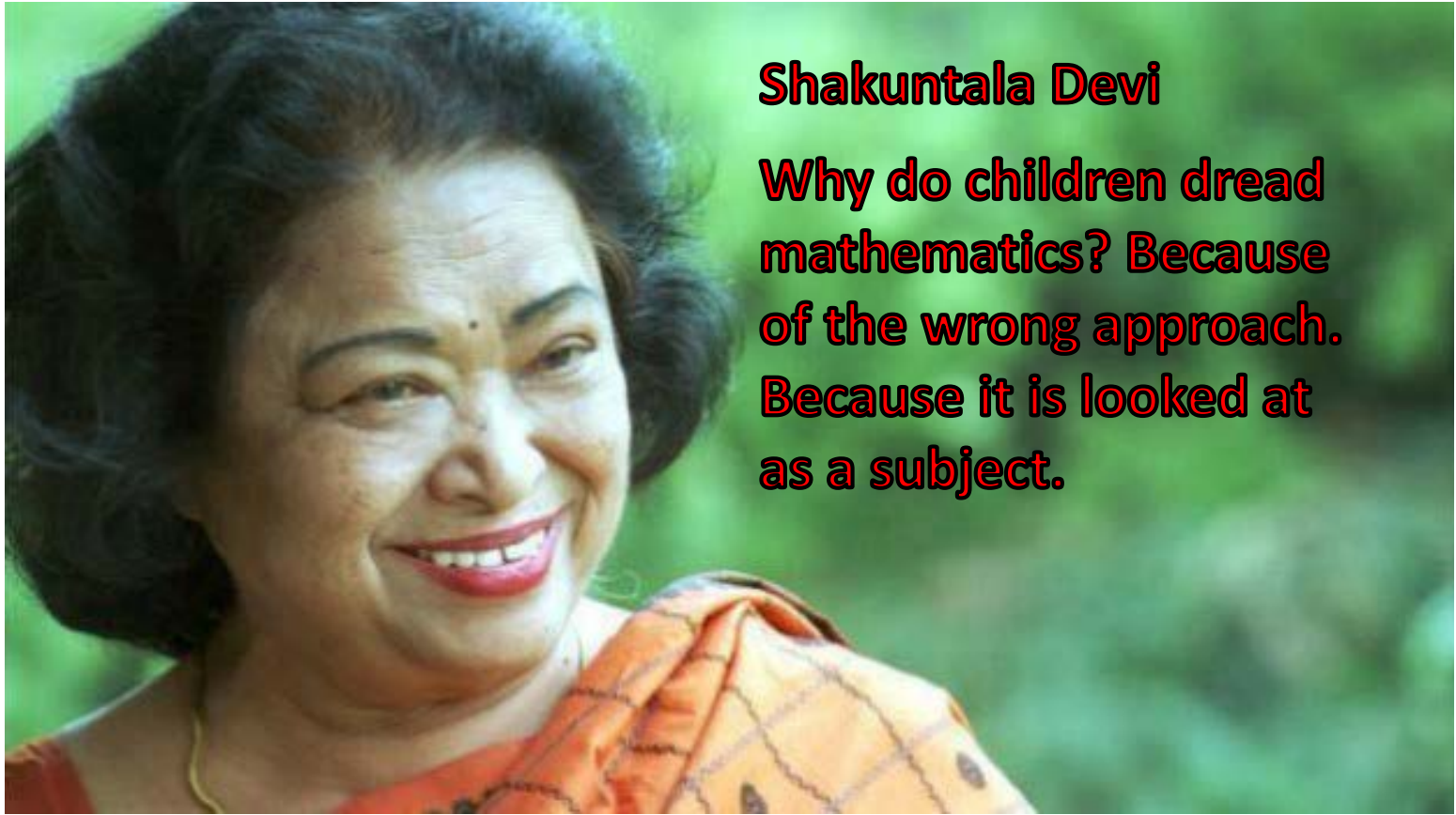
The Jamaica Plain Community Centers Adult Learning Program

First Literacy Lab Project FY 18

# From Exposure to Mastery: Helping Adult English Language Learners Develop Content Knowledge in Math

This project was funded with a First *Literacy Lab* grant.



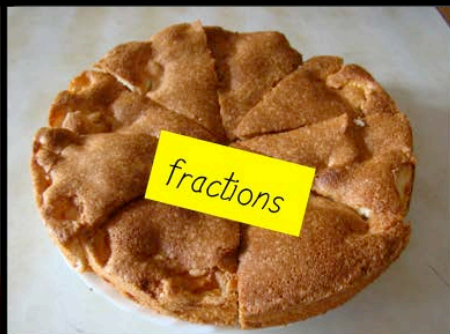


## **Shakuntala Devi**

**Why do children dread mathematics? Because of the wrong approach. Because it is looked at as a subject.**

# What led us to developing this project?

**We use math everyday . . . look around!**



<http://twoboysandadadteacher.blogspot.com>

# What we hoped to accomplish:

## Support teachers as they integrate math into ESOL lessons

- Address and discuss misconceptions
- Monitor teacher progress and practice via Likert surveys

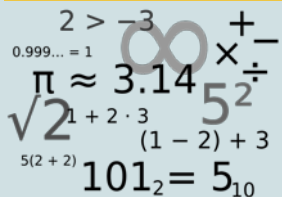
## Create lessons and classroom activities made by teachers, for teachers

- Develop math lessons that easily integrate into the curriculum
- Organize and publish a guide to share among the field

# What was the process?



1. Facilitate teacher share on experience of teaching math in ESOL



2. Dispel misconceptions about math and math instruction



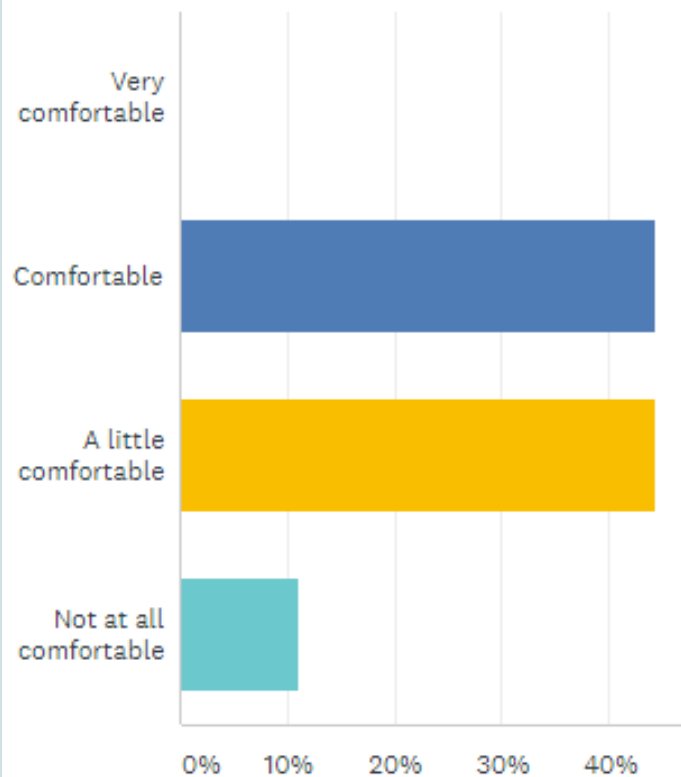
3. Provide examples of lesson plans or activities



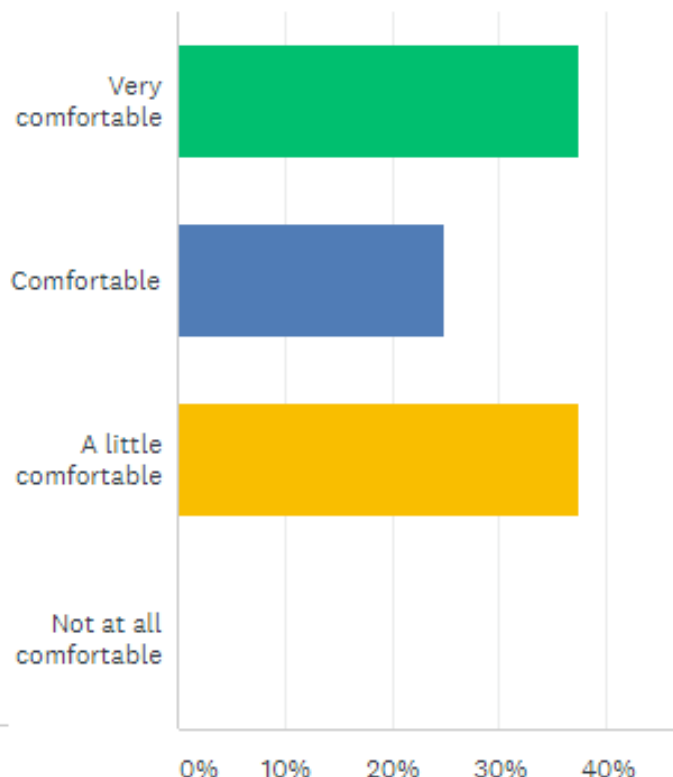
4. Teachers associate a math skill with a language connection

# How we measured our progress:

Before Professional Development



After Professional Development



## Project Highlights: Teacher Comments

“Students used charts to categorize foods based on food group and aisle in the grocery store.”

“Students in the Literacy class learned key words and phrases, such as “more” and “less.””

“I was able to insert analysis of tables with numbers into a lesson about higher education expenses and financial aid in a way that was super helpful and relevant for my students.”

# Sample Math in ESOL Lesson

Look at the picture. What do you see?





# Sample Math in ESOL Lesson

**Listen and read the story.**

**Then, read the story again in a group.**

It is December 22.

It's time for the holidays.

Juan is going to the Dominican Republic.

He is going to visit his parents.

He is excited.

He needs to pack his luggage.

It's very hot there.

He doesn't need to bring his coat.

He needs to bring some T-shirts and some pairs of shorts.

He needs some good outfits.

He will be in the Dominican Republic from December 23 to December 26.



**Talk to your classmates for 5 minutes. Ask these questions.**

1. How many T-shirts does he need?
2. How many pairs of shorts does he need?

# Teacher Created Resource Example



Juan brings 1 pair of brown shorts and 1 blue T-shirt.

How many outfits does he have?

**One.**

*\*Actual worksheet  
includes more  
examples and  
questions*

# Teacher Created Resource Example

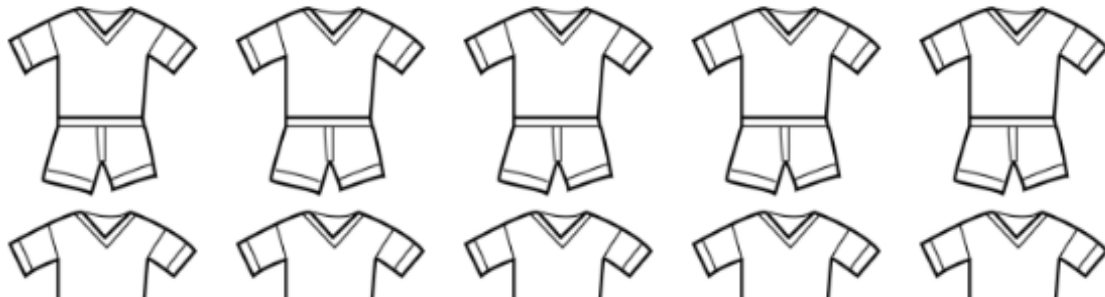
Juan brings 4 pairs of shorts. One brown pair, one navy pair, one grey pair, and one black pair.

How many outfits does he have? Write what you think next to “prediction”.

See if you are correct. Write the color names or use colored pencils and make the outfits

**Can you explain the pattern?**

Prediction: \_\_\_\_\_ outfits



*\*Actual worksheet includes more examples and questions*

# Index of Teacher Resource

	Theme	Math Skill	Language Connection	Target Vocab
1	Fruit, Food, Grocery Shopping	Adding, Filling in Charts	Produce vocabulary, skimming	Chart, How many
2	Clothing, Travel	Probability, Patterns	Read and discuss	Prediction, how many
3	Restaurants	Addition and subtraction calculations using numbers with decimal points	Speaking, ordering food	Decimals, tax, subtract, add, percent, total
4	Community, Census	Calculate percentages with a variety of data points in a word problem	Reading an article that includes statistical information, Surveying classmates	Data, Percentage calculate

**Index will enable teachers to seamlessly integrate a math lesson into a particular theme, such as food or clothing, or by language connection, such as skimming or discussion.**

# What we would have done differently

- Given the somewhat unexpected focus on teacher training, we could have been better prepared with a more developed metric (survey).
- The guide should be more developed and ready to publish at this stage.
- Going forward I would like to do more teacher training that could result in a better collection of lessons and activities.

# ***MATH IN DAILY LIFE***



**PATTERNS**



**MEASUREMENT**



**ESTIMATION**



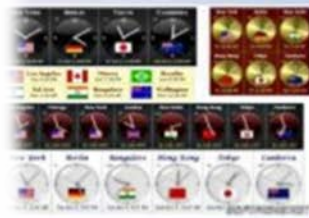
**PROBLEM  
SOLVING**



**PROBABILITY**



**FRACTIONS**



**TIME**



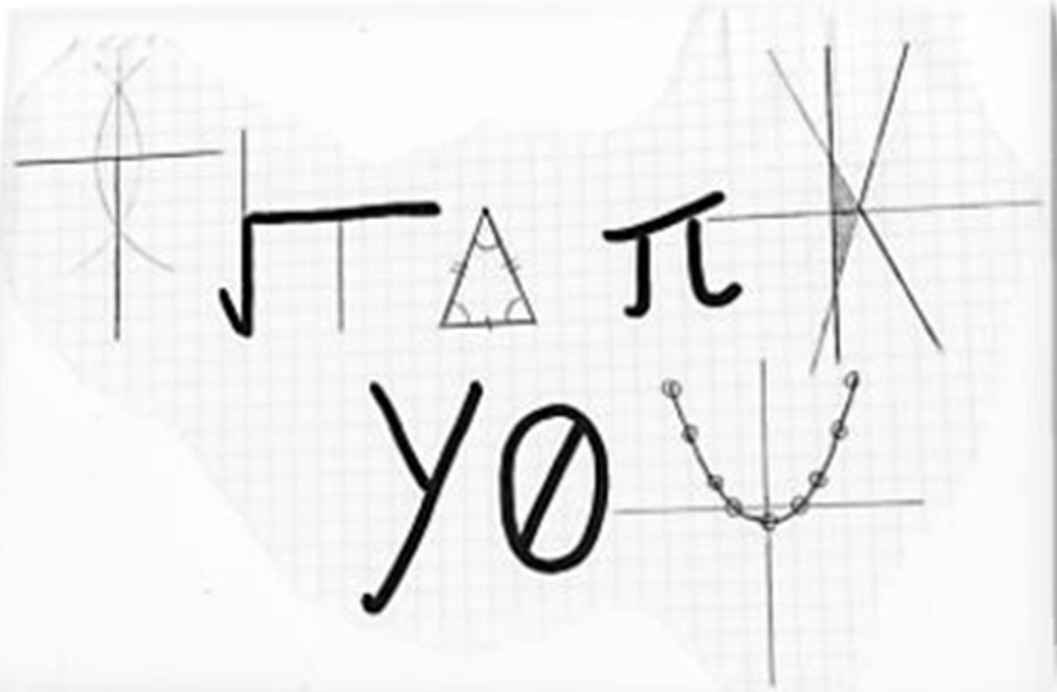
**SYMMETRY**



**MONEY**



**GEOMETRY**



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