

Place Value Kit

Starter Kit



AGA KHAN FOUNDATION



Meet The Design Team



We want to celebrate our teacher colleagues at Vyemani Primary and Ronald Ngala Primary in Mombasa, Kenya. Amina, Aisha and Miswalehe created the amazing Place Value Kit!

AMISHA Design Team



Aisha Omar Kibwana - Vyemani Primary
Miswalehe Hamisi Chigarimbwe - Vyemani Primary



Amina Mohamed Mbule - Ronald Ngala Primary

How has the Place Value kit benefitted teachers?



1. Active Learning:

It encourages learners to actively participate in their own learning through problem solving, group work, and hands-on activities.

2. Collaborative Learning:

It promotes collaboration among teachers and parents. Parents and secondary students can make the place value kit.

3. Problem Solving:

It encourages learners to engage in addition and regrouping, students have better retention because of the place value kit.

4. Locally available materials:

The place value kit is simple to make and low cost from locally available resources.



How do I use the Place Value Kit in my classroom?



Adding numbers

→ Invite a student to solve $222 + 444$

	HUNDREDS	TENS	ONES
	2	2	2
+	4	4	4
=	6	6	6

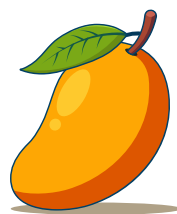
Subtracting with shillings

→ Nala receives 500 shillings from her father. She buys one coconut for 50 shillings and one mango for 40 shillings.

How many shillings does she have left?



50 Shillings



40 Shillings

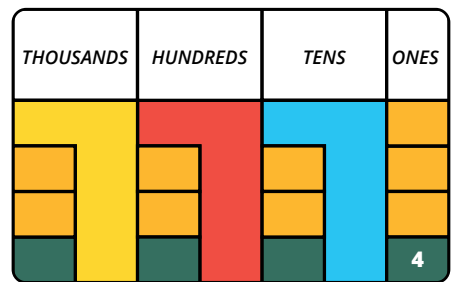
	HUNDREDS	TENS	ONES
	5	0	0
-		5	0
=	4	5	0

	HUNDREDS	TENS	ONES
	4	5	0
-		4	0
=	4	1	0

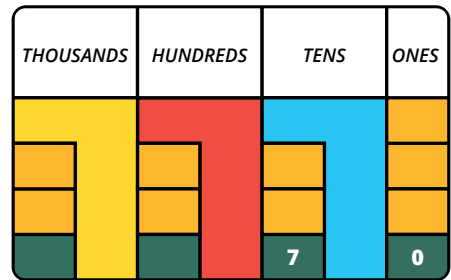


Teaching Place Value

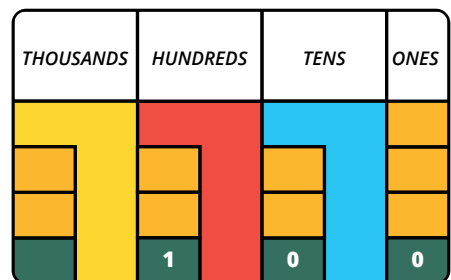
→ **Ones:** Ask a student to put the ones in the Place Value Kit



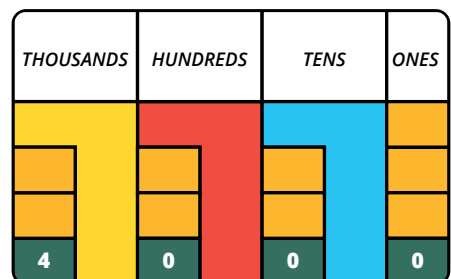
→ **Tens:** Ask a student to put the tens in the Place Value Kit



→ **Hundreds:** Ask a student to put hundreds in the Place Value Kit



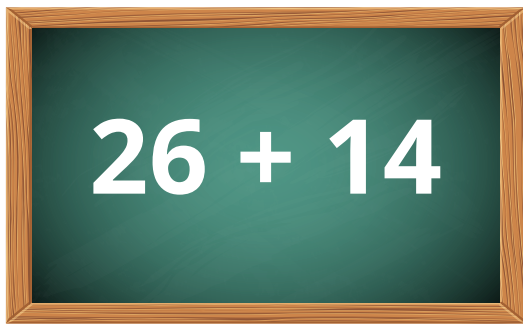
→ **Thousands:** Ask a student to put thousands in the Place Value Kit





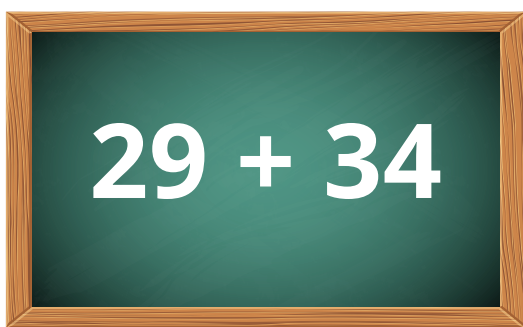
Regrouping

- Ask students to solve $26 + 14$. Ask one student to place the answer in the Place Value Kit



	HUNDREDS	TENS	ONES
		1	
		2	6
		1	4
		4	0

- Ask students to solve $29 + 34$. Ask one student to place the answer in the Place Value Kit



	HUNDREDS	TENS	ONES
		1	
		2	9
		3	4
		6	3



Below are some examples on how teachers have used the Place Holder Kit in their classroom.

- *Grouping learners and competing in carrying out operations*
- *During free time leaving learners to practice which had emphasized the core competencies of teamwork collaboration and responsibility*
- *It has supported play and encouraging turn taking when using it*
- *It has built interest in learners as they have tried coming up with the same innovation which has boosted creativity towards learning*
- *There is active participation as learners interact with the kit*

How would you use the Place Value Kit in your class? Draw below

How to make a Place Value Kit

VIDEO



Scan the QR Code for a video.

Or use the link below

www.youtu.be/BVrlxIWCdIl



Items Needed



2 Heavy Duty Boxes (Size L)



3 Manila Papers (Assorted Colors)



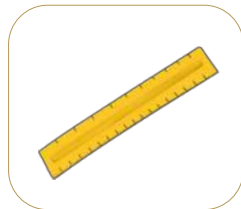
1 Pair Of Scissors



1 Stapler



1 Box Of Staple Pins



30cm Ruler



1 Pencil



1 Tin Glue



4 Marker Pens (Assorted Colors)



2 Masking Tapes



Compass and Pencil

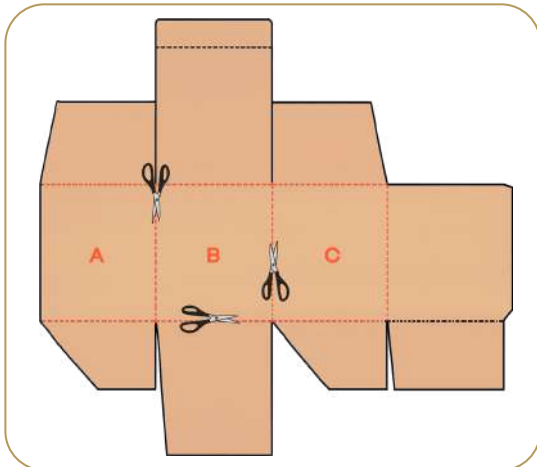


Box Cutter

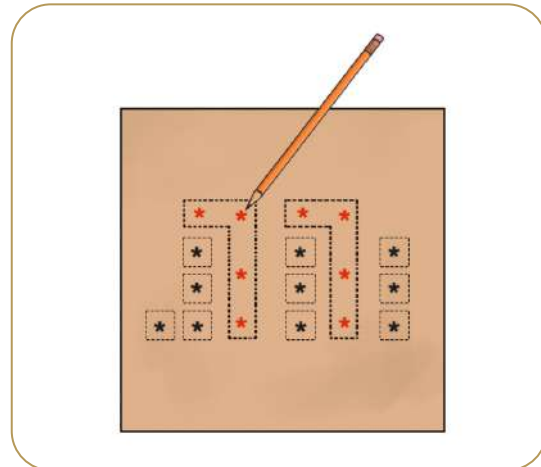


Instructions

Step 1. Prepare the Base Rectangle

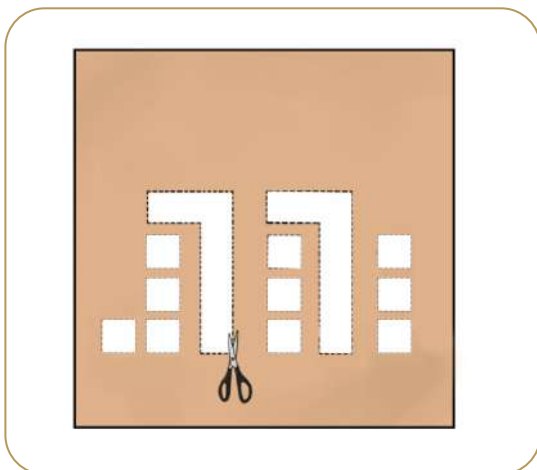


1. Measure and cut two rectangles from the cotton box.

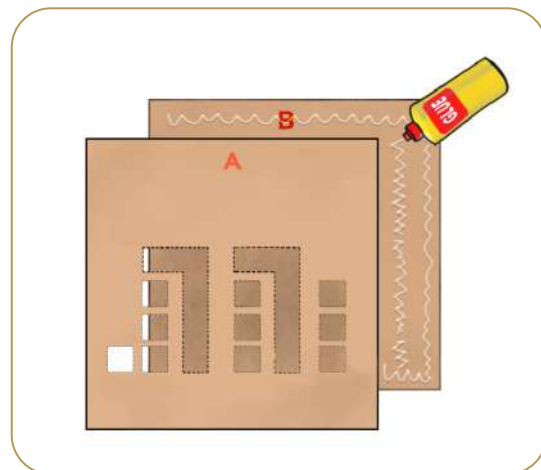


2. Draw and identify the areas for:

- Place value (marked with a black star *)
- Regrouping (marked with a red star *)



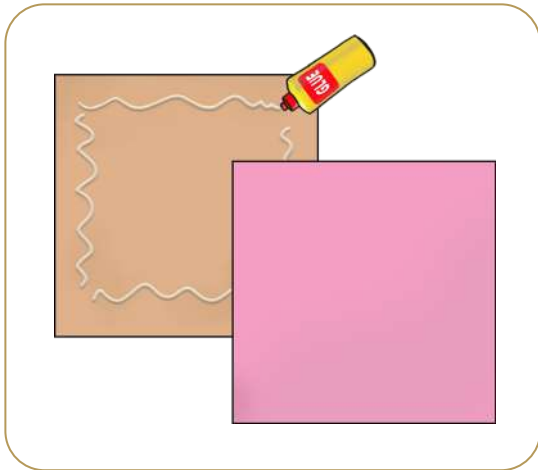
3. Cut out the marked sections carefully.



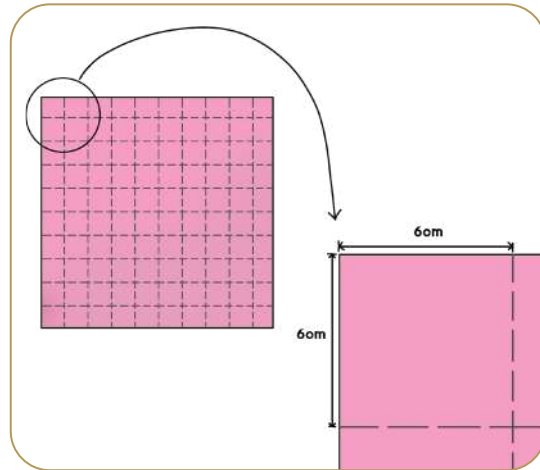
4. Glue (or staple) the rectangle with the cut outs with an identical rectangle together to make it firm.



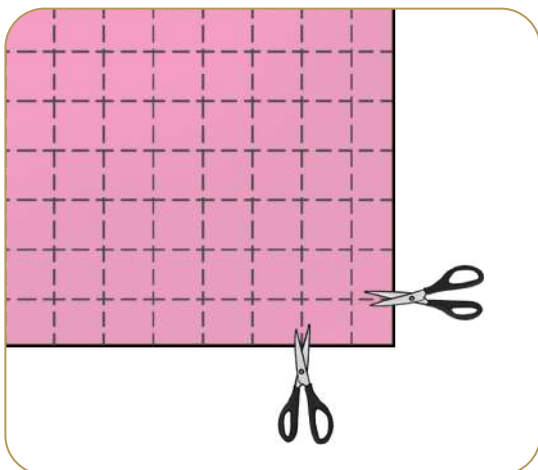
Step 2. Preparing the flash cards



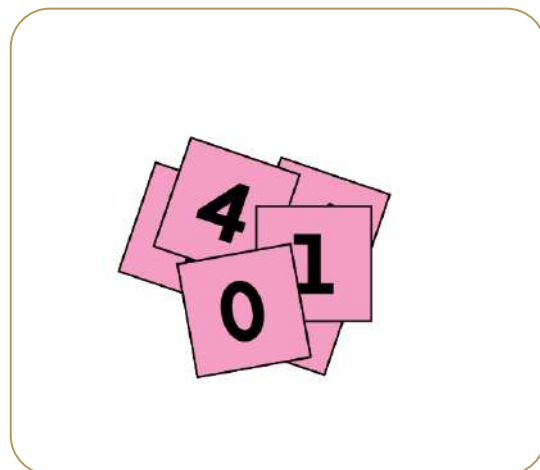
1. Take a rectangular carton box and a same size manila paper and glue them together.



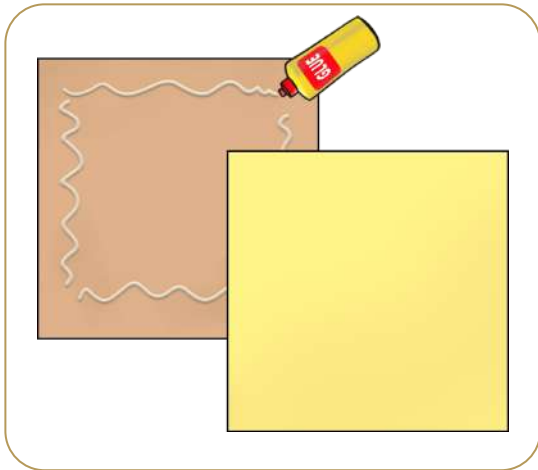
2. Draw out rectangular boxes measuring 6cm by 6cms or the dimensions of the place value boxes from Step 1.2.



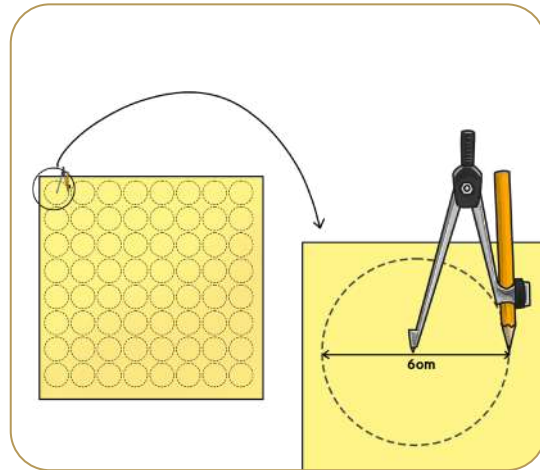
3. Cut out the boxes



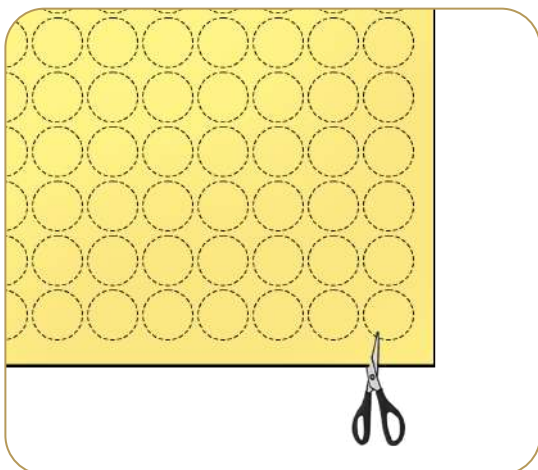
4. Label them 0 – 9. (You will need 2 sets for each place value so, 20 cards for ones, 20 cards for tens etc.)



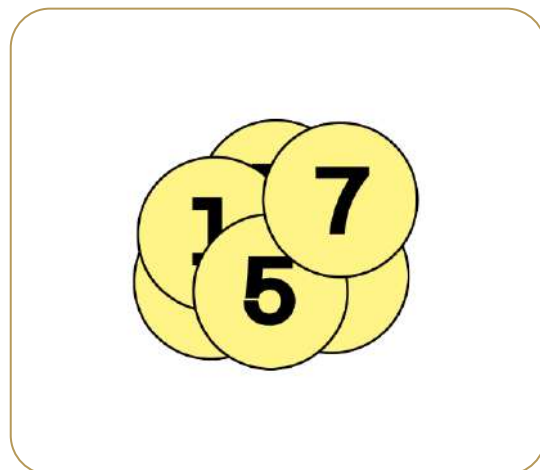
5. Take another rectangular carton and a matching size manila paper of a different color and glue them together.



6. With the use of a compass and pencil, draw circles measuring 6cm diameter or the width of the base of the regrouping area.



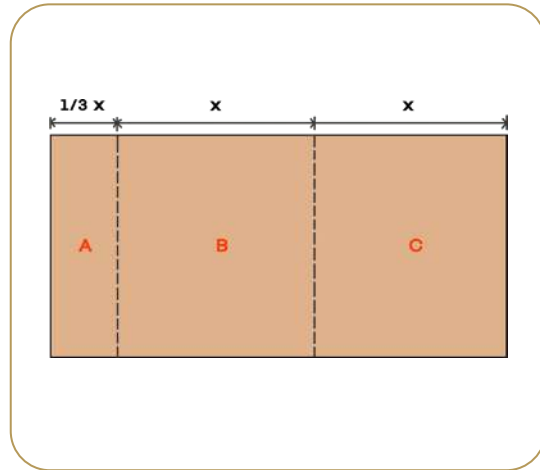
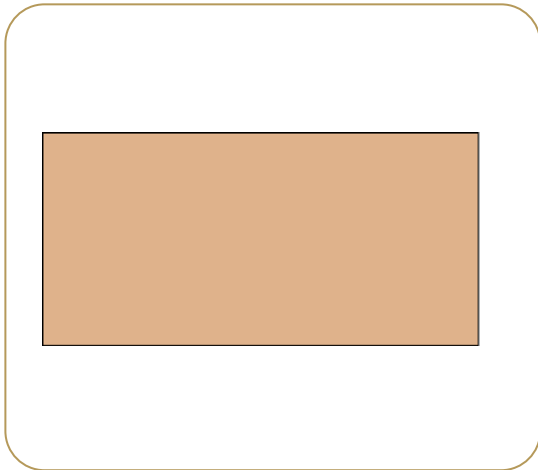
7. Cut them out using scissors or a box cutter.



8. Label them 0 – 9 using a marker. These will be your regrouping flashcards. (You will need a set of these for each regrouping section)

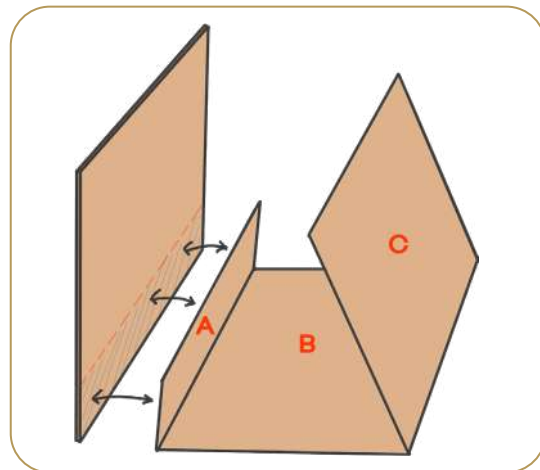
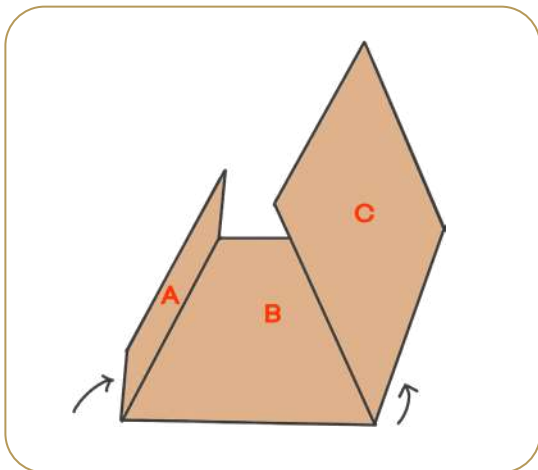


Step 3: Making The Stand



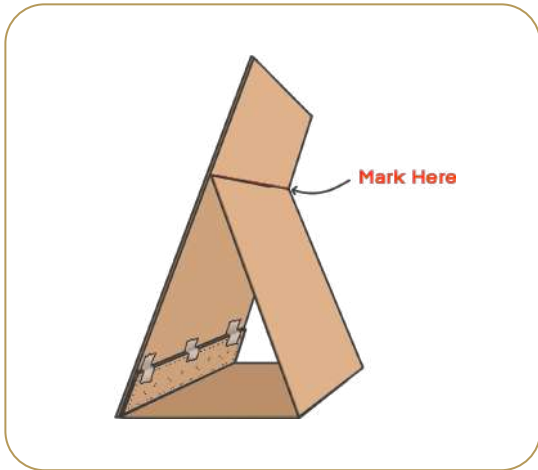
1. Take a long rectangular box with its height being the width of place value kit

2. Mark 3 areas as shown and label A, B and C



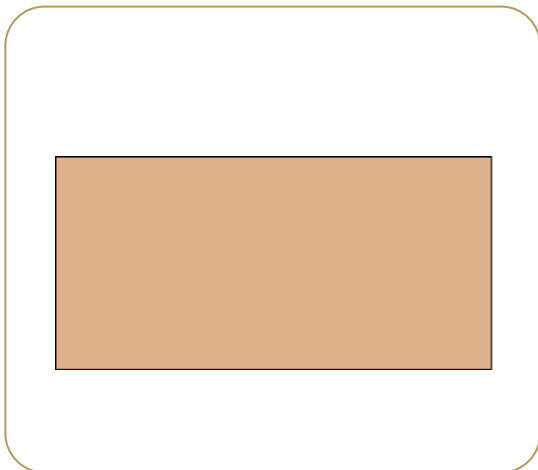
3. Use a ruler to fold the box along the marked lines

4. Attach side A to the back of the place value kit using staplers and Tape to make it firm

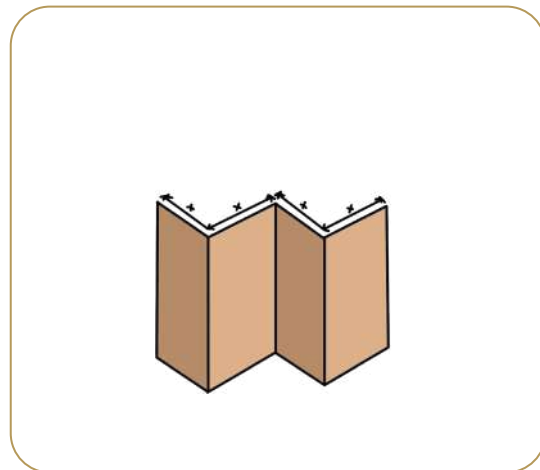


5. Allow the Kit to stand using Side B as the Base and Side C as the anchor. Adjust to the preferred angle then mark a line where Side C meets the back of the kit.

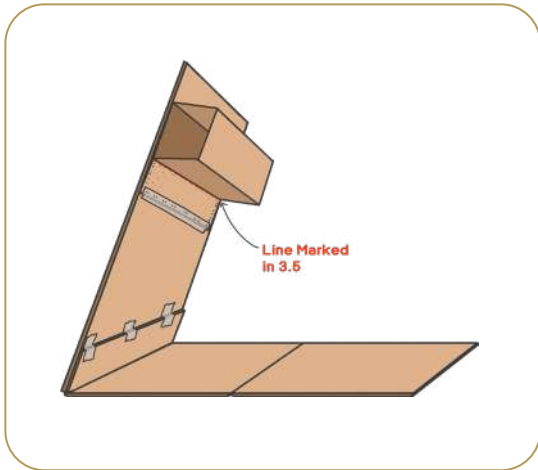
Step 4: Making The pocket board



1. Take a rectangular board with a shorter width than the place value kit (about $\frac{2}{3}$ of the width of the kit)

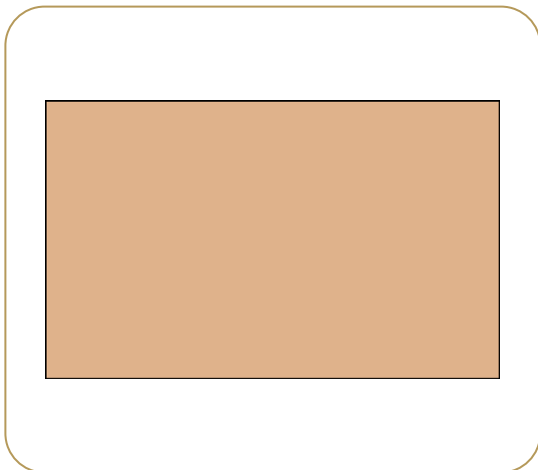


2. Divide the length into 4 equal parts and fold as shown

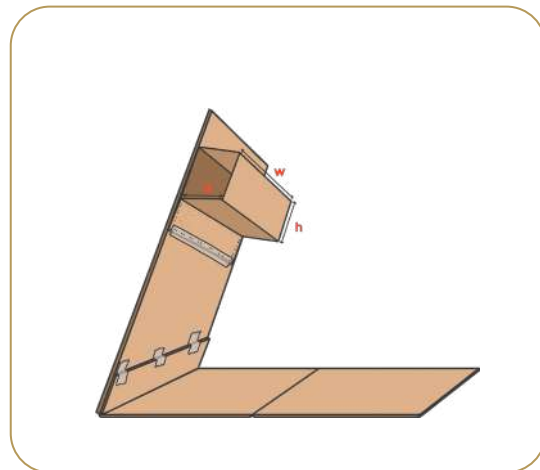


3. Attach the pocket box at the back using a stapler and tape, ensuring the line marked in step 3.5 lines up with the base of the pocket box so that the kit can now support itself.

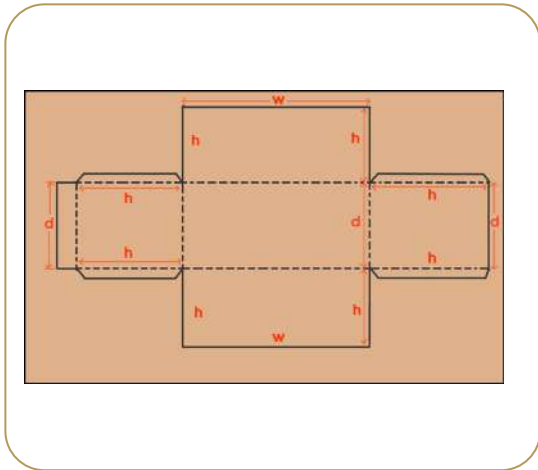
Step 5: Making The Flashcards Drawer



1. Take a rectangular box with the height that is at least three times larger than the height and width of

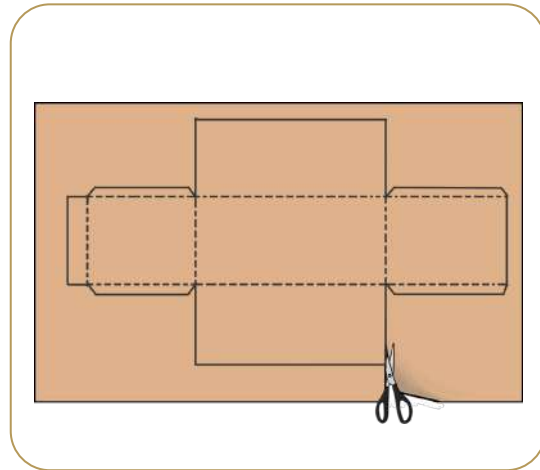


2. Measure the sizes labeled **w**, **h** and **d** on the pocket box using a ruler

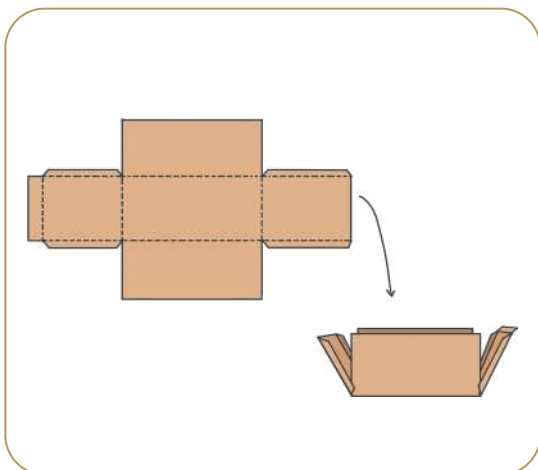


3. Using the sizes for **w**, **h** and **d**, measure and mark as shown above.

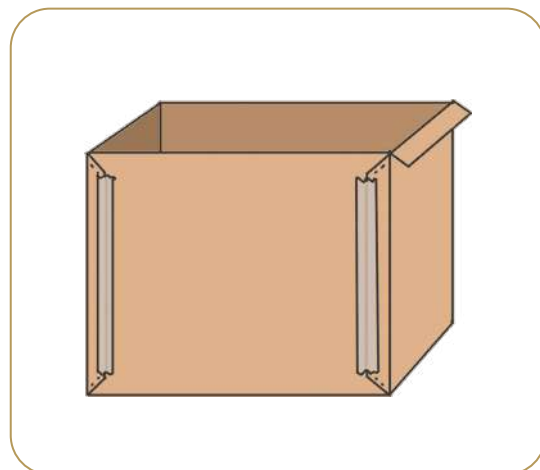
Make sure to reduce the sizes for **h** and **d** by **3-5 mm** so they can fit in the pocket board.



4. Cut out the shape along the **non-dotted** line marked out using a pair of scissors or a box cutter



5. Make creases on the shapes along the dotted lines and fold into a box.



6. Reinforce the edges using a stapler and tape



Finish by decorating and labeling the kit to identify the place values (ones, tens, and hundreds columns).

Place Value Kit

Starter Kit



AGA KHAN FOUNDATION

