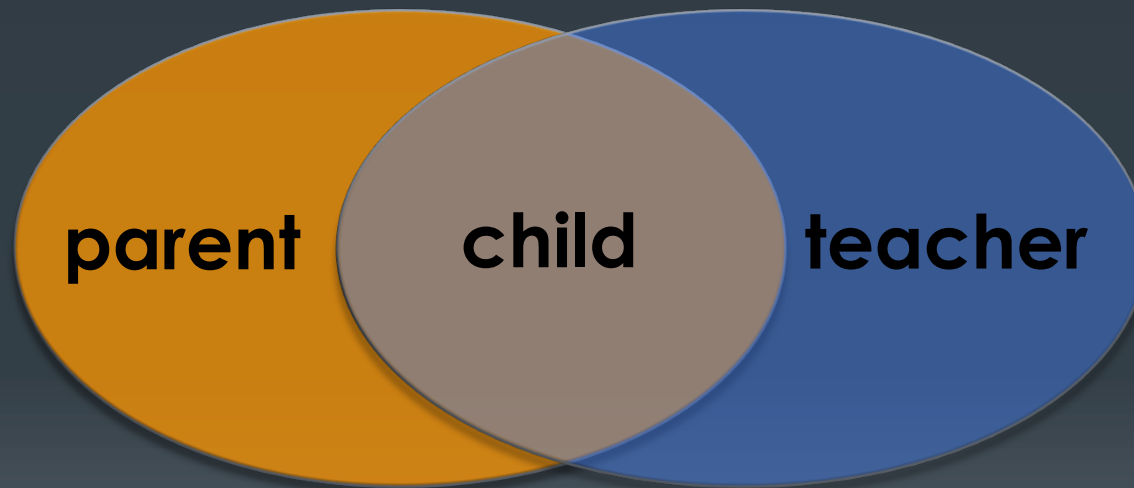


# The Homework Connection:

## Engaging Families Through Bilingual Math Activities



Justin Johnson  
Portland Public Schools



“Jose knows 3 colors in Spanish and 3 in English (same 3), he is labeled 'limited' in L1 and L2

Bill knows 5 colors all in English. He is labeled as 'average'.

Who knows more?

Our current paradigms are deficit oriented with regard to simultaneous bilingualism.

We need to develop an asset based theory about simultaneous bilingualism. ”

# Agenda

- Video: Compare Math Language
- Build Background of Math Language Frames Work
- Take a Trip to Bolivia
- Analyze Homework
- Video: Connect Use of Academic Language to Homework
- Activity: Practice using Math Language
- Read & Reflect
- Q & A

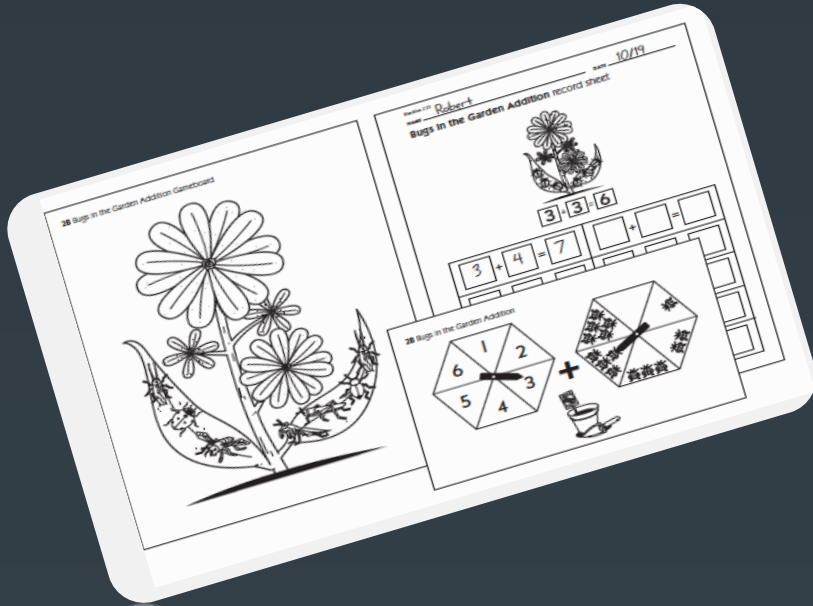
# Math Talk!



What language would you rather hear?



# Student-Centered Activities



When students are working in pairs or small groups, are they on task and using the **precise** academic language required for the activity?

What strategies can we use to guide students toward this goal?

# Background

## SIOP / Sheltered Instruction

- 84 schools trained between 2010-2012 in Portland

“I agree this is great teaching for ELLs, but there are 8 components, 30 features...I simply don't have time to implement all of this in my classroom.”

Turn and talks are great, but how do I know that my kids are really talking about the concept? How do I keep them on track?

# Language Frames Connected to the Math Content



I put a \_\_\_\_\_ on the big hexagon.



triangle



rhombus



trapezoid



hexagon



How does this connect to our families?



**HOMEWORK**





## Enlace con el hogar no. 23 ★ Actividad

### NOTA PARA LA FAMILIA DEL ALUMNO

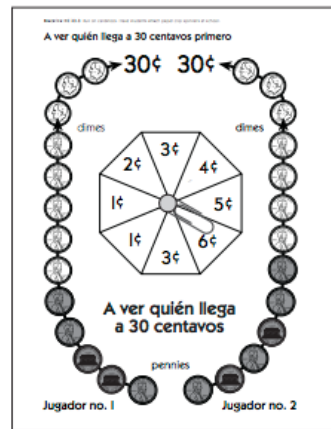
A ver quién llega a 30 centavos primero es un juego diseñado para que los niños aprendan a identificar las monedas por su nombre y por su valor, al igual que para llegar a comprender que se pueden cambiar 10 *pennies* (monedas de un centavo) por 1 *dime* (una moneda de diez centavos). También hace que cuenten de a 10 y de a 1 y que calculen sumas de 10 y más y de 20 y más a medida que continúa el juego. El reto es comprender que los *dimes* valen 10 y que los *pennies* sólo valen 1, y así poder contar el dinero debidamente. Aún si su niño no ha llegado a entender que 3 *dimes* valen 30 centavos, le encantará ganar los 3 *dimes* y saber que cada uno vale 10 *pennies*.

### A ver quién llega a 30 centavos primero

Van a necesitar el juego A ver quién llega a 30 centavos primero, al igual que 25 *pennies* y 6 *dimes* para que los puedan compartir los 2 jugadores.

#### Instrucciones

**1** Túrnense girando la flecha y juntando el número indicado de *pennies*.



**2** Al tomar cada turno, pon la nueva colección de *pennies* sobre los dibujos de cada *penny* en tu lado o parte del

tablero. (Si tienes más de 10, pon los que sobran a un lado por ahora.)  
¿Cuántos *pennies* tienes en total? ¿Te sobrará alguno después de cambiarlos?

**3** Si tienes 10 o más *pennies*, cambia 10 por 1 *dime* y ponlo encima de 1 de los dibujos de un *dime* de tu lado del tablero. Pon los *pennies* que te sobren encima de los dibujos de *pennies* en tu parte del tablero. Ahora le toca girar la flecha al otro jugador.

**4** Deben contar los grupos de monedas de los dos jugadores a medida que van creciendo.

**5** Cuando uno de los jugadores ya está cerca de tener 30 centavos, cuando gira la flecha tiene que sacar la cantidad *exacta de pennies* para ganar. Si saca

## Home Connection 23 ★ Activity



### NOTE TO FAMILIES

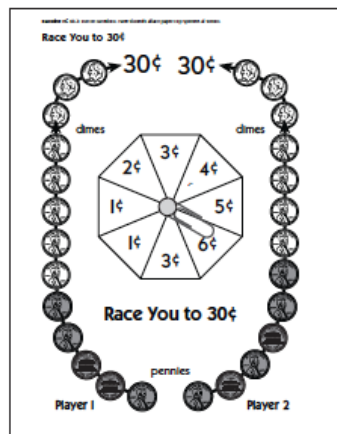
Race You to 30¢ is a game designed to help children practice identifying coins by name and value, as well as to develop the understanding that 10 pennies may be traded for 1 dime. It also entails counting by 10's and 1's and figuring out sums of 10 and more and 20 and more as the game progresses. The challenging part of this game is to understand that the dimes are worth 10 while the pennies are only worth 1, and to count the money accordingly. Even if your child doesn't yet fully understand the idea that 3 dimes make 30¢, he or she will be delighted to end up with the 3 winning dimes and to know that each dime is worth 10 pennies.

### Race You to 30¢

You'll need the Race You to 30¢ game, along with 25 pennies and 6 dimes for 2 players to share.

#### Instructions

**1** Take turns spinning the spinner and collecting the designated number of pennies.



**2** With each new turn, place the new collection of pennies on top of the penny pictures on your side of the

gameboard. (If you have more than 10, place the extras off to the side for now.) How many pennies do you have altogether? Do you have enough to trade for a dime? Will you have any left over after the trade?

**3** If you have 10 or more pennies, trade 10 for a dime and set it on top of 1 of the dime pictures on your side of the gameboard. Place any leftover pennies on top of the penny pictures on your side. Then it's your partner's turn to spin.

**4** Be sure to stop and count both players' growing accumulations of coins frequently.

**5** When a player gets close to 30¢, he or she has to spin the *exact amount* of pennies needed to win the game. If



## Gr K Home Connections 23 Race You to 30¢ Simplified Directions










### What you need:



- Race You to 30¢ gameboard
- 25 pennies
- 6 dimes



### What to do:

1.  Spin the spinner.
2.  Collect the number of pennies your arrow lands upon.
3.  Place the pennies on top of the gameboard pennies (if you run out of space, place the pennies close by).
4.  If you have 10 or more pennies, trade 10 pennies for 1 dime.
5.  Use the dime to cover one of the dime on your side of the gameboard.
6.  Now it is your partner's turn to spin.
7.  When a player gets close to 30¢, they have to spin the exact number of pennies to win the game.
8.  If the spin is too much, that turn is lost.
9.  The first player to collect exactly 30¢ wins the game.





### ¿Qué se necesita?



• El tablero A ver quien llega a 30¢ centavos primero



• 25 pennies

• 6 dimes

### Que hacer:



1. Gira la ruleta.



2. Toma la cantidad de monedas pennies que indica la flecha.



3. Coloca las monedas pennies en su lugar designado en el tablero.

En cuanto coleccionas 10 pennies intercámbialos por 1 dime.



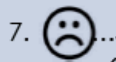
4. Coloca el dime en el lugar designado de tu lado del tablero.



5. Ahora es el turno de tu compañero/a.



6. En cuanto un jugador se aproxima a 30¢, al girar por última vez, tendrá que obtener la cantidad exacta para ganar su último dime...



7. ..Si al girar por última vez, cae en una cantidad mayor de lo que necesita para 10¢ (un dime) pierde el turno.



8. El jugador que junte primero 30¢ centavos exactos ¡gana!



Hago girar y agarré \_\_\_\_\_ centavos.



Ahora tengo \_\_\_\_\_ centavos.



\_\_\_\_\_ cambiar 10 centavos por 1 'dime'.



Puedo  
No puedo

Tengo \_\_\_\_\_ centavos que usted.



**más/menos**

o

¡Tengo la misma cantidad de usted!



I spun \_\_\_\_\_ cents.



Now I have \_\_\_\_\_ cents.



I \_\_\_\_\_ trade in 10 pennies for 1 dime.



can  
can't

I have \_\_\_\_\_ cents than you.

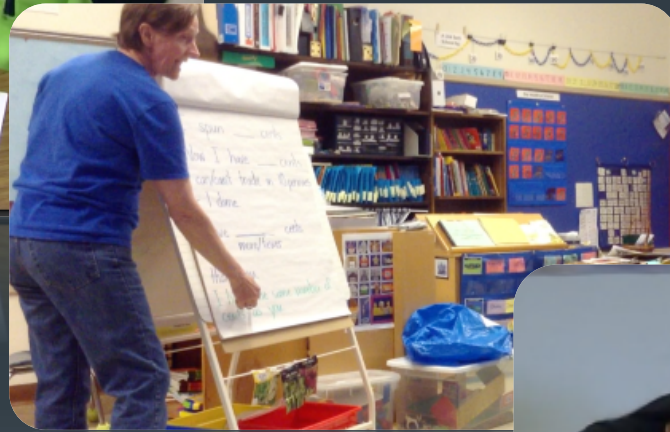


**more/fewer**

Or

I have the same amount of money as you!

# The Home Connection



# Video Debrief

- Find a shoulder partner
- Discuss:
  - Mathematical Content of the Activity
  - Language Components of the Activity
  - Questions, Connections and Insights



# Let's play!

Race You to 30¢

dimes

Race You to 30¢

pennies

Player 1

Grado K Conexión con la casa/ 23 instrucciones simplificadas.

Lo que usted necesita:

- 1 tablero de juego para Carrera hasta 30 ¢
- 100 pennies (100 centavos) 'dimes'

Hago girar y agarré \_\_\_\_\_ centavos.

Ahora tengo \_\_\_\_\_ centavos.

Puedo/no puedo cambiar 10 centavos por 1 'dime'.

Tengo \_\_\_\_\_ centavos que usted.

○ Más/menos

Tengo la misma cantidad de usted!

I spun \_\_\_\_\_ cents.

Now I have \_\_\_\_\_ cents.

I can/can't trade in 10 pennies for 1 dime.

I have \_\_\_\_\_ cents than you.

Or

I have the same amount of money as you!

pero de monedas de un centavo, la flecha en que paro la flecha.

monedas de 1¢ en la parte donde estan las monedas mas cerca unas de otras.

Si tiene 10 ¢ o mas en pennies, cambie por 1 moneda de (diez ) 'dime'.

de 10¢ 'dime' para cubrir uno de los espacios para colocar los 'dimes'.

le toca a su compañero hacer girar la ruleta.

or se acerca a 30 ¢, tiene que esperar que caiga la cantidad exacta.

numero mas de centavos de los que le faltan se pierde ese turno.

# Actions taken...

- Making visual step by step directions for the K-2 math homework
- Translating them into the top 5 languages
- Providing a academic sentence frame in both languages for families to use as they are interacting with the homework



It is one thing to just send it home,  
but another to teach families how  
to use the tools...

добро пожаловать

ຍິນດີຕ້ອນຮັບ

chào đón

ברוך הבא

ترحيب

# Family Math Night Woodmere Elementary

bienvenido

欢迎

soo dhaweyn

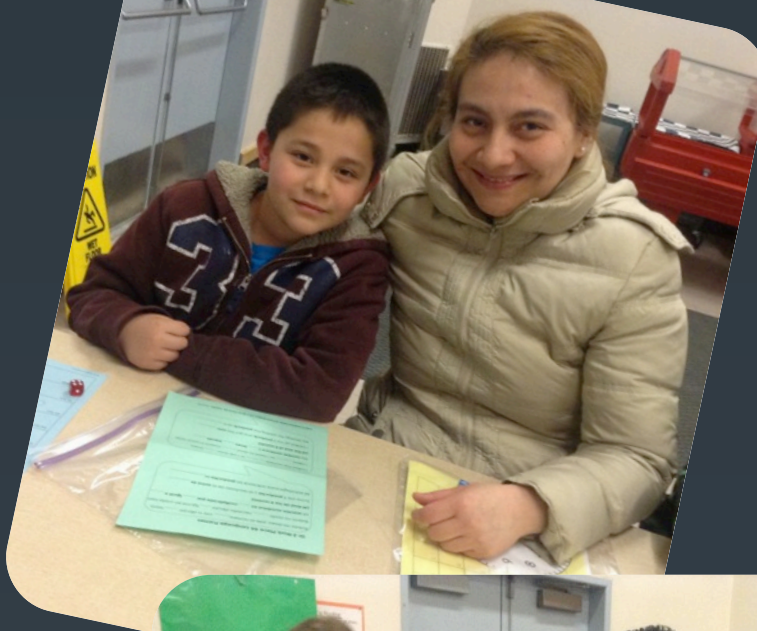
welcome

maligayang pagdating

zoo siab txais tos

ласкаво просимо













**What you need:**



- Pattern Blocks:
  - 10 hexagons
  - 20 trapezoids,
  - 20 triangles
  - 20 blue rhombuses
- A Last Shape In Wins gameboard

**What to do:**

1.  Find a partner.
2.  Get some pattern blocks and a gameboard.
3.  Decide who will go first and who will go second.
4.  Take turns placing the blocks on the gameboard.
5.  Each time it is your turn, you get to put one block anywhere on the gameboard you want.
6.  You may use any of the four shapes.
7.  You must take your turn every time, down to the very end.
8.  The object of the game is to be the person who gets to complete the big hexagon by fitting in the final shape.

I put a \_\_\_\_\_ on the | Coloco un \_\_\_\_\_ en el hexágono grande.

我放黑一個

在這個十六角形上

Waxaan dul dhigay \_\_\_\_\_ lix geesoolaha weyn.



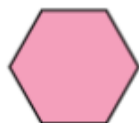
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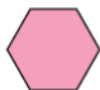
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шестиугольник



## Providing Access to Content

1. Language Frames Connected to Core Content

2. Visual Directions  
Connected to  
Core Homework

3. Language Frames  
Connected to Core  
Homework

4. Opportunities  
for Parents to  
learn about tools

5. These Resources in  
Multiple Languages



# Pair Read Reflect

**“English Language Learners are the fastest growing group of students across the nation. Most states and districts lack a vision for ELL education that builds on families’ cultural and linguistic assets. They also mostly underfund ELL education and adopt primarily subtractive ELL approaches, in which students lose their first language and identity and are immersed in English-only environments. The role of ELL leaders in most states and districts is marginalized rather than elevated and is focused on compliance rather than asset and capacity building. ...We need to shift the paradigm by increasing the opportunities and choices for students and families to those that support the acquisition of academic English, while simultaneously developing the students’ native language and teach the students content.”**

-Dr. Rosann Tung

(2013) *Innovations in Educational Equity for English Language Learners*

Annenberg Institute for School Reform



= **bold text**



= *italic type*



Why do you think the Rosann Tung wrote this?

I think she wrote it because \_\_\_\_\_.



What part of this statement resonates with you? Why?

The part of the text that states, \_\_\_\_\_  
resonates with me because \_\_\_\_\_.



How do we apply this statement to our experience?

I think it can teach us \_\_\_\_\_.



# Q & A



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