



Pre-K Mathematics

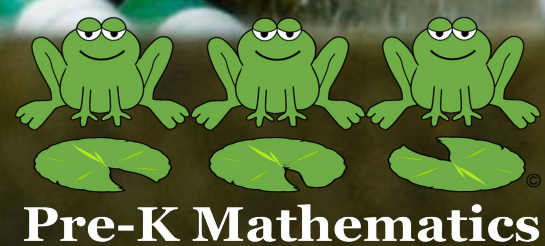
A Hybrid Approach to Supporting Children's Early Mathematical Development Part A

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Professional Development Team



What to Expect...

Part 1 and Part 2 (60 Minutes each)

Overview of *Pre-K Mathematics* Home Activities

Learn ways you and family/caregivers can support 4-year old's early mathematical development in-person and virtually.

At the completion of the webinar, activities will be provided to participants.

Why Is Math a Domain in Head Start's Early Learning Outcomes Framework?

1. A principal purpose of Head Start is to provide effective learning opportunities that lead to important learning outcomes.
 - Math readiness is one of these important learning outcomes.
 - Research has found that math (e.g., number sense) is naturally part of cognitive development. It begins early in life and develops rapidly during early childhood.
 - Therefore, Head Start programs should provide effective learning opportunities in math. This will give children a head start on being ready for and successful in school.

Why Is Math a Domain in Head Start's Early Learning Outcomes Framework?

- 2. Research has found that children from low-income families often have less math knowledge than their middle-class peers when they enter kindergarten. This is called the early math gap.**
- **Economically disadvantaged children do not differ from middle-class children in their ability to learn.**
 - **Instead, disadvantaged children have fewer opportunities to learn math.**
 - **For example, low-income households often have fewer educational materials at home and provide less mathematical language to support math learning.**

Why Is Math a Domain in Head Start's Early Learning Outcomes Framework?

Continued...

- Also, preschool curricula in widespread use in public preschool programs, including Head Start, have not been found to be effective in supporting math learning (e.g., What Works Clearinghouse, 2020).
- Head Start can make a big difference in children's lives by giving them opportunities to learn math – effective opportunities that produce math learning.

Why Is Math a Domain in Head Start's Early Learning Outcomes Framework?

3. Many states have adopted rigorous math standards such as the Common Core. State Standards for Mathematics.

- These standards increase what children are expected to learn in kindergarten.
- This increases the level of math readiness needed at entry into kindergarten.
- So, more than ever before, there is a need to prepare children who are in Head Start for math. An effective early math curriculum can help your program do this important work.

The *Pre-K Mathematics* Curriculum

- Provides a systematic approach for mathematically enriching the preschool classroom and home learning environments of young children
- Includes activities specifically designed to provide young children with a strong foundation for standards-based math instruction to prepare all children for success in elementary school
- Has been developed, continuously improved, and evaluated over the past two decades. The Institute of Education Sciences/U.S. Department of Education's What Works Clearinghouse has assigned the highest rating of effectiveness (++) to our *Pre-K Mathematics* curriculum (What Works Clearinghouse, 2020).

The Key Components of the *Pre-K Mathematics Curriculum*

- ✓ Systematic, Intentional Classroom Support
- ✓ Engaging Home Activities
- ✓ Professional Development in Mathematics for Teachers





Pre-K Mathematics

Classroom component:

Small group activities with concrete manipulatives

Math learning center

Home component:

Dyadic (parent-child) home math activities corresponding conceptually to classroom activities

English and Spanish versions

Trainer-of-trainers model:

Trainers institute for local curriculum coaches

Math workshops for pre-k teachers

In-classroom coaching by local program staff to support implementation by teachers

Evidence for *Pre-K Mathematics*

Rated as effective by the What Works Clearinghouse of the U.S. Department of Education/Institute of Education Sciences

Klein, A., Starkey, P., Clements, D., Sarama, J. & Iyer, R. (2008). Effects of a pre-kindergarten mathematics intervention: A randomized experiment. *Journal of Research on Educational Effectiveness*, 1, 155-178.

Thomas, J., Cook, T., Klein, A., Starkey, P., & DeFlorio, L. (2018). The Sequential Scale-Up of an Evidence-Based Intervention: A Case Study. *Evaluation Review*, 42, 318-357.

Head Start's Parent, Family and Community Engagement Interactive Framework


Community.... Families as
Lifelong Educators




Parents and families
observe, guide, promote,
and participate in the
everyday learning of their
children at home, at school,
and in their communities.

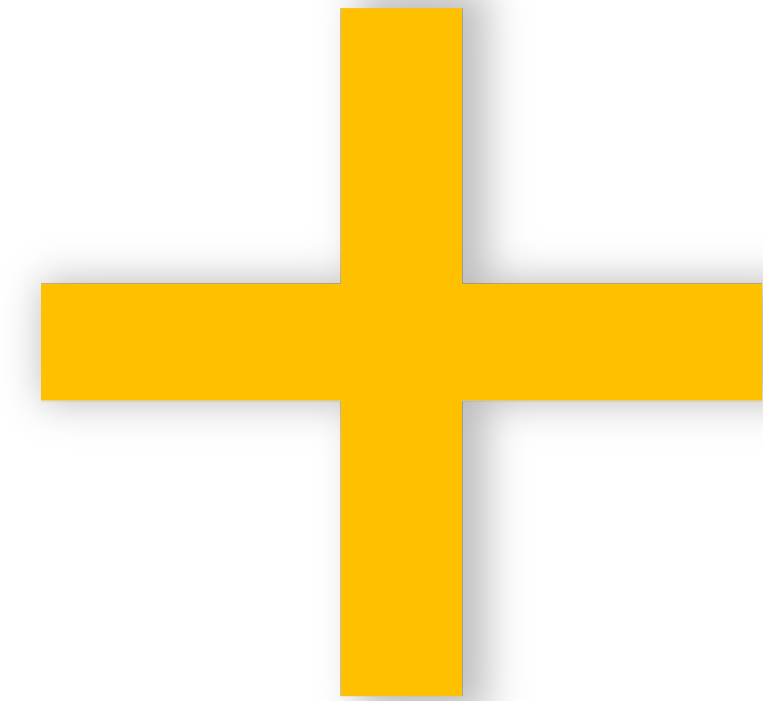
MATH

 Begins to develop at home, early in life.

 Develops during everyday activities:

- ✓ Play
- ✓ Interacting with family/caregivers

 Family/Caregivers can support early mathematical learning and development through planned activities completed with the child.



HOME

HOME ACTIVITY DELIVERY METHODS

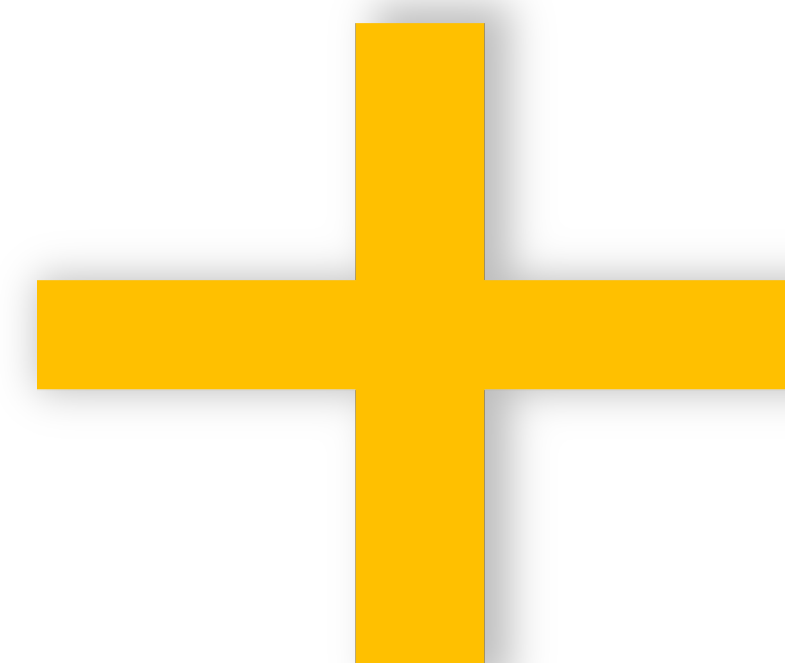
- TRADITIONAL**
 - MONTHLY DISTRIBUTION**
 - VIRTUAL HOME VISIT**
 - RESOURCES**
- 

MATH



“Q & A”

**Do you currently support family’s role as educator in early math? If so, how?
For example: through home visiting.**



HOME

Review of Mathematical Content

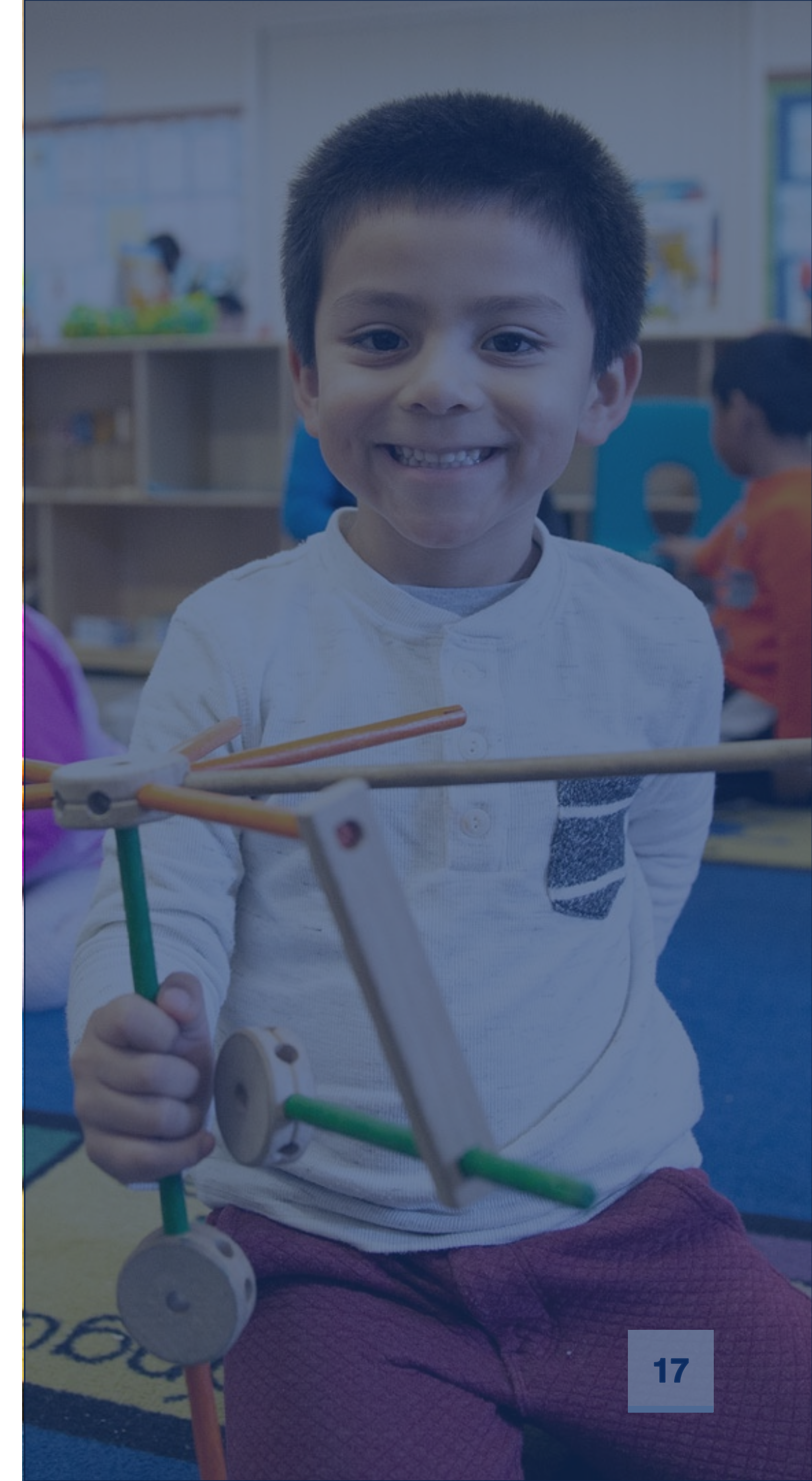
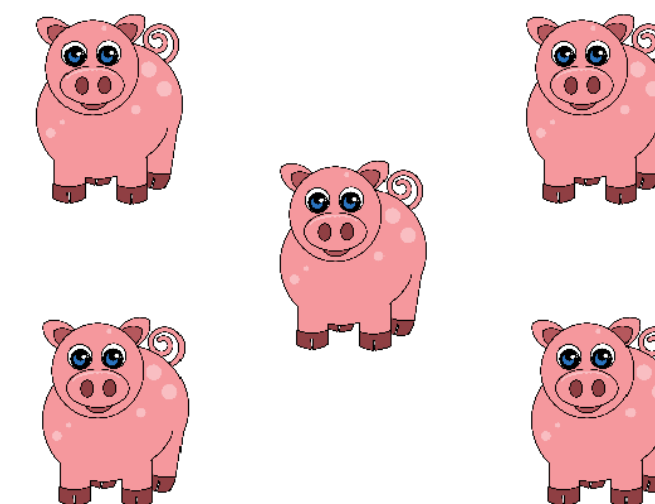
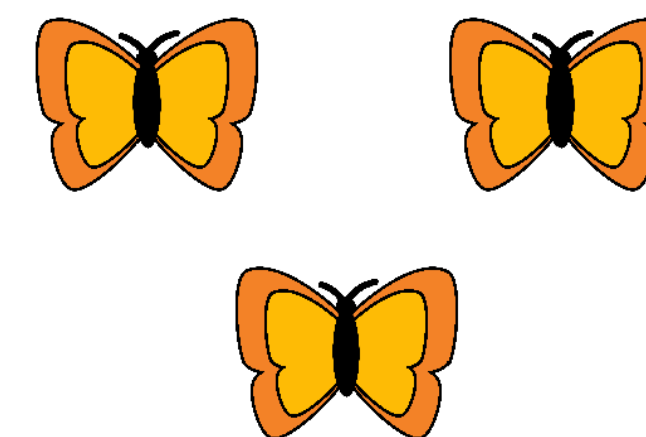
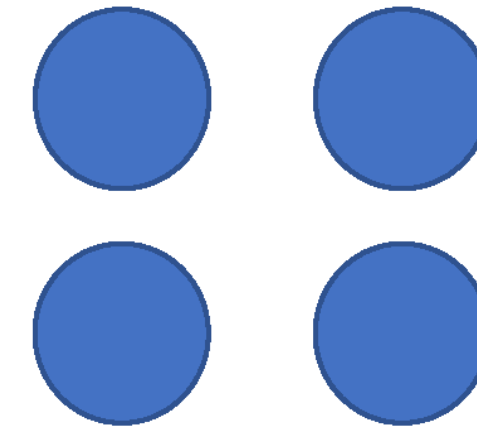
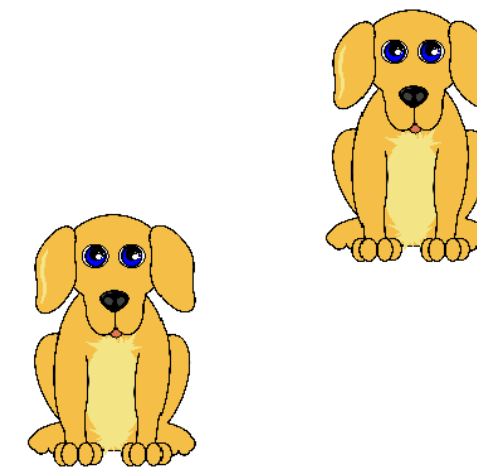
Mathematical Content

- ❖ Numbers
- ❖ Number Relations
- ❖ Arithmetic Operations and Patterns
- ❖ Space and Geometry
- ❖ Measurement and Data

Math Learning by *Four-Year-Olds* in the Pre-Kindergarten Year

Numbers (1-20)

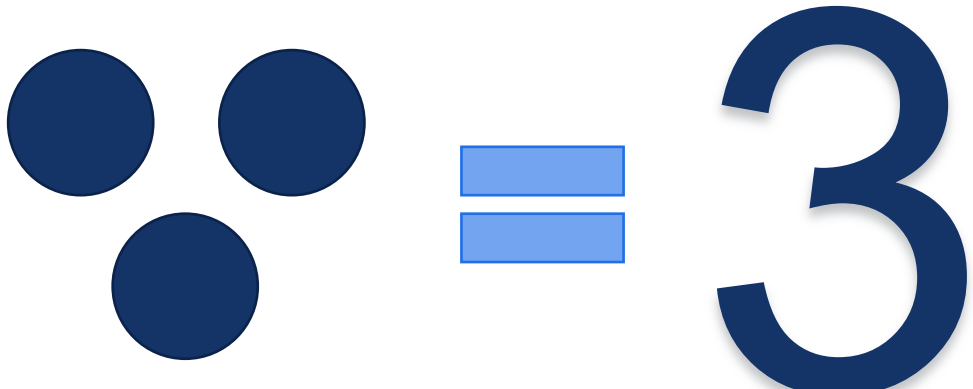
- ❖ Verbal Counting
- ❖ One-to-One Correspondence
- ❖ Cardinality
- ❖ Subitizing
- ❖ Numeral Knowledge



Math Learning by *Four-Year-Olds* in the Pre-Kindergarten Year

Number Relations

- ❖ Groups of objects differing in amounts
- ❖ Sequencing sets of objects
- ❖ Determining 1st, 2nd, 3rd, 4th, 5th

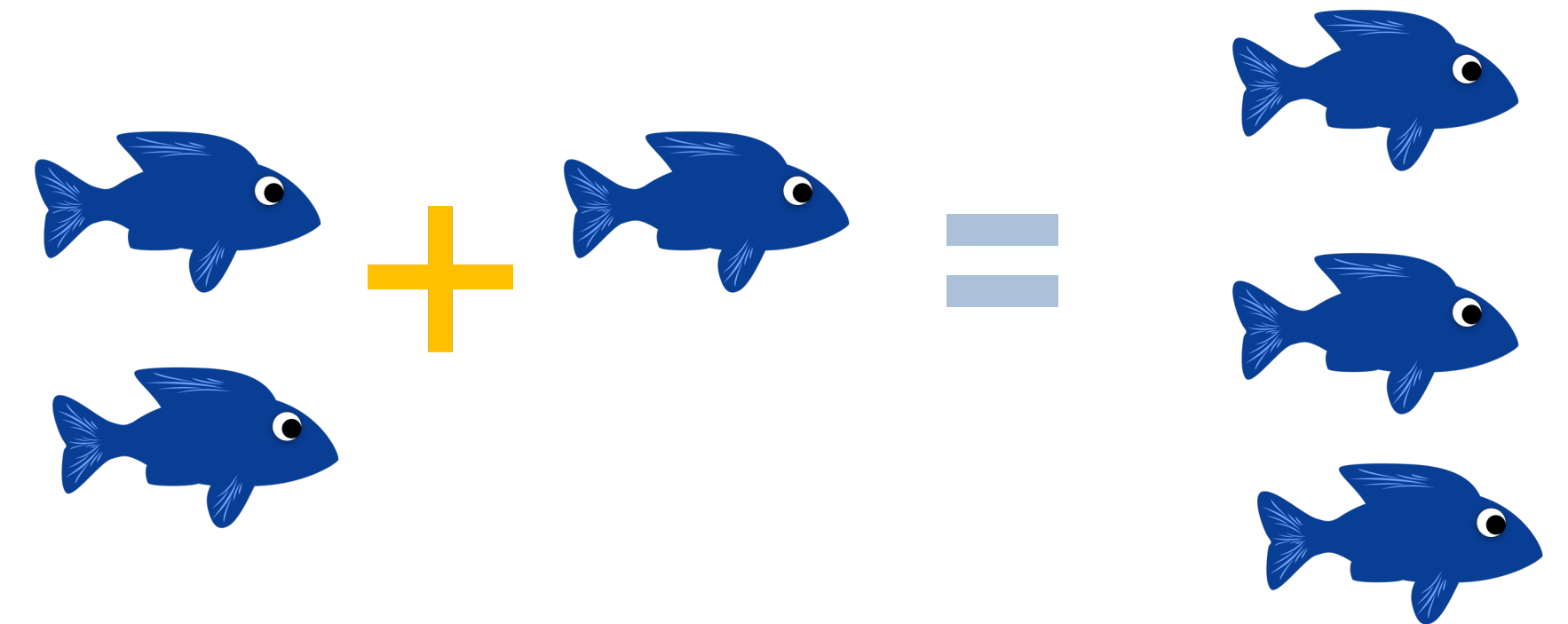


$$\bullet \bullet = 3$$

Math Learning by *Four-Year-Olds* in the Pre-Kindergarten Year

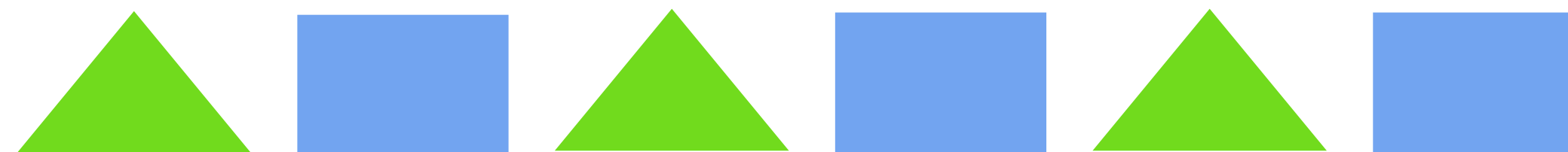
Arithmetic Operations

- ❖ Add (*put together*)
- ❖ Subtract (*take away*)
- ❖ Equal to (*both sides are the same*)



Patterns

- ❖ Repetitive sequencing of a set of objects (*unit*)





Math Learning by *Four-Year-Olds* in the Pre-Kindergarten Year: Home Activities – PART 1

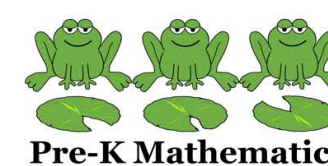
PRE-K MATHEMATICS Home Activity Curriculum Plan		
WEEK	Home Activity	
Number & Number Relations: Part 2		
17	Help Kitty Count 2	
18	Help Kitty Compare	
19	Park the Cars in Their Spaces 2	
20	Match the Numerals to the Sets 2	
21	Let's Share the Crackers	
Measurement & Data		
23	Which Crayon is Longer?	
24	Who is Third in Line?	
25	How Many Coins Does Kitty Have?	
26	Spring Break	
Arithmetic Operations & Patterns: Part 2		
27	Birds in the Nest	
28	The Number Race	
Space & Geometry: Part 2		
30	Three-Dimensional Shapes	
31	Shape Pictures	





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Help Kitty Count



Dear Parent/Guardian,

As part of the math program at preschool, your child's teacher will be sending home math activities and games for you and your child to do together. The activities are an opportunity for you to learn more about the math your child is doing in school and for you and your child to practice and extend the skills that they are learning.

This week the children have been doing lots of activities that teach counting. *Help Kitty Count* is a counting game for you and your child to play at home. Sock puppet Kitty is learning to count and sometimes makes mistakes. Playing this game with your child will help them learn to count increasingly larger numbers of objects.

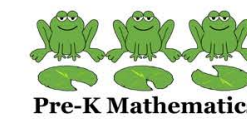
We hope you and your child will enjoy helping Kitty learn to count.

Best Wishes!

Home Activity: Help Kitty Count
Pre-K Mathematics Activity: Watch Me Count

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Help Kitty Count



Pre-K Mathematics Home Activity Help Kitty Count

Problem 1: Have Kitty slowly and correctly count the objects, starting at the left end of the strip and ending at the right end of the strip.

1

1, 2, 3. There are three things here.

Was Kitty's counting OK or was his counting not OK and wrong?

OK

2

Now have Kitty miscount by skipping a number.

1, 2, 4. There are 4 things

3

Was Kitty's counting OK or was his counting not OK and wrong?

Not OK.

4

How many things are here?

Three.

If Your Child Needs Help.

If your child encounters difficulty (for example, they did not detect an error that the puppet made), have the puppet count again and watch your child to be sure they are watching when the puppet makes the error. You can also have the puppet make the same type of error but on a very small set. If your child detects the error made in counting a very small set, have the puppet make the error again in counting a larger set.

Help Kitty Count

Make Kitty Sock Puppet



Help Kitty Count

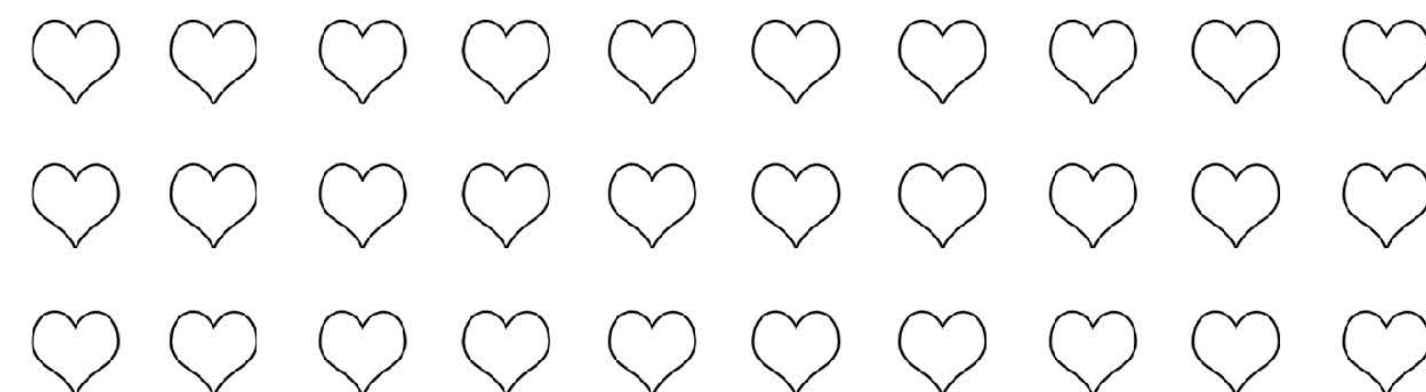
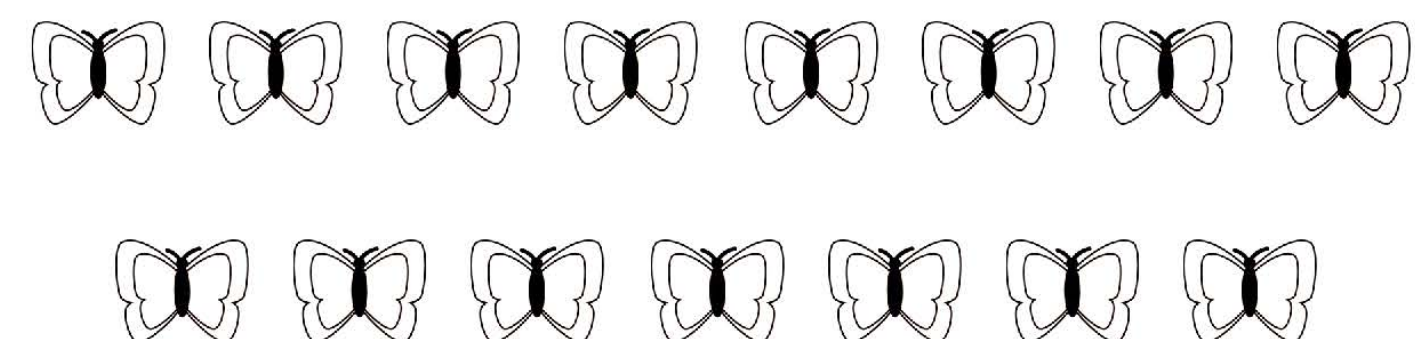
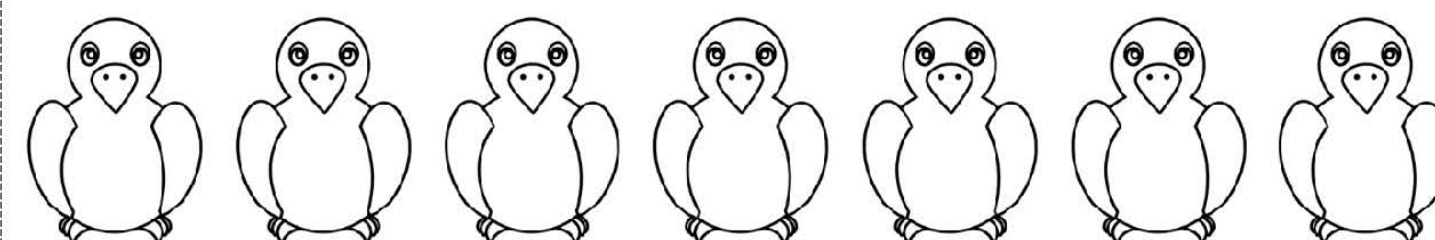
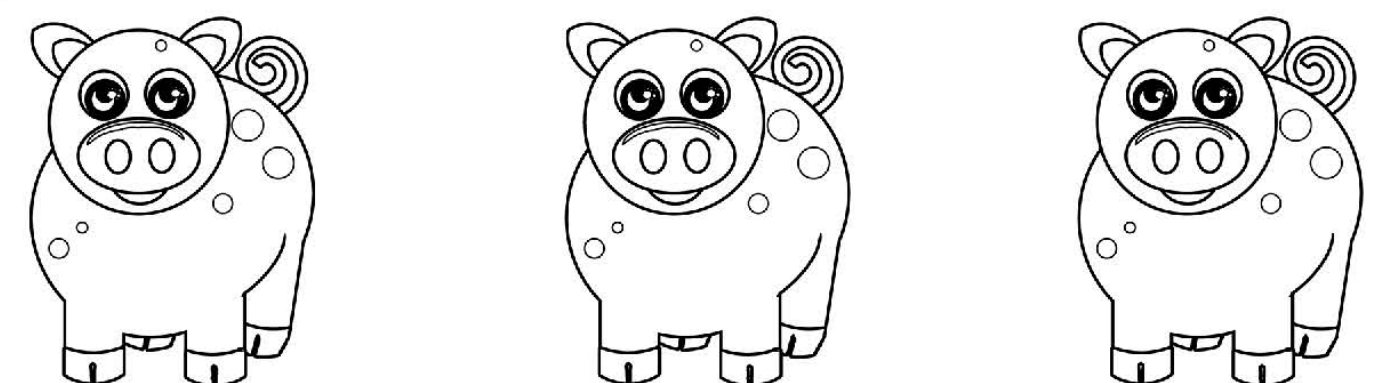
Activity Strips



Pre-K Mathematics Home Activity

Help Kitty Count / Ayuda a Kiko a contar

- ❖ Color and cut apart the 4 counting strips before you show them to your child.
- ❖ Coloree y corte las 4 tiras de conteo antes de mostrárselos a su hijo(a).



Help Kitty Count

Downward Extension (DE)

Giving Your Child Extra Support

If your child encounters difficulty (for example, he or she did not detect an error that the puppet made), have the puppet count again and watch your child to be sure he or she is watching when the puppet makes the error.

You can also have the puppet make the same type of error but on a very small set. If your child detects the error made in counting a very small set, have the puppet make the error again in counting a larger set.

Help Kitty Count

Upward Extension

Try These: Use sets of 3, 7, 15 or 30.

Kitty clearly misses the final object as he counts, for example, on the 3-object strip, "One, two. There are two things here."

Kitty counts one object twice, for example, on the 3-object strip, "One, two, three, four. There are four."

Kitty uses number words in the wrong order, for example, "One, three, two. There are two things."

Kitty reports the wrong number for a set, for example, "One two, three. There are four things."



Which of these HS-ELOF goals is supported by the counting activity? *Choose all that apply*

- Goal P-MATH 1: Child knows number names and the count sequence.
- Goal P-MATH 2. Child recognizes the number of objects in a small set.
- Goal P-MATH 3. Child understands the relationship between numbers and quantities.
- Goal P-MATH 4. Child compares numbers.
- Goal P-MATH 5. Child associates a quantity with written numerals up to 5 and begins to write numbers.

In the Next Session:

- **Home Activities for Semester 2**
- **Supporting Key Mathematical Language**
- **How to Further Support Math Learning at Home and in the classroom**



Welcome Back!

A Hybrid Approach to Supporting Children's Early Mathematical Development Part B

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Head Start's Parent, Family and community Engagement Interactive Framework

Community.... Families as
Lifelong Educators



Parents and families
observe, guide, promote,
and participate in the
everyday learning of their
children at home, at school,
and in their communities.

Pre-K Mathematics

Home Activities



Dear Parent/Family,

As part of the math program at preschool, your child's teacher will be sending home math activities and games for you and your child to do together. The activities are an opportunity for you to learn more about the math your child is doing in school and for you and your child to practice and extend the skills that they are learning.

For the next week your child will learn number names from *ONE* through *FIVE*. We are sending home an activity called *Let's Learn Some Number Names* for you or another family member to do with your child. Please do this activity at least twice (on two separate days), or more often if your child is still learning from the activity. Please return the attached Parent and Family Feedback Form in the next week.

This activity will further support your child's understanding of number names and will help prepare your child for some counting activities later in the school year.

We hope that you both enjoy the activity *Let's Learn Some Number Names*.

Best Wishes!

Home Activity: Let's Learn Some Number Names
Pre-K Mathematics Activity: Let's Learn Some Number Names

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Benefits of Home Activities

When family/caregivers and children work together, at home, on activities provided by the teacher for at least 15-20 minutes up to three days a week:

- ✓ children have a better understanding of the concepts and strategies being taught at school
- ✓ children have access to more individual time and attention from their family/caregivers.

The Home Activity Organizer is:

✓ available in English and Spanish

✓ provides clear instructions and

suggestions to successfully

implement with children

✓ offers developmental adjustments:

➤ Downward Extension if the activity

is too difficult

➤ Upward Extension if a child

encounters no difficulties

*Materials for Family/Caregivers



Dear Parent/Guardian,

This week at school your child is working with patterns. The home activity *Put a Pattern on the Flag* will further support your child's understanding of patterns. By coloring pictures of flags, your child will gain experience analyzing and extending patterns.

Please do this activity at least twice (on two or more different days), more often if your child is still learning from the activity. Please return the attached Parent and Family Feedback Form to your child's teacher in the next few weeks.

We hope that you both enjoy playing *Put a Pattern on the Flag*.

Best Wishes.



Estimados padres de familia:

Esta semana en la escuela su hijo/a está trabajando con patrones. La actividad en casa *Colocar un patrón en la bandera* apoyará el entendimiento de su hijo/a sobre patrones. Al colorear dibujos de banderas, si hijo/a podrá adquirir experiencia en analizar y extender patrones.

Por favor haga esta actividad por lo menos dos veces (en dos o más días diferentes), más seguido si su hijo/a aún está aprendiendo de la actividad. Por favor devuelva el papel adjunto, Comentario de padres y familia, al maestro/a de su hijo/a en las próximas semanas.

¡Esperamos que usted y su hijo(a) se diviertan jugando *Colocar un patrón en la bandera*!

Sinceramente,



Pre-K Mathematics Home Activity

Put a Pattern on the Flag

Child's Goal: Your child will gain experience analyzing and extending patterns and will become more familiar with the term *pattern*.

Parent's Role: You will help your child extend patterns that you have begun.

Activity Organizer

Key Mathematical Language

- Pattern

Setup and Materials

Parent (or another adult) and child stand or sit at a table or on the floor to do this activity.

A small box of crayons is needed. The parent should color the first four stripes on both flags used in Problem 1 (Teacher's Flag and Girl's Flag).

The parent should also color the first six stripes on the flag used in Problem 2 and the first six squares of the sidewalk used in Problem 2.

PARENT TIPS

- Provide only the crayons needed to complete each pattern.
- See if your child can tell you how they plan to complete a pattern. Say, "Show me which crayon you will use to color this stripe. And what color will the next stripe be?"

Introducing the Activity

This activity will give your child experience extending a pattern. You will begin the pattern on each flag and sidewalk, and your child will color in the rest of the pattern.

Place the crayons and the pictures you have partly colored on the table. Say, "Here are some children and their teacher. The teacher has asked everybody to put a pattern on a flag and a pattern on a sidewalk. The patterns have already been started, but the teacher and children need you to finish coloring the patterns."

Point to the teacher's flag, which has a 2-color pattern on it, and say, "Let's start with the teacher's flag."

How to make it easier. Have your child duplicate a pattern. Use the sheet labeled "How to make it easier." First, the parent should color one sidewalk entirely (e.g., red-blue-red-blue-red-blue). The have your child copy your pattern on the other sidewalk.

How to make it harder. Have your child create a new pattern using the Flag for 2 Crayons. Say, "Can you make a new pattern? Pick two crayons to use to make your pattern." After your child selects two crayons, point to the top stripe on the flag and ask, "Which color goes here?" After your child responds (e.g., "black"), point to the second stripe and ask, "Which color goes here?" After your child responds (e.g., "orange"), say, "Okay, you are making a black-orange pattern. Put a black-orange pattern on your flag."

In this example, black-orange is the pattern unit that gets repeated until the flag is completed. You should watch to see if your child keeps using this pattern unit while coloring the flag.

Next, have your child create a new pattern using the Flag for 3 Crayons. Go through the activity step-by-step as above until your child has created a pattern unit using three colors.

Pre-K
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Pre-K Mathematics Home Activity

Colocar un patrón en la bandera

Metas para su niño(a): Su hijo(a) adquirirá experiencia analizando patrones, completando los patrones y familiarizándose con el vocabulario *patrón*.

Cómo participar: Usted ayudará a su hijo(a) a completar los patrones que usted ha comenzado.

Organizador de actividad

Vocabulario de matemáticas

- patrón

Preparación y materiales

Padre o tutor y el niño/la niña se puede poner de pie o sentarse en una mesa o en el suelo para hacer esta actividad.

Se necesita una pequeña caja de creyones. El padre o tutor debe colorear las primeras cuatro franjas en ambas banderas utilizadas en el problema 1 (bandera de la maestra y bandera de la niña).

El padre o tutor también debe colorear las primeras seis franjas en la bandera utilizadas en el problema 2 y las primeras seis partes del camino de la acera utilizadas en el problema 2.

SUGERENCIAS

- Proporcione sólo los creyones necesarios para completar cada patrón. Vea si su hijo(a) puede decirle cómo planea completar un patrón. Diga, "Muéstrame qué creyón usarás para colorear esta franja. ¿Y de qué color será la próxima franja?"

Cómo hacerlo más fácil. Pídale a su hijo(a) que duplique un patrón. Use la hoja indicada "Cómo hacerlo más fácil". El padre o tutor debe colorear una acera por completo (por ejemplo, rojo-azul-rojo-azul-rojo-azul). Haga que su hijo(a) lo copie en la otra acera.

Presentar la actividad

Esta actividad le dará a su hijo(a) experiencia completando los patrones. Usted comenzará el patrón en cada bandera y acera, y su hijo(a) coloreará el resto del patrón.

Coloque los creyones y las ilustraciones queestán parcialmente coloreadas en la mesa. Diga: "Aquí están algunos niños y su maestra. La maestra les ha pedido a todos que coloreen un patrón en la bandera y un patrón en la acera. Los patrones se han comenzado, pero la maestra y los niños necesitan que termines de colorear los patrones."

Enséñele la bandera de la maestra, que tiene un patrón de 2 colores, y diga: "Comencemos con la bandera de la maestra."

Cómo hacerlo más difícil. Pida a su hijo(a) que cree un nuevo patrón usando la bandera para 2 colores de creyones. Diga, "¿Puedes hacer un nuevo patrón? Elige dos colores de creyones para usar hacer tu patrón." Después de que su hijo(a) seleccione dos creyones, señale la franja superior de la bandera y pregúntele: "¿Qué color va aquí?" Después de que su hijo(a) responda (por ejemplo, "negro"), señale la segunda franja y pregúntale: "¿Qué color va aquí?" Después de que su hijo responda (por ejemplo, "naranja"), diga, "Bien, estás haciendo un patrón negro-anaranjado. Pon un patrón negro-anaranjado en tu bandera."

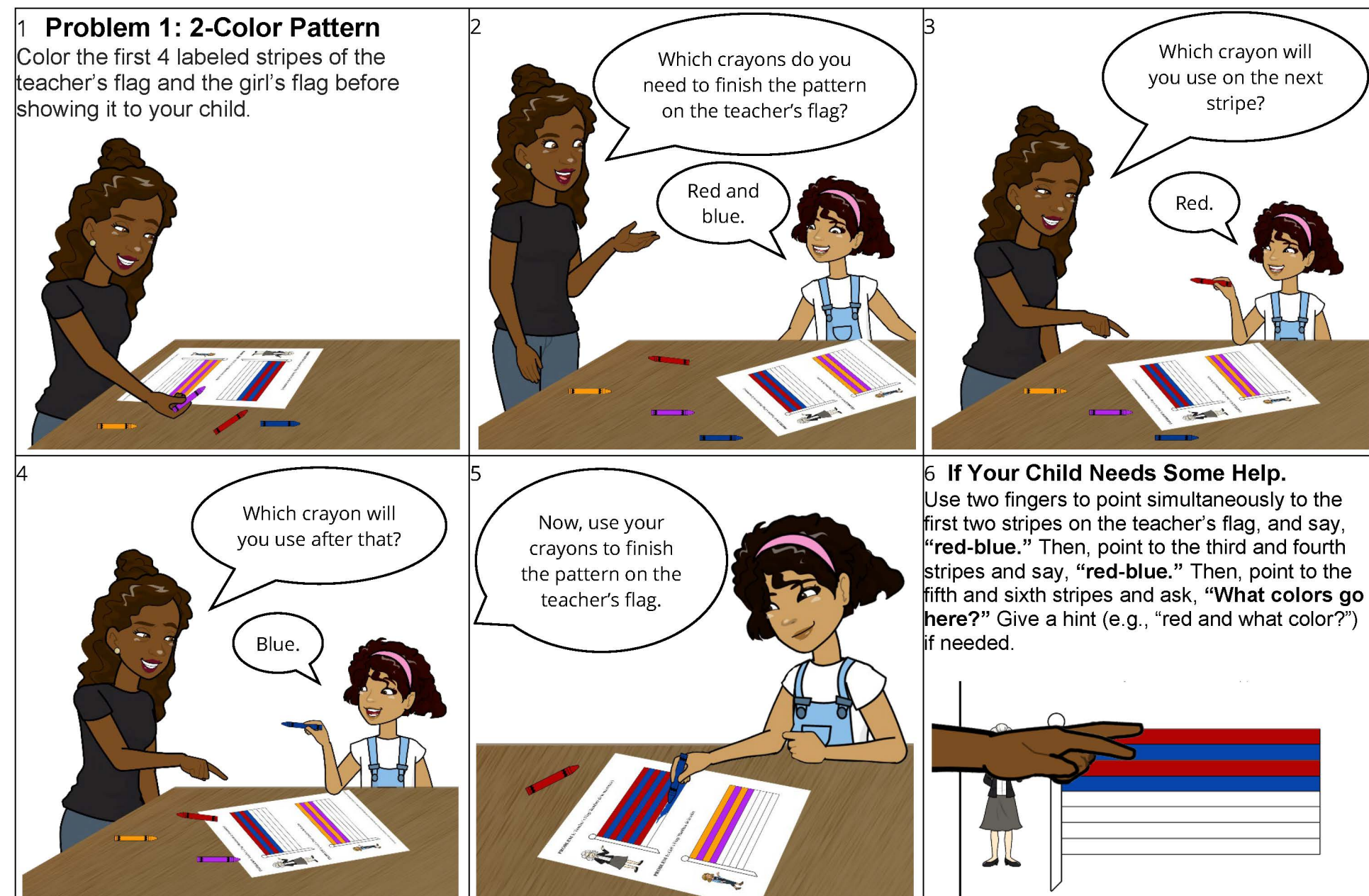
En este ejemplo, negro-anaranjado es la unidad de patrón. Usted debe mirar para ver si su hijo(a) sigue usando esta unidad de patrón mientras colorea la bandera.

Lo siguiente a hacer, pídale a su hijo(a) que cree un nuevo patrón usando la bandera para 3 colores de creyones. Revise la anterior actividad paso a paso hasta que su hijo(a) haya creado una unidad de patrón con tres colores.

How Much Time Should Family/Caregivers Devote to Using These Activities?



Pre-K Mathematics Home Activity
Put a Pattern on the Flag

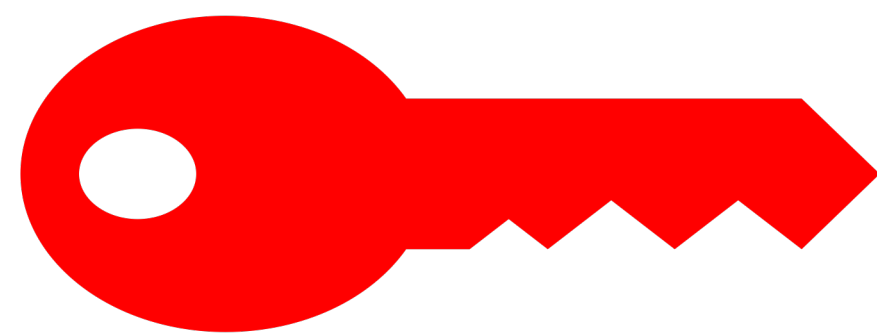


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Family/Caregivers should complete the activity with the child:

- ✓ At least two times, on different days for 15-20 minutes each time.
- ✓ include the more difficult problems
- ✓ give children opportunities to review activities, so they can learn more

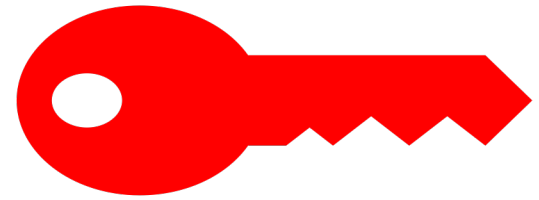
Teacher's Role in Helping Family/Caregivers Understand Key Mathematical Language



What is Key Mathematical Language?

The language specific to the activity's primary skills or concepts that we want family/caregivers to use with the child throughout the activity.

Teacher's Role in Helping Family/Caregivers Understand Key Mathematical Language in English and In Spanish



Activity Organizer

Key Mathematical Language

- pattern

Vocabulario de matemáticas

- *patrón*



Teachers can work with Family/Caregivers to:

- ✓ Understand importance of their engagement and involvement with the child during activities.
- ✓ Set aside time to review and plan the home activity.
- ✓ If not available, ask another family member/caregiver to complete activity with child.
- ✓ Model for family/caregivers how to implement at least one home activity.

When Family/Caregivers are Ready... Children are Ready!

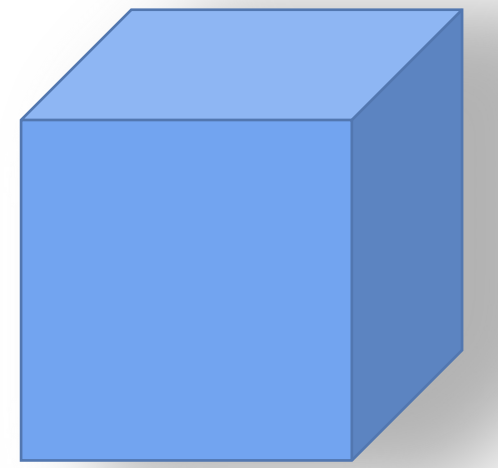
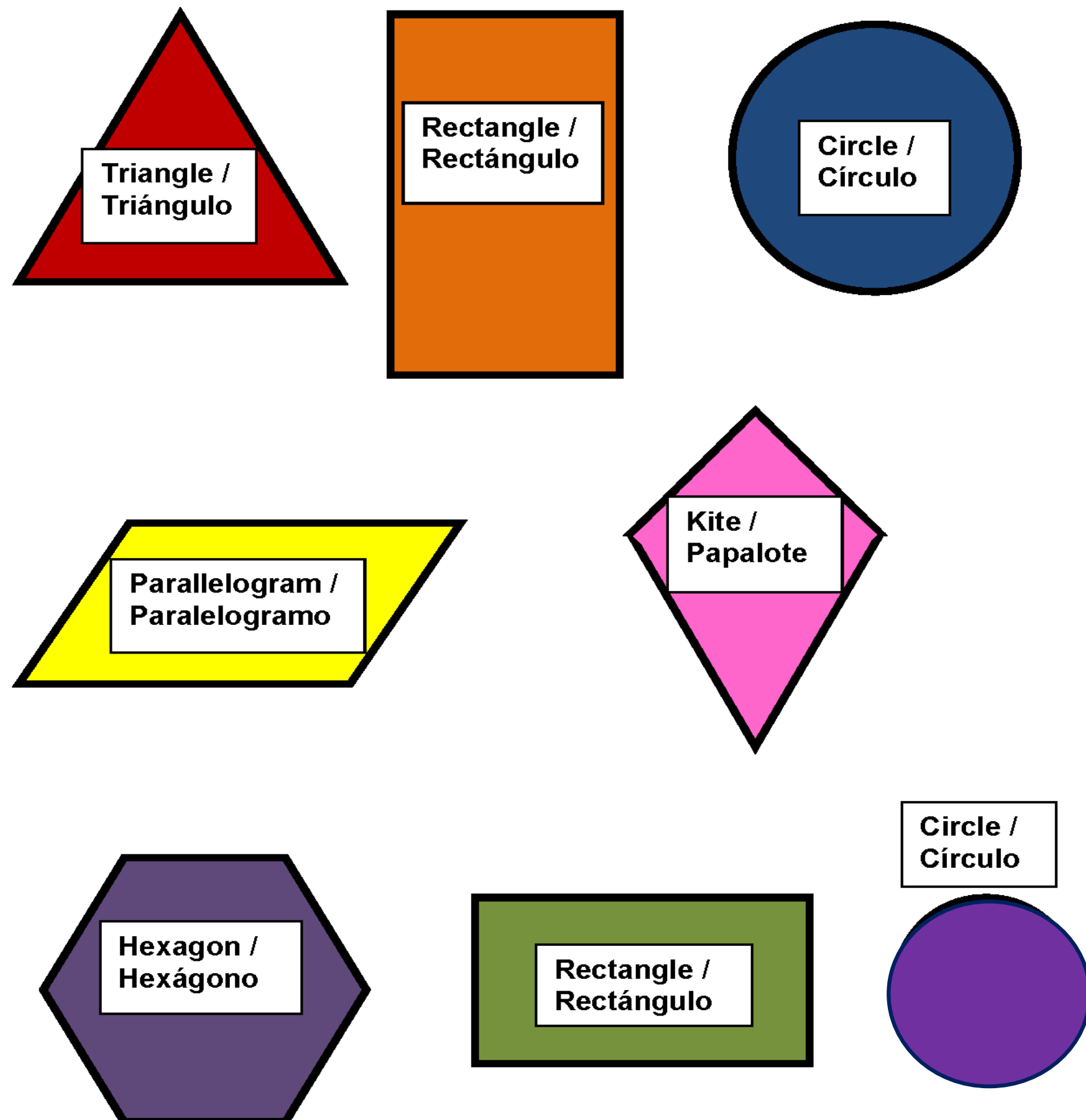
Review of Mathematical Content...*continued*



Mathematical Content

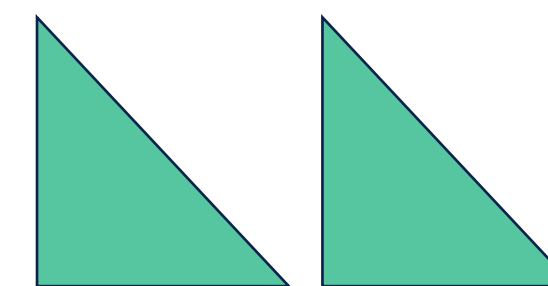
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- ❖ Number Relations
- ❖ Arithmetic Operations and Patterns
- ❖ Space and Geometry
- ❖ Measurement and Data

Math Learning by *Four-Year-Olds* in the Pre-Kindergarten Year

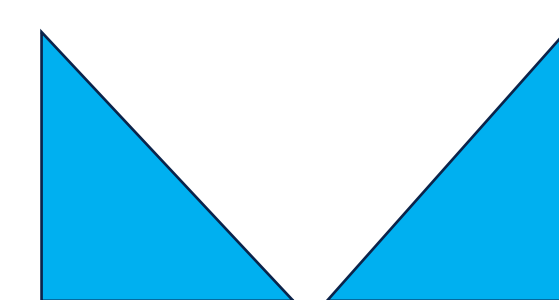


Space and Geometry

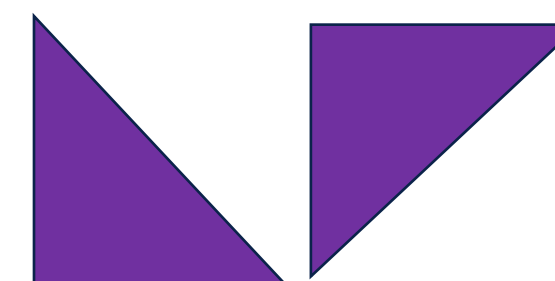
- ❖ Spatial sense and relations
- ❖ Identify and create two-dimensional shapes (flat shapes)
- ❖ Parts, attributes and properties of 2D and 3D shapes - corner/vertex; side (long, short, leaning or straight); and/or orientation (turn, flip and slide)



Slide

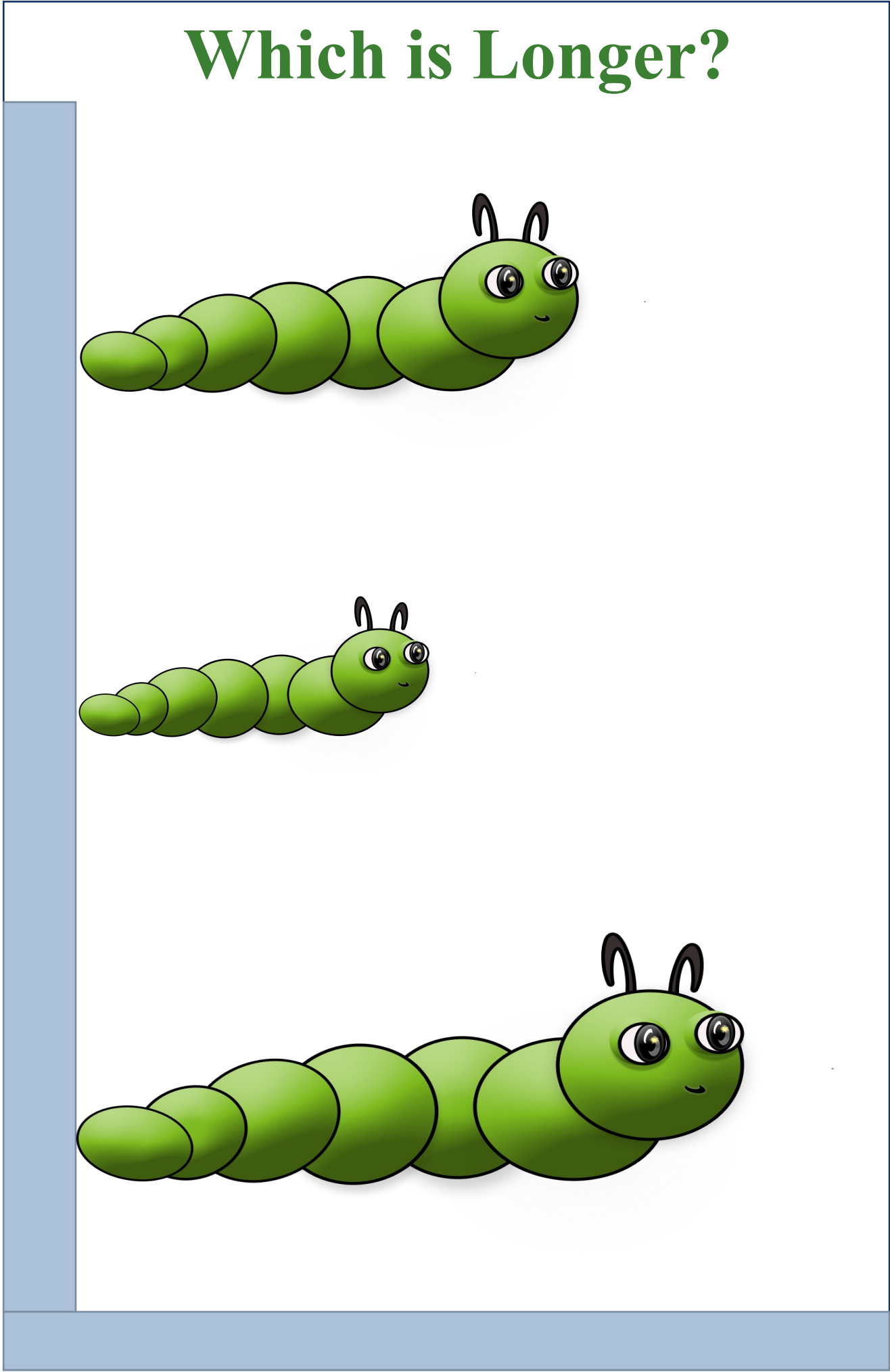


Flip



Turn

Math Learning by *Four-Year-Olds* in the Pre-Kindergarten Year

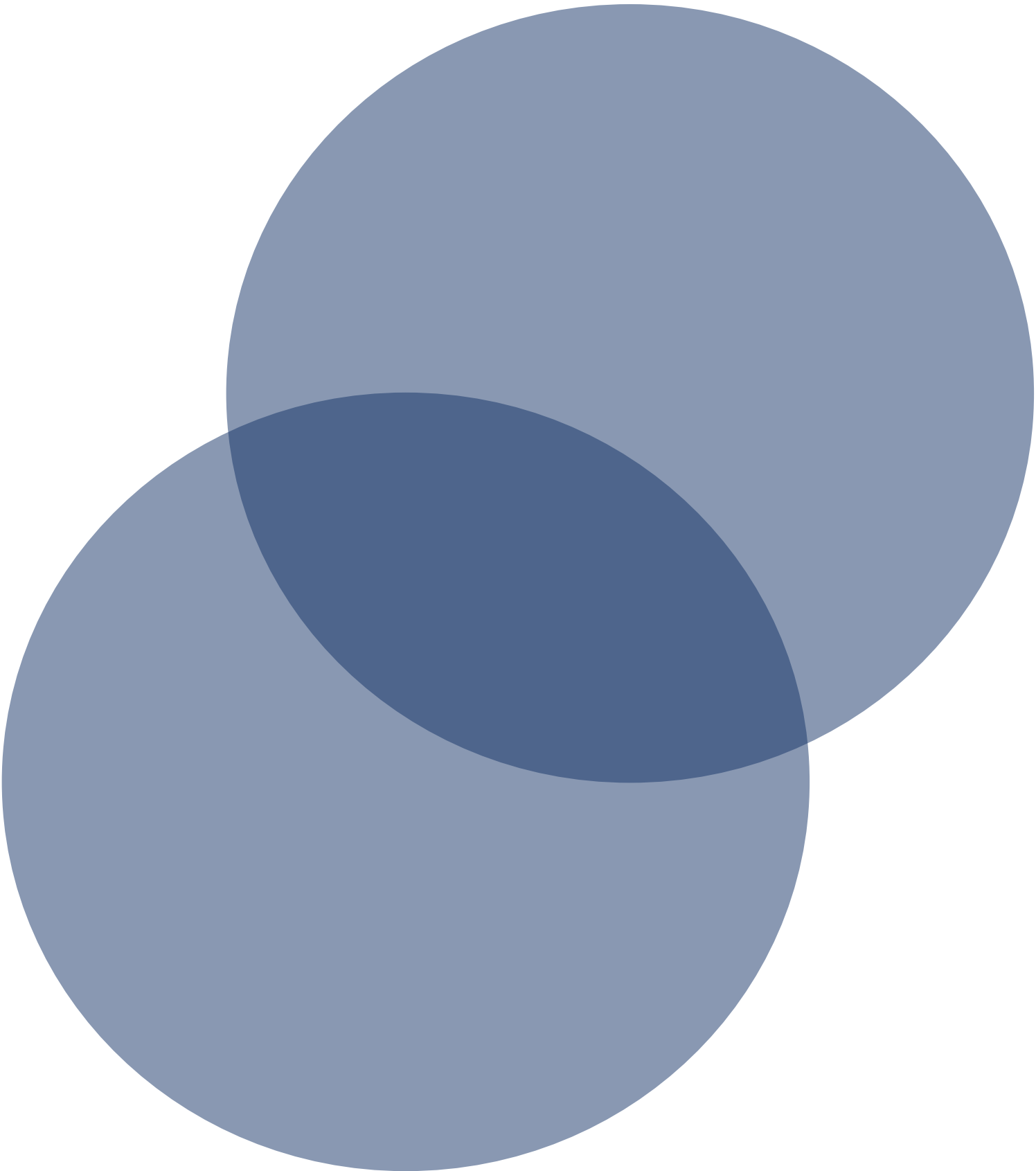


Measurement	Data
Height	Graph
Length	Column (bottom to top)
Size	One-to-One Correspondence
Comparison of Similar Attributes	Number Knowledge
	Number Relations



Math Learning by *Four-Year-Olds* in the Pre-Kindergarten Year: Home Activities – PART 2

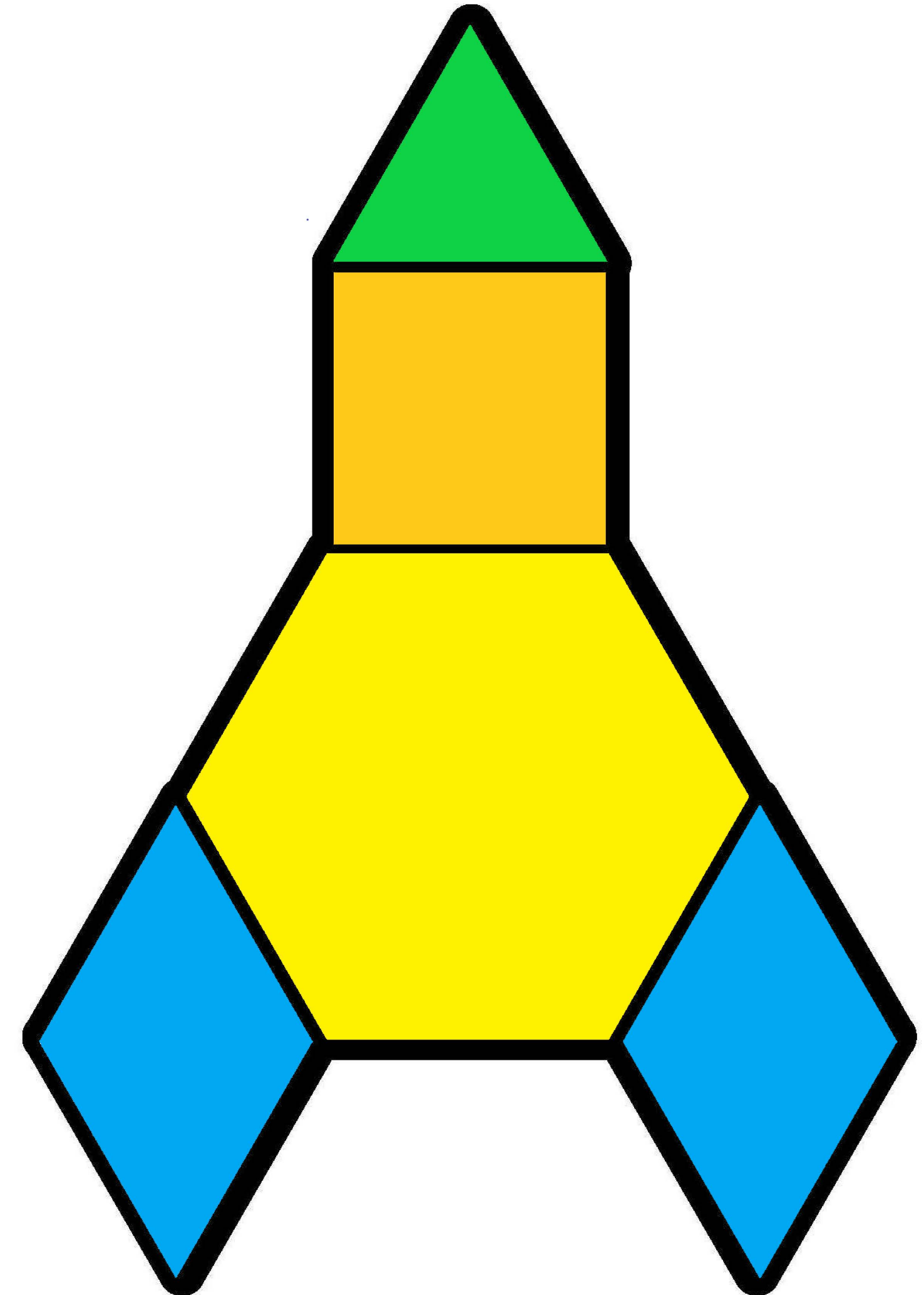
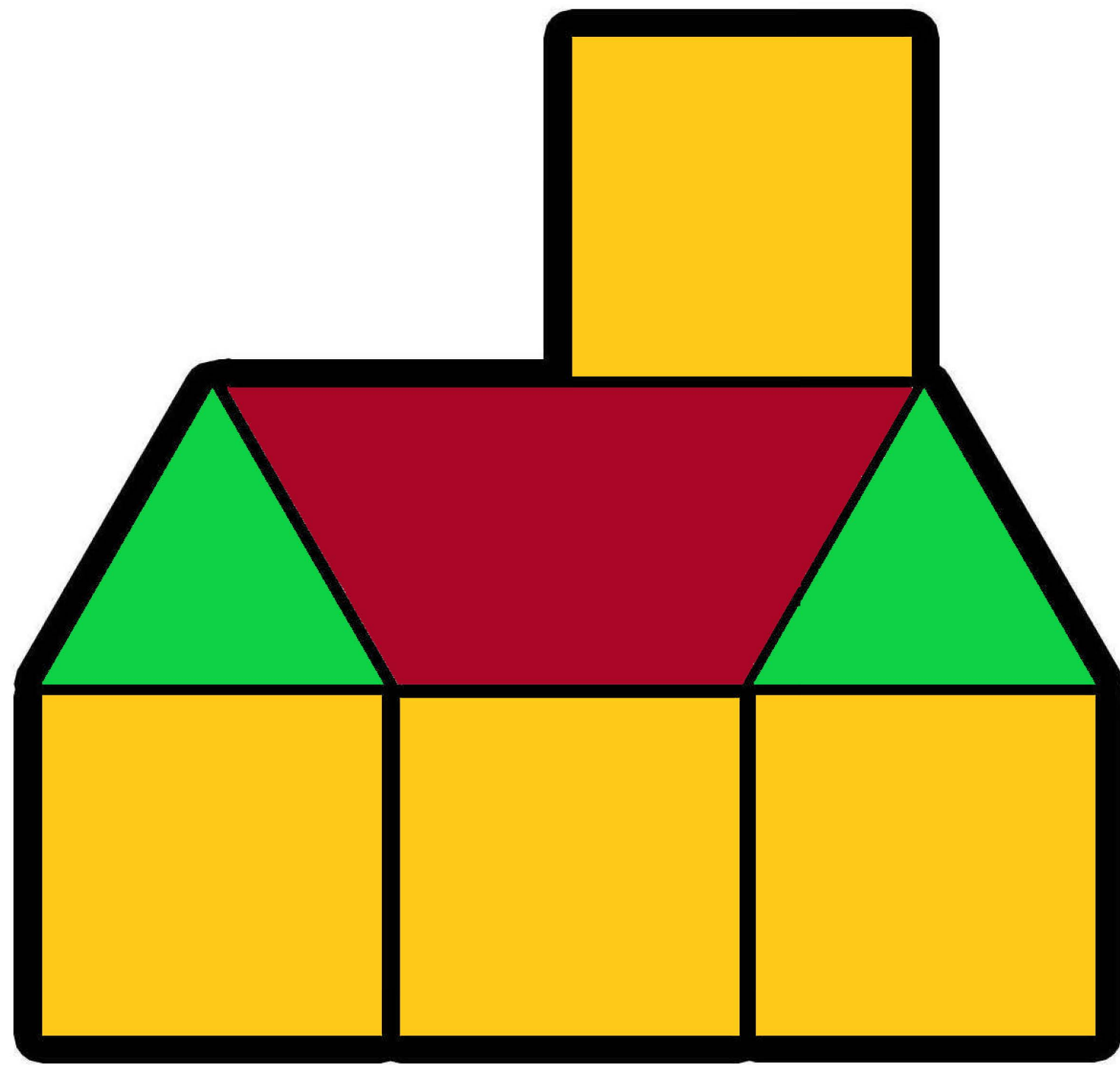
PRE-K MATHEMATICS		
Home Activity Curriculum Plan		
WEEK	Home Activity	
Number & Number Relations: Part 2		
17	Help Kitty Count 2	
18	Help Kitty Compare	
19	Park the Cars in Their Spaces 2	
20	Match the Numerals to the Sets 2	
21	Let's Share the Crackers	
Measurement & Data		
23	Which Crayon is Longer?	
24	Who is Third in Line?	
25	How Many Coins Does Kitty Have?	
26	Spring Break	
Arithmetic Operations & Patterns: Part 2		
27	Birds in the Nest	
28	The Number Race	
Space & Geometry: Part 2		
30	Three-Dimensional Shapes	
31	Shape Pictures	





PRE-K MATHEMATICS		
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27	Birds in the Nest	
28	The Number Race	
Space & Geometry: Part 2		
30	Three-Dimensional Shapes	
31	Shape Pictures	

Shape Pictures



Shape Pictures

Home Activity



Pre-K Mathematics Home Activity

Shape Pictures

Child's Goal: Your child will learn the names and properties of basic flat shapes. He or she will also obtain experience in orienting and matching shapes and in using them as parts of larger shapes.

Parent's Role: Help your child become more familiar with the names and properties of these shapes. You should also decide whether your child is ready to try the more difficult problems.

Activity Organizer

Key Mathematical Language

- Square
- Triangle
- Diamond
- Hexagon
- Trapezoid
- Match

Setup and Materials

Parent and child sit across from one another at a table or on the floor to do this activity.

Cut out the colored paper shapes and separate them into piles of the same shape.

Fold each page in half so only the shape with no lines is showing.

Introducing the Activity

Cut out the individual-colored shapes. Fold each page in half so that the shape picture with the internal lines is on one side of the paper and the matching shape picture without internal lines is on the opposite side.

Ask your child to name the different shapes as you point to them on the table. Say the names of any shapes that are unfamiliar. Ask some questions about the shapes, such as, "**How many sides does this shape have?**" Help, if necessary, by suggesting that your child count the sides. Select another shape and ask, "**How many shapes match this one?**"

Say, "**Let's use these shapes to make some pictures.**" Spread the set of shapes on the table and show your child a few shape pictures.

PARENT TIPS

How to make it easier: If your child has difficulty filling in the shapes pictures that have lines inside of them, hand them the shapes that are needed to complete the pictures on at a time each time asking, "**Where can this one go?**" If necessary, help place some of the shapes in the pictures. Then let your child try again with less help.

How to make it harder: If your child successfully fills in the shape picture with no internal lines, give your child Shape Pictures again. Ask your child to use a different combination of shapes. For example, a trapezoid and 3 triangles may be used instead of 6 triangles for the hexagon, and so on.


Shape Pictures

Child's Goal: Your child will learn the names and properties of basic flat shapes. He or she will also obtain experience in orienting and matching shapes and in using them as parts of larger shapes.

Parent's Role: Help your child become more familiar with the names and properties of these shapes. You should also decide whether or not your child is ready to try the more difficult problems.

Child Goals and Parent Goals

Shape Pictures




Parent Tips

PARENT TIPS

- Allow your child to compare and explore the shapes before doing the activity.

Shape Pictures



Key Mathematical Language

Key Mathematical Language

- Square
- Triangle
- Diamond
- Hexagon
- Trapezoid
- Match
- Fill in

Shape Pictures

Set up and Materials

Setup

Parent and child sit across from one another at a table or on the floor to do this activity.

Materials

- Colored paper shapes
- Crayons to color (if not already colored in)
- Set of shape pictures with lines
- Scissors

Shape Pictures

Introducing the activity

Introducing the Activity

Color the shapes on the provided page and then cut them apart. Fold each Activity Aid in half so that the shape picture with the internal lines is on one side of the paper and the matching shape picture without internal lines is on the opposite side.

Ask your child to name the different shapes as you point to them on the table. Say the names of any shapes that are unfamiliar. Ask some questions about the shapes, such as, **"How many sides does this shape have?"** Help, if necessary, by suggesting that your child count the sides. Select another shape and ask, **"How many shapes match this one?"**

Say, **"Let's use these shapes to make some pictures."** Spread the set of shapes on the table and show your child a few shape pictures.

Shape Pictures

Downward and Upward Extension

DOWNWARD EXTENSION If your child has difficulty filling in the shapes pictures that have lines inside of them, hand them the shapes that are needed to complete the pictures on at a time each time asking, **“Where can this one go?”** If necessary, help place some of the shapes in the pictures. Then let your child try again with less help.

UPWARD EXTENSION If your child successfully fills in the shape picture with no internal lines, give your child Shape Pictures 7 and 10 again. Ask your child to use a different combination of shapes. For example, a trapezoid and 3 triangles may be used instead of 6 triangles for the hexagon, and so on.



Which of these HS-ELOF goals is supported by the counting activity? *Choose all that apply*

- Goal P-MATH 9: Child identifies, describes, compares, and composes shapes.
- Goal P-MATH 10. Child explores the positions of objects in space.



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- ❖ For further support and training
- ❖ If your program is interested in a similar webinar on supporting the home environment

- Home Page:
<https://www.prekmath.wested.org>

Thank you!

We will use the contact information you provide to send you the Pre-K Mathematics home activities.