

# TIVAETVAE

QUILTMaking - COOK ISLANDS

## INSTRUCTIONS

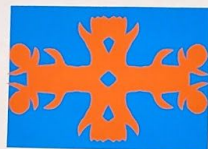
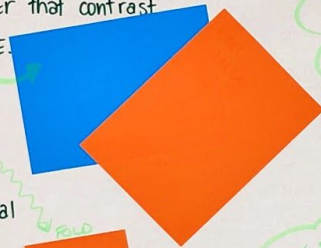
1. Use 2 sheets of coloured paper that contrast strongly. Use one as the BASE.

2. Fold the other into four.

3. Draw and then cut-out a floral and leaf pattern, cutting some pieces into the fold.

4. Unfold the paper and paste it onto the base paper.

5. On the back of the tivaetae, describe all the transformations you can see.



Using **SQUARE PAPER** try this method:

1. Fold the square into four as before.
2. Now fold to make a triangle.
3. Draw a design and cut.
4. Unfold and paste onto base paper.
5. What different transformations can you find in this TIVAETVAE?



## \*DIFFERENT DESIGNS

- \* flower
- \* butterfly
- \* leaves
- \* any others?

use your imagination!

## \*DIFFERENT FOLDING METHODS

Try other ways to fold and cut....

Can you make a design with 3, 5 or 6 lines of symmetry?

## \*DIFFERENT COLOURS

Try colouring (after cutting) with different colours

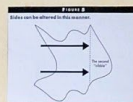
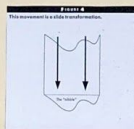
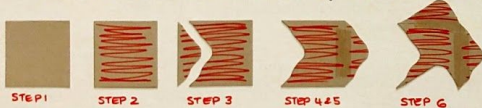
# ESCHER TYPE TESSELLATIONS

## INSTRUCTIONS

### CREATING A TESSELLATING TEMPLATE

- 1 TAKE A SQUARE OF CARD 5cm x 5cm
- 2 COLOUR ONE SIDE
- 3 TAKE A 'NIBBLE' FROM ONE SIDE OF THE SQUARE  
(CUT FROM CORNER TO AN ADJACENT CORNER (FIG.3))
- 4 SLIDE THE 'NIBBLE' DIRECTLY ACROSS TO THE  
OTHER SIDE OF THE SQUARE (FIG.4)
- 5 TAPE THE 'NIBBLE' SECURELY TO THE OTHER SIDE
- 6 DO A SECOND 'NIBBLE' FOLLOWING STEPS 3-5 (FIG.5)

YOU NOW HAVE A TESSELLATING TEMPLATE (TEMPLATE TO TESSELLATE)



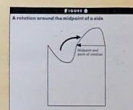
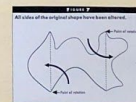
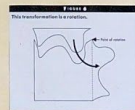
### TESSELLATING WITH YOUR TEMPLATE

- \* ON A SHEET OF PAPER, STARTING IN A CORNER, TRACE AROUND YOUR TEMPLATE
- \* SLIDE YOUR TEMPLATE ALONG & DOWN, TRACING AROUND IT EACH TIME
- \* TAKE CARE IN LINING UP THE SHAPES
- \* BE CAREFUL NOT TO FLIP IT OVER ALWAYS KEEP THE COLOURED SIDE UP.



### OTHER DESIGNS

- 1 ROTATION AT A CORNER (FIG.6 & 7)
- 2 ROTATION AT MIDPOINT: USE A RULER TO MARK MIDPOINT.  
TAKE 'NIBBLE' (FIG.8). REPEAT ON ALL FOUR SIDES.
- 3 COMBINATION: DO A MIDPOINT ON 2 OPPOSITE SIDES,  
DO A SLIDE (STEPS 3-5) FOR THE OTHER TWO SIDES.  
TRY USING AN EQUILATERAL TRIANGLE



# KOWHAIWHAI RAFTER PATTERNS

## INSTRUCTIONS

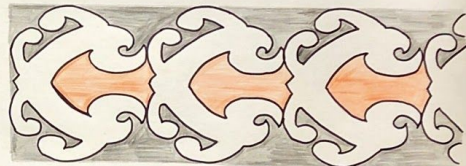
- 1 CREATE A TEMPLATE ON CARD TO USE FOR YOUR KOWHAIWHAI. YOU SHOULD WORK IN PENCIL.

- a. START WITH A SIMPLE KORU.
- b. ADD ANOTHER TO THIS.
- c. RUB OUT THE CONNECTING LINE.
- d. REPEAT STEPS b & c UNTIL YOU HAVE CREATED THE TEMPLATE (PATTERN) YOU WISH TO USE FOR YOUR KOWHAIWHAI.

- e. CUT OUT YOUR PATTERN TO MAKE THE TEMPLATE.



- 2 USE YOUR TEMPLATE TO DRAW UP A KOWHAIWHAI PATTERN. USE VERTICAL &/OR HORIZONTAL REFLECTION OR HALF TURN ROTATION. COLOUR WHEN FINISHED.



- 3 ON YOUR KOWHAIWHAI IDENTIFY CLEARLY & LABEL ANY MIRROR LINES, CENTRES OF ROTATION & TRANSLATIONS