Entering Kindergarten

Summer Math Work

WCS

Name: _____

Dear Families,

To help prepare your child for Kindergarten at Wissahickon Charter School, we have created a packet of math work to do with your child over the summer. This packet is designed for your child to practice the skills they will need to be successful and to help you better understand how to help your child with math! Children will practice writing numbers, counting, identifying shapes, making patterns, and sorting things.

In this packet, you will find 10 weeks of work. Each week has an explanation for you, an activity to try each week, and one one practice page. With the activity and practice page, each week should take about one hour. We suggest you spread this work over at least two days each week. For the questions, ask your child these throughout the week- whenever you think of it! The best thing you can do to help your child be successful is to read through this work and talk to your child about math and the world around them!

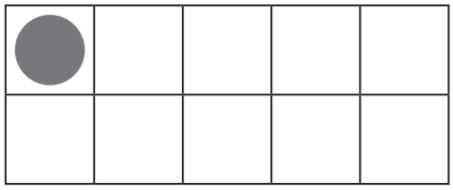
Please return this workbook to your child's teacher on their first day of school. If you have any questions, you can reach out to Donna Green, our math coordinator at d.green@wissahickoncharter.org.

We are so glad to have you as part of our community,
happy summer!

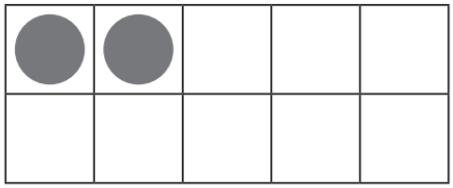
Week 1

I can.. write and count the numbers 1 and 2.

Number 1
is like a stick,
a straight line down
that's very quick!



For number 2
go right around,
Then make a line
across the ground!



Understanding the math: At the beginning of each of these first weeks of work, you will see short poem to help your child write numbers like the ones above. Saying these poems as you show your child how to write the number or as your child tries them for themself is a great way to help them form the numbers correctly. They will practice this often in Kindergarten.

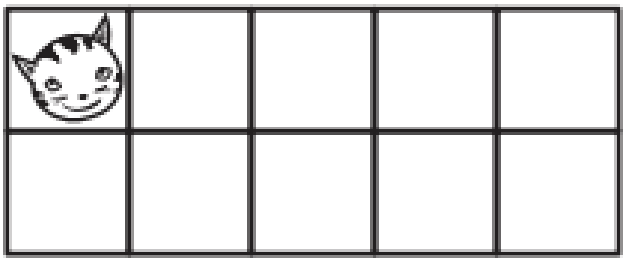
Activity to try this week:
-Go on a number hunt! Search for all the numbers you can on a walk or drive you take or even in your house. See how many numbers your child can find and name. For now they do not need to know how to read big numbers like 347- but should be start to identify 3, 4, and 7.

Questions to Ask Your Child :

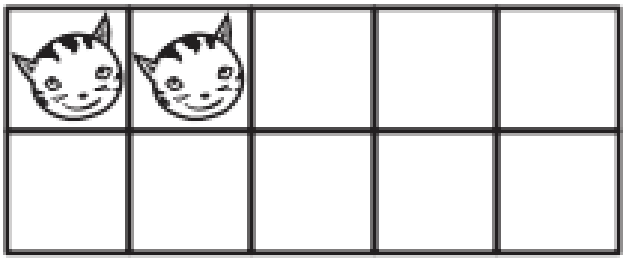
- What number is that?
- Can you find the number 1 in our house? 2?
- How do you make a number 2?
- How many ___ do I have? How do you know? Can you count them?

Practice Page

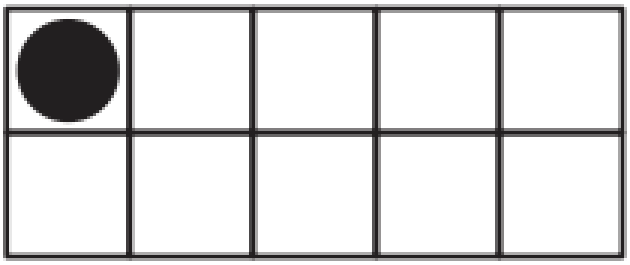
Count and practice writing.



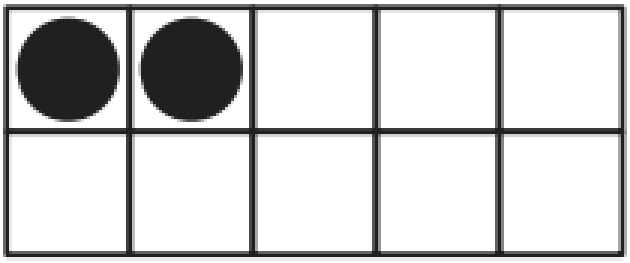
1 1 1 1



2 2 2 2



1 1 1 1

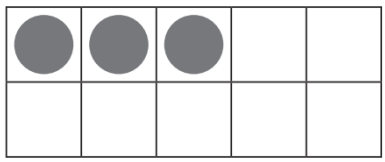


2 2 2 2

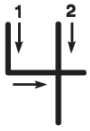
Week 2

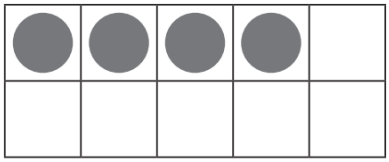
I can.. write and count the numbers 3 and 4.

Go right around.
What will it be?
Go round again
to make a 3!



Down and over
and down some more.
That's the way
to make a 4!





Understanding the math: Your child might have learned to count to ten or even higher by repeating the counting sequence. You may see now or when they were younger that they do not think of those numbers as separate things but rather a sort of song they know. Think about the alphabet- your child might say "elemenopee" rather than L, M, N, O, P. They have just memorized the alphabet song, rather than the letters and their order. The same happens with numbers. When counting objects they may count some things twice or skip some or count multiple objects as one because they don't yet see the numbers as separate things. One way to help your child understand this,is to count objects, pointing to each object as you count it and moving it into a seperate area. Knowing that each number represents one object when counting is called one to one correspondence and is a very important kindergarten skill!

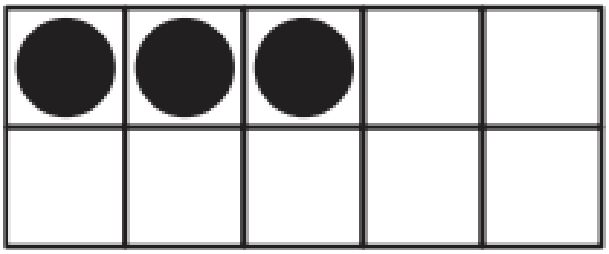
Activity to try this week:
-Practice counting a collection of about 20 objects. It could be buttons, beads, rocks, dried pasta- whatever you have! Model for your child how to count the collection, moving each object into a seperate pile as you count and saying each number clearly. Then have them try. You can add or take away objects for more of a challenge.

Questions to Ask Your Child :

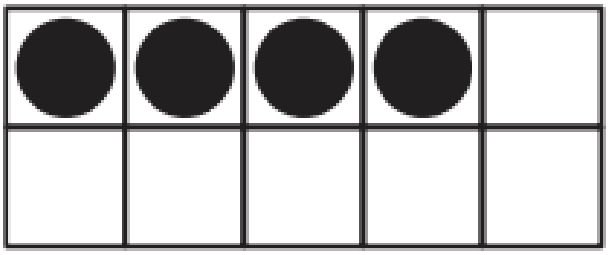
- What number is that?
- Can you find the number 3 in our house? 4?
- How do you write a number 4?
- Can you count these for me? How do you know which ones you counted?

Practice Page

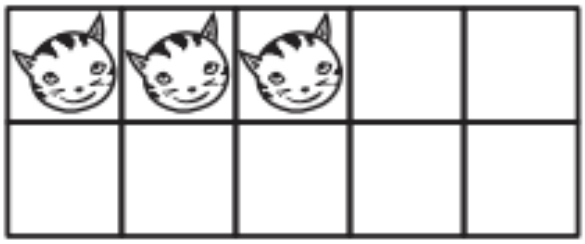
Count and practice writing



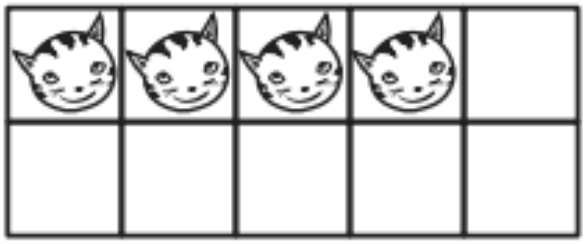
3 3 3 3



4 4 4 4



3 3 3 3

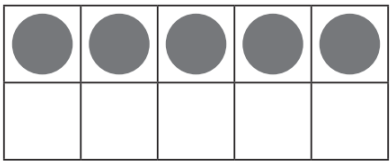


4 4 4 4

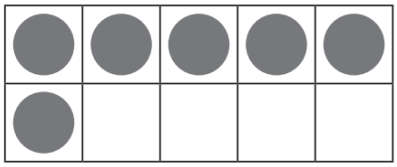
Week 3

I can.. write and count the numbers 5 and 6.

Go down and around,
then you stop.
Finish the 5
with a line on top!



Down around
in a circle you go.
That's a 6
just as you know!



Understanding the math: In addition to understanding one to one correspondence, when your child is counting they can also work on "cardinality." This means understanding when you count, the number you say last is the amount there is. It is very common for children to count something correctly and then when you ask them how many there were they may have no idea, or just start counting again, or just say ten since that's the number they usually land on! You can practice this skill by modelling it for your child and by doing lots of repeated practice. Try the activity below for ways to do that!

Activity to try this week:

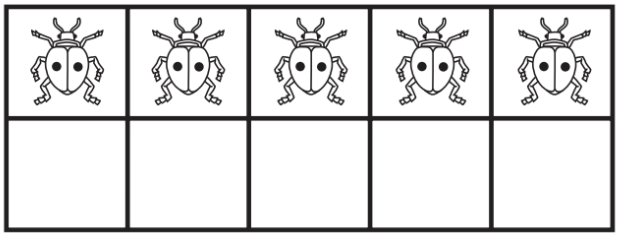
-Get out our collection from last week with a few less (under 10). Have your child count again. Ask how many are there? If they don't know, you can say, "There are ____, how many are there?" and have them repeat. Move the objects around and ask your child how many there are (it's okay if they need to recount!). Repeat this over a few times moving the objects around each time. Eventually, your child should no longer need to count. When they do, try it again with a different number. It can help to start with numbers 3 or less before moving into bigger numbers!

Questions to Ask Your Child :

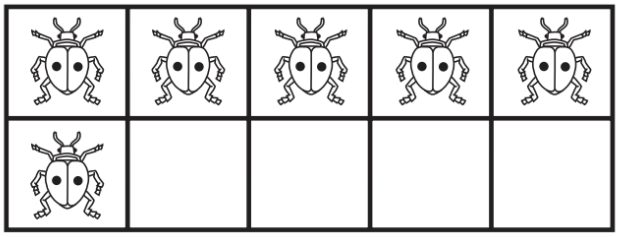
- What number is that?
- Can you find the number 6 in our house? 5?
- How do you make a number 6?
- How many ___ do I have? How do you know? Can you count them?
- Are there still six if I move them around? What if I put them all in here, are there still six?

Practice Page

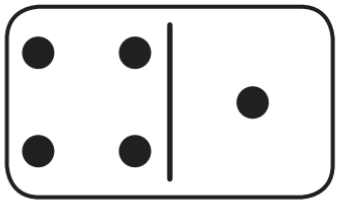
Count and practice writing



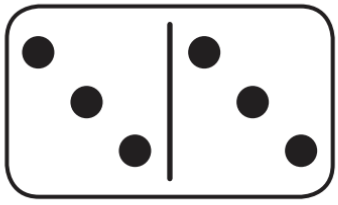
5 5 5 5



6 6 6 6



5 5 5 5 5

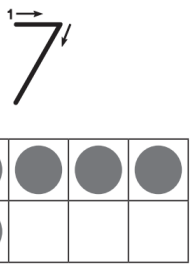


6 6 6 6 6

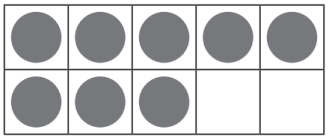
Week 4

I can.. write and count the numbers 7 and 8.

Slide to the right.
Then slant the line.
That makes 7
every time!



Make an "S"
but do not wait.
Slant back up
to make an 8!



Understanding the math: You may have noticed your child can easily identify dots or objects if there are less than 3. Studies have shown that even young babies can recognize 1, 2, 3 and 4 objects (if your child does not easily name them yet, don't worry! They likely are just struggling with number names and will work on this frequently in Kindergarten). Since our brains can easily identify these small groups, this really comes in handy with bigger numbers. Your child might start to understand 5 as four and one more (think of dots on a dice and how there are four on the outside and one more in the middle) and 6 as three and three. This is called subitizing- understanding that big numbers are made up of smaller numbers. This becomes incredibly helpful when understanding larger numbers (like 17 is made up of 10 and 7) and when adding and subtracting. Try the activity below to help your child begin to subitize.

Activity to try this week:

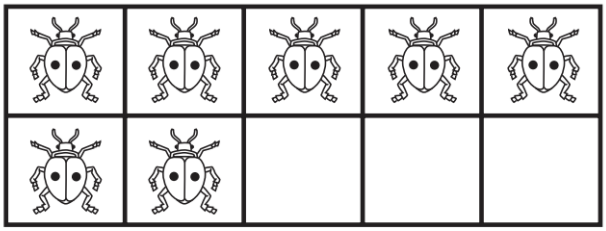
-Try making your own flashcards this week. Cut rectangles of paper and draw the dots like you see under each number each week. "Flash" them to your child for just a 2-3 seconds. Start with just the numbers 1-4 as you add more and more. See if they can identify the amount. Its okay if they count at first, but encourage them to use other strategies. You can model for them what you would like to hear... For example, I saw 2 because I saw 1 dot and 1 dot (hold up one finger on each hand) and that makes 2.

Questions to Ask Your Child :

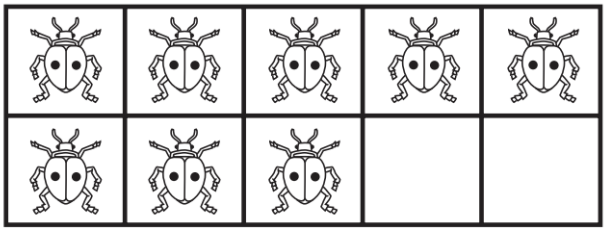
- Can you find the number 8 in our house?
- How do you make a number 7?
- How many ___ do I have? How do you know?
- How many are on my card? How did you know?

Practice Page

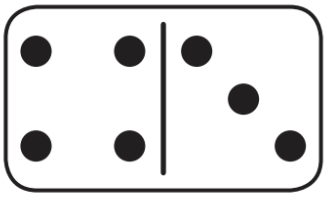
Count and practice writing



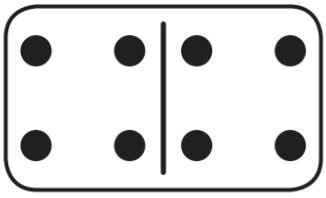
7 7 7 7



8 8 8 8



7 7 7 7 7

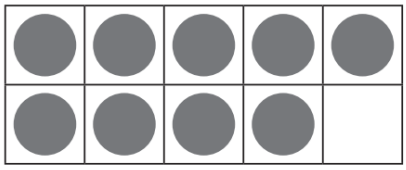


8 8 8 8 8

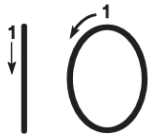
Week 5

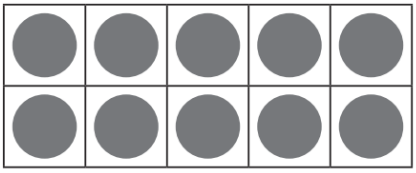
I can.. write and count the numbers 9 and 10.

Loop to the left
and add a line.
Now you've made
number 9!



Make a 1
and then 0
That makes 10!
Now you know.





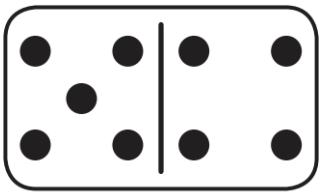
Understanding the math: In addition to the short poem above you see each week, you will notice a set of boxes and dots below each number. These boxes are called a tens frame. They are used very frequently in Kindergarten to help students see the relationship between numbers. Using these frames students can see that 6 is made of 5 and one more and 10 is two fives. This helps them subitize. They also help students organize their counting!

Activities to try this week:
-Practice writing all the numbers 1-10 in a fun way this week. You could use sidewalk chalk, paint, spray the numbers with a hose, write them in the air, write them in sand or shaving cream- whatever you can think of! Remember the poems to help your child form the numbers. This is a great activity to repeat multiple times this summer!

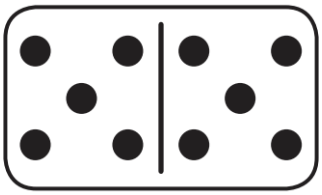
Questions to Ask Your Child :

- Can you find the number 10 in our house?
- How do you make a number 9?
- How many ___ do I have? How do you know?
- How many are on my card? How did you know?

Practice Page

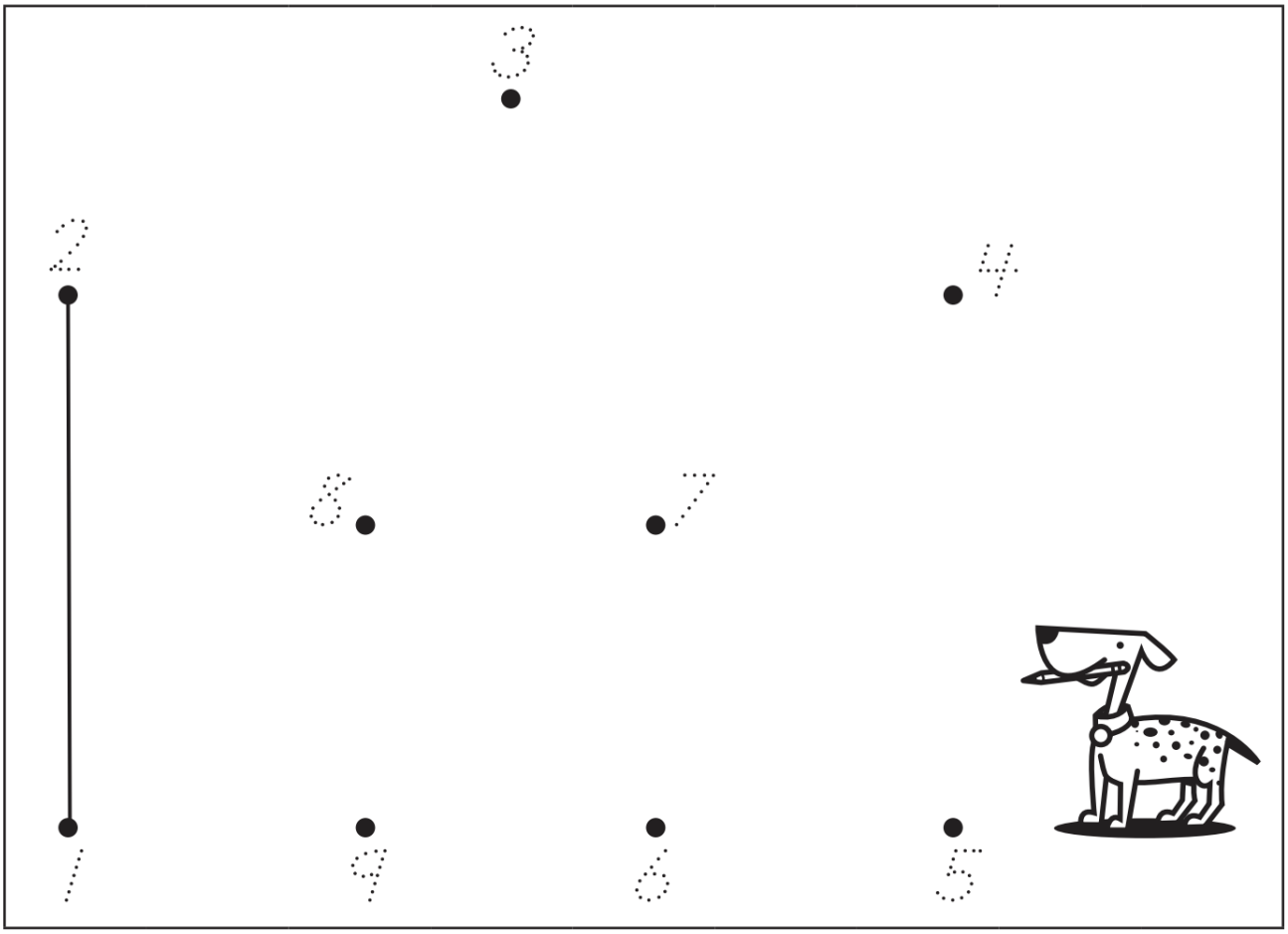


9 9 9 9 9



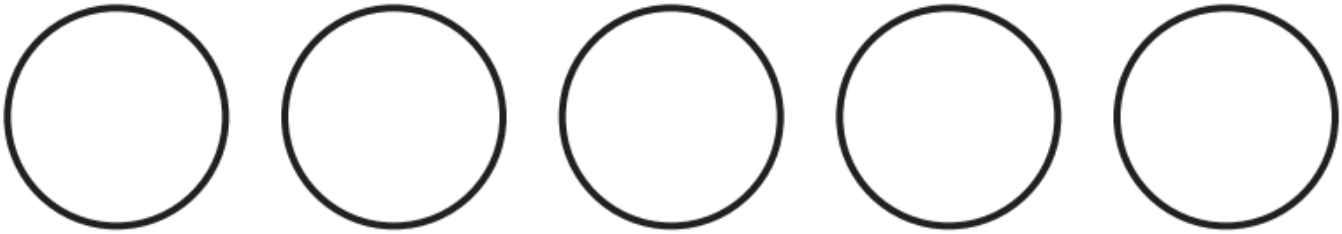
10 10 10 10 10

2 Trace the numbers. Connect the dots in order to make a picture.



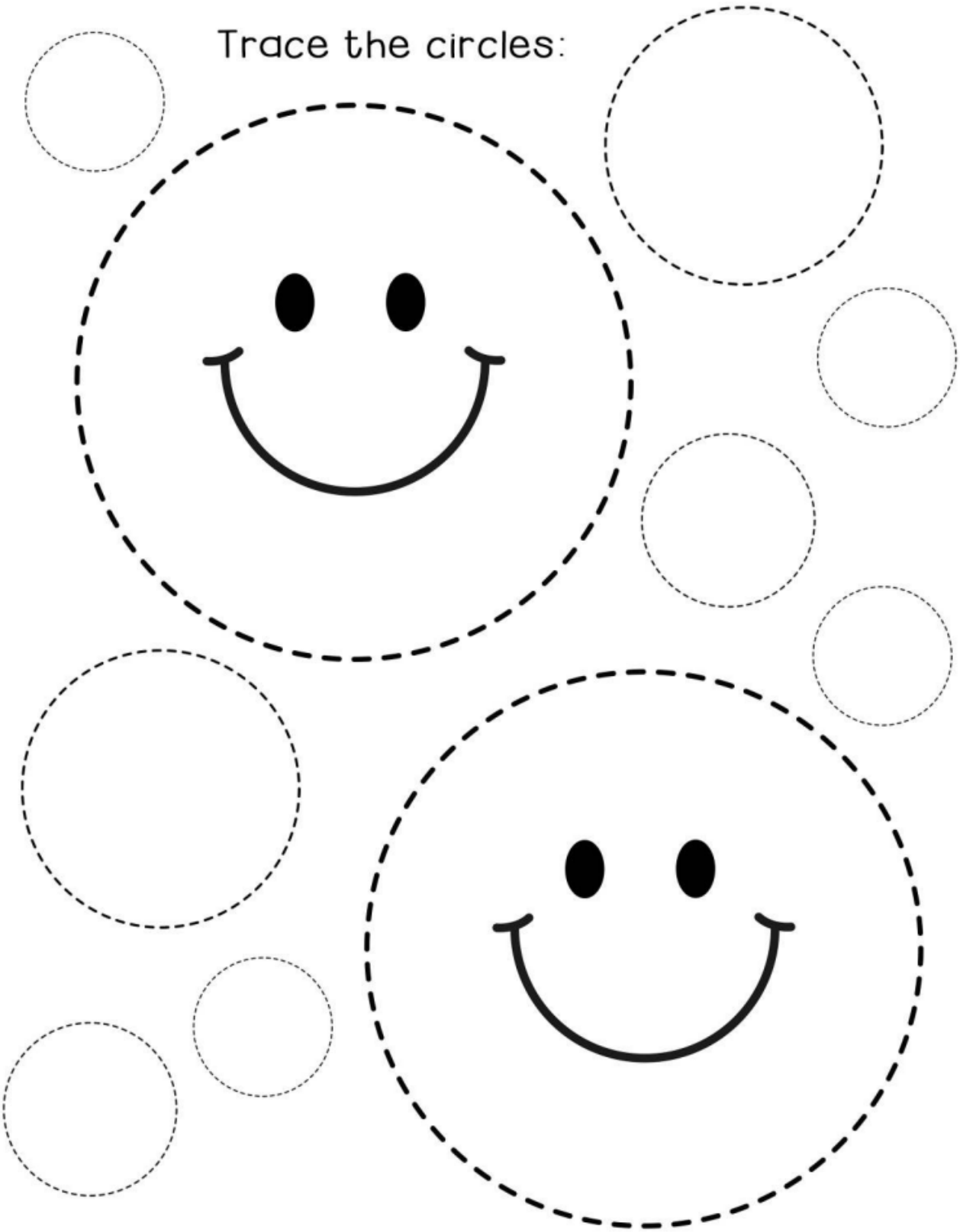
Week 6

I can.. Identify and draw circles.



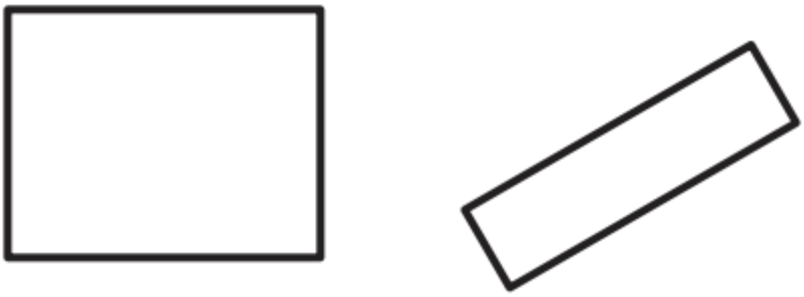
Understanding the math: Your child might struggle to draw shapes with a steady hand. This is very normal! The best thing you can do is have your child practice frequently. Drawing shapes will really help with letter and number formation- an important Kindergarten skill.	
Activities to try this week: -Go on a shape hunt on a walk, in your house, on the bus- wherever! Try to find as many shapes as you can. See if your child can find different shapes including circles, rectangles, squares, and triangles!	**Questions to Ask Your Child :** - What shape do you see? - How do you know that is a circle? - What makes it a circle?

Practice Page



Week 7

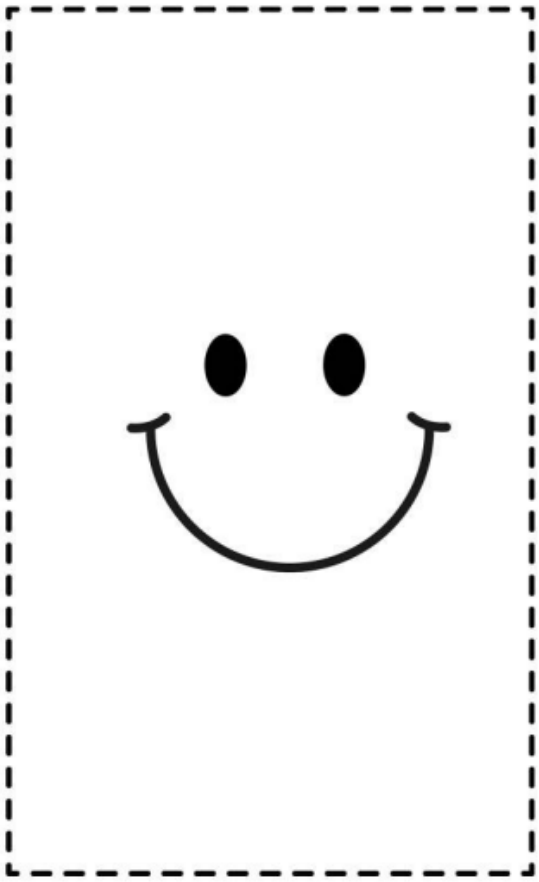
I can.. Identify and draw rectangles.



Understanding the math: When identifying shapes, a great question to ask is how do you know that it is a rectangle (or square or circle or triangle)? By the end of kindergarten, the goal is to have your child say something like, “It has 4 sides and 4 corners, so I know it is a rectangle.” For now, if your child says something like it has straight sides or it looks like a ball (for a circle) or pointy (for a triangle), that is great! You can say to them after, “I also know it’s a triangle because it has three sides” or “I know it’s a circle because it is round.” This modeling of language will help your child be successful in Kindergarten!	
Activities to try this week: Try making a shape picture! Cut out some shapes for your child (or have them practice cutting themselves!). Then, have them glue them down to make a picture. This activity is really fun if you can find colored construction paper.	**Questions to Ask Your Child :** -What shape do you see? -How do you know it is a rectangle? -How many sides do you see? How many corners do you see?

Practice Page

Trace the rectangles:



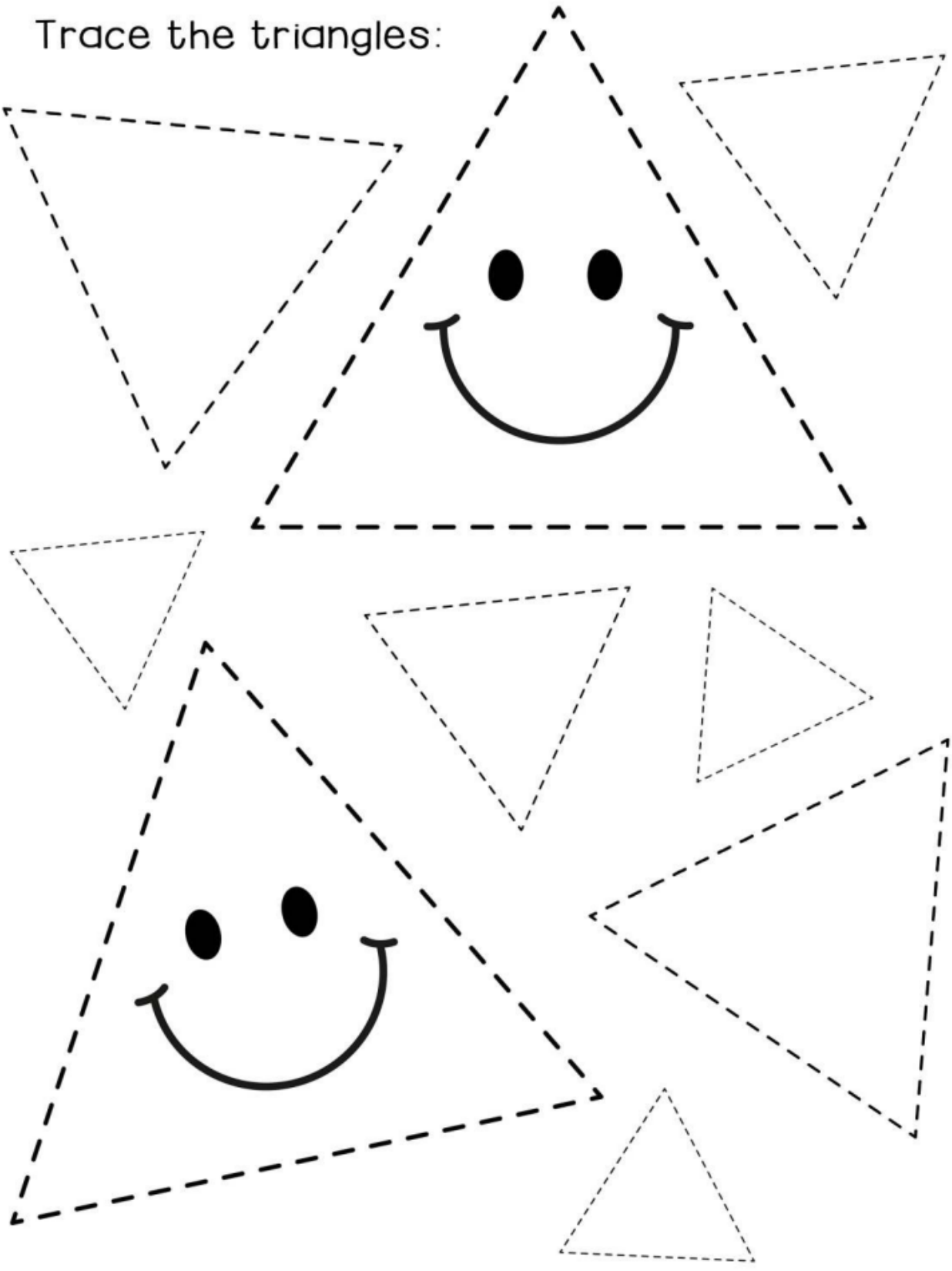
Week 8

I can.. Identify and draw triangles.

Understanding the math: A very common mistake young children make is not identifying all triangles as triangles. They may say only the second triangle above as a triangle and that the first triangle is not a triangle because it is sideways or the last triangle isn't a triangle because it's not pointing straight up. This is because they are used to seeing triangles in one specific way. You can help your child understand that all the shapes above are triangles by pointing out that all triangles have 3 sides and 3 corners. Then you can count the corners and sides together to see if shapes are triangles.	
Activities to try this week: -Practice drawing all the shapes you learned in a fun way this week. You could use sidewalk chalk, paint, spray the numbers with a hose, write them in the air, write them in sand or shaving cream- whatever you can think of! This is a great activity to repeat multiple times this summer/	**Questions to Ask Your Child :** - What shape do you see? - -How do you know it is a triangle? - -How many sides do you see? How many corners do you see?

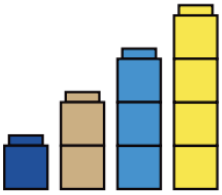
Practice Page

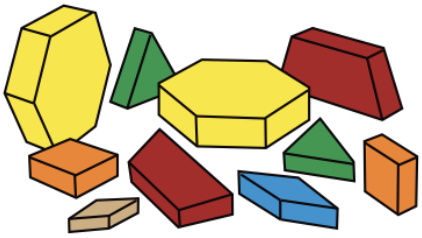
Trace the triangles:

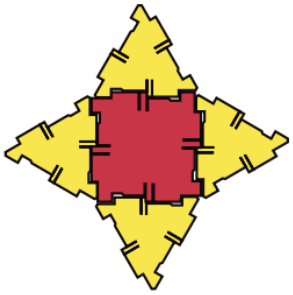


Week 9

I can.. Sort objects based on their characteristics.







Understanding the math: Sorting is an important life skill, but you might be asking, is it really a math skill? Sorting is actually a really important math skill. It not only helps students develop logical thinking, but helps them with matching (important for understanding odds and evens and for grouping terms in an algebra problem), organizing and classifying (an important geometry skill), and understanding patterns and rules (important for all sorts of math). Sorting is a very important first step in becoming strong mathematicians

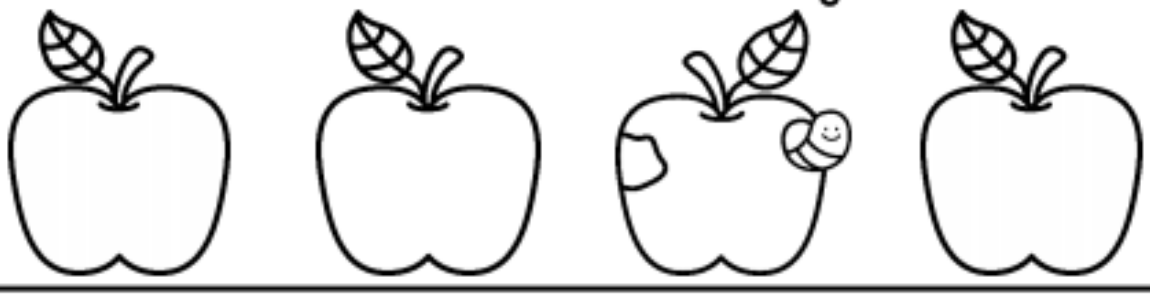
Activities to try this week:
Have your child help you with a household chore this week that involves sorting. Laundry is a great one- have your child sort the clothes by color to help you before you put them in the wash and then again after you fold them (maybe all the shirts go together or you sort by person they belong to). You could also have them help you organize a closet or cabinet (all the dishes go together and bowls or all the clothes go together by color). You could even have them help you sort the trash into trash and recycling!

Questions to Ask Your Child :
-Can you sort these?
-Can you sort them a different way (think size, color, shape, etc)?
-What names could you give to each of your groups ? (All of these are yellow, these are green, etc)

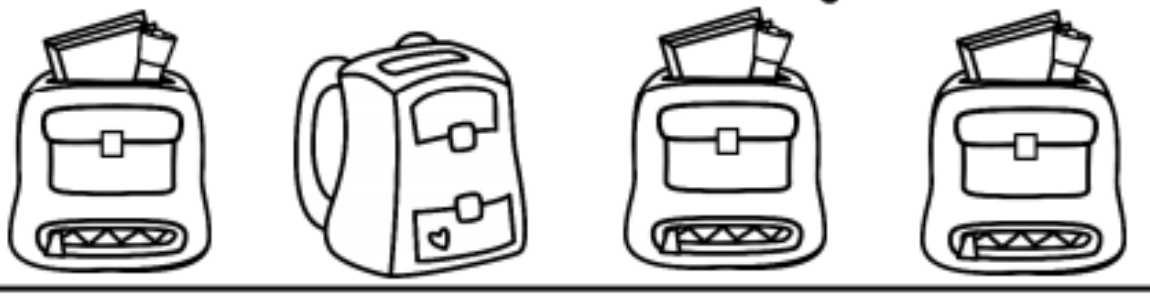
Practice Page

Directions: Color the pictures. Circle the picture that is different from the others.

Which one doesn't belong?



Which one doesn't belong?



Which one doesn't belong?

Which one doesn't belong?

©KidCrafters Educational Media

Week 10

I can.. make and continue a pattern

Understanding the math: It may seem strange but the very best thing you can do to help your child with math is to talk to them! Talking about math, the world around them, and even just explaining your thinking when doing a task have shown great improvement in math skills! Talk to your child about measuring, building, shapes, sorting, numbers, cooking, and patterns- these are all math. Do not stop when they enter kindergarten. Talking to your child about math throughout their career at WCS will help their learning tremendously.

Activities to try this week:
Make a movement pattern together! Start a pattern of movement to have your child continue (something like, “hop, step, hop, step” or “Reach, skip, skip, reach, skip, skip”. As your child gets comfortable with this game, let them try to make a pattern for you to continue. This is a great thing to do on a walk somewhere!

Questions to Ask Your Child :

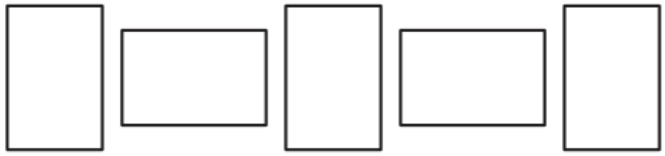
- What would come next? How do you know?
- Can you continue my pattern?
- Can you make a pattern with these blocks (or anything you have)?

Practice Page

Draw the 3 shapes you think should come next in each pattern below.

1

2



3

4

5