

Follow this simple step by step guide to solve your Rubik Cube



Once you master each step it's so important to keep messing it up and keep practising what you've learnt. Do not try to remember it too quickly as you need to learn it in chunks and embed each stage into your brain.

It is important to realise you will make mistakes so stay patient and you'll be able to do it in a matter of days!

**When you make a mistake you always have to go back to the white cross and start again.**

## STAGE 1:

# GET TO KNOW YOUR RUBIK'S CUBE

## DEFINITIONS OF RUBIK'S CUBE PIECES

### THE PARTS:

#### EDGE PIECES

PIECES WITH TWO (2) COLORS. THERE ARE TWELVE (12) EDGE PIECES LOCATED IN THE MIDDLE ROWS.



#### CORNER PIECES

PIECES WITH THREE (3) COLORS. THERE ARE EIGHT (8) CORNER PIECES LOCATED ON THE CORNERS.



#### CENTER PIECES

PIECES WITH ONE (1) COLOR. THERE ARE SIX (6) CENTER PIECES LOCATED IN THE CENTER OF EACH SIDE. CENTER PIECES **DO NOT MOVE** AND REPRESENT THE COLOR OF THEIR SIDE.

**WHITE** **YELLOW** **ORANGE** **RED** **GREEN** **BLUE**



CENTER PIECE COLORS ARE ALWAYS OPPOSITE EACH OTHER:

- **WHITE** OPPOSITE **YELLOW**
- **ORANGE** OPPOSITE **RED**
- **GREEN** OPPOSITE **BLUE**

## EACH SIDE OF THE CUBE IS REPRESENTED BY A LETTER

**R** = Right Face - Right side of the cube



**L** = Left Face - Left side of the cube



**U** = Up Face - Top side of the cube



**D** = Down Face - Bottom side of the cube



**F** = Front Face - Front side of the cube



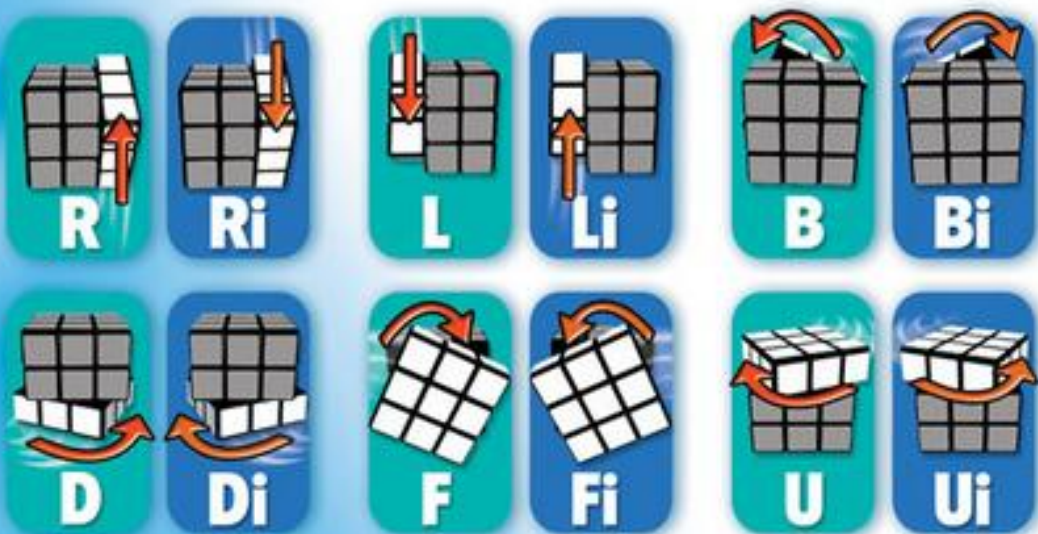
**B** = Back Face - Back side of the cube



A letter with an "**i**" after it means an inverted or counter-clockwise move when looking at that face directly.

### VERY IMPORTANT

When making the moves below hold your cube full-face front with logo on top as shown. Dark grey on the pictures means the color does not matter. Each move is a  $1/4$  turn rotation.



## STAGE 2:

# SOLVE THE WHITE CROSS

### Holding Your Cube:

Holding your cube with the **white center piece** on the top (**U**) face, you must create a white cross as shown to the right. Much of this level is achieved with practice and by trial and error...but we do have some tips.



Your Goal

### Tips:

- Be sure to solve the sections of the white cross in the following order - blue, orange, green, red.
- Notice the **EDGE PIECE COLORS** above match the top white center piece and the side red and blue center pieces. This is how we know the edge pieces are in the correct positions.
- Keeping the **white center piece on top**, move the blue/white edge piece to the bottom (**D**) face, then rotate it on the bottom until it is directly under the blue center piece. Now hold your cube so the blue center piece and blue/white edge piece are on the right (**R**) face.



Rotate the right (**R**) face until the blue/white edge piece is on the top (**U**) face and above the blue center piece.



- If your cube looks like this, hold your cube so the orange center piece is on the right (**R**) face and start solving the side with the orange center piece the same way as stated above.



- If your cube looks like this, do the sequence below making sure the blue center piece is on the right (**R**) face.



### Congratulations!

If your Cube has a white cross that looks like this picture, you can move to **Stage 3!**



## Stage 2 – White Cross



**R**aging **I**nsects

**U**se

**F**ancy **I**nstruments

**U**nder **I**nspection

Use the story to help you learn the moves but try to learn these ones by looking at the moves. The sequences get longer and longer so do not move on to the next stage until you can do this with ease.

# SOLVE THE WHITE CORNERS

## STAGE 3:

### Holding Your Cube:

With the white cross on top (U) face, you must solve the white corner pieces.

#### Tips:

- Corner pieces will have one white side plus 2 other colors.
- If the corner piece is already on the bottom (D) face, then rotate the bottom (D) face until the corner is directly below its intended location. Once in that position, your cube may look like any one of the 3 pictures on the right.

**THEN** do the sequence below **1X**, **2X** or **3X** or **UNTIL** it is in the correct position



- Repeat this process for all four corners.
- If the corner piece is on the top (U) face, move it to the bottom (D) face by doing:



**NOW** rotate the bottom (D) face **UNTIL** the corner is directly below its intended top (U) face location.

### Congratulations!

If your white layer looks like the picture here, you have completed one third of the cube and you can move to **Stage 4!**



Your Goal



## Stage 3 – White Corners

Please not you have to keep doing this until it is in the right place.

Maybe even 5 times



To help you remember

**R**ed **I**ndians

**D**ine **I**n

**R**ed

**D**iners

Before you move on make sure you can combine this with the white cross from the start. Every time you mess up further on you will always come back to this step so it is really important you perfect it before moving on.

Practise these 2 stages only for at least a day as many times as you can until you are confident at doing this without needing the story anymore.

## STAGE 4:

# SOLVE THE MIDDLE LAYER

### Holding Your Cube:

With the **COMPLETED WHITE LAYER** on the **BOTTOM**, now you have to solve the middle layer, which means positioning the 'edge pieces' in the correct place.



Your Goal

### Tips:

- Notice the vertical row of blue (this could be red, orange, green)  
- **THIS IS CRITICAL!**
- Create a vertical line by rotating the top (u) face until the front color of the edge piece on the top (u) face without yellow on it matches a side center piece. The color on the edge piece's top (u) face will determine the direction the edge piece should move.

- 1) If you're moving the edge piece in the same direction as indicated in the picture, then follow the sequential moves pictured below:



- 2) If you're moving the edge piece in the same direction as indicated in the picture, then follow the sequential moves pictured below:



Continue these steps until all the edge pieces are in the correct position.

**NOTE:** If one of the edge pieces is already in the middle row, but in the wrong position, then do either one of the sequential moves, and it will move to the top layer. Then you can do the appropriate sequential moves to position it in the correct location of the middle layer.

### Congratulations!

If your bottom two layers look like this picture, you can move to **Stage 5**. You Are Two Thirds of the Way Done!





To move the square down and to the right



**UR**

**U**kulele **I**s

**R**ight **I**nside

**U**ncle **I**an's

**F**rosty **I**gloo

**U**ber

**F**rosty

To move the square down and to the left



**U**gly **I**zzy

**L**eaves **I**nside

**U**nderpants

**L**ots

**U**gly

**F**aeces

**U**rsula **I**s

**F**at **I**ndeed

# SOLVE THE TOP LAYER... GET THE YELLOW CROSS

## STAGE 5:

### Holding Your Cube:

- 1) Match the yellow pattern on the top (u) face of your cube to one of the yellow patterns shown on the cubes below.
- 2) Then follow the correct sequence.



### Tip:

- Yellow edge pieces on the top (u) face do **NOT** need to match on the side pieces... yet!

### 1<sup>st</sup> Step : Make a yellow cross



Proceed to the 2<sup>nd</sup> Step on the next page.



Then match the result to State 3 or 4, hold the cube to match that State and do that sequence.



When one square or L shape on top



**FUR**

**U**sually **I**tches

**R**ichards **I**nside

**F**ront **I** ("eye")

When a line of yellow



It's practically the same as before but you need to think a little bit more as a couple of the moves switch places

I usually say the same story in my head but just make sure I swap the **U** and the **R** from **FUR** to make **FRU**

and swap **U**sually **I**tches and **R**ichards **I**nside around

If you forget to do this do not worry as you can just do the normal one twice and that will work too and it will just slow you down.

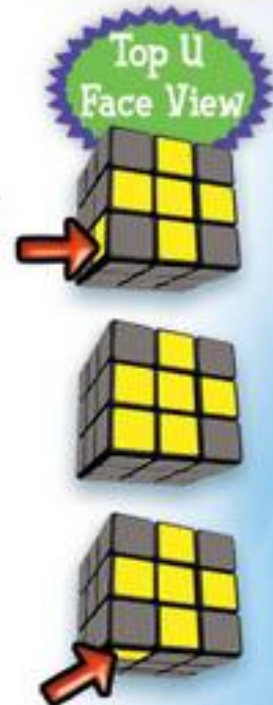
# SOLVE THE TOP LAYER... GET ALL THE YELLOW ON TOP

## 2<sup>nd</sup> Step: Make all the corners yellow

**NOW**, look at the top (U) face and match your top (U) face to one of the states below



- State 1. If **No Corner** Cubes are Yellow on the top (U) face, you must have Yellow **Left** Corner on Left Face as shown
- State 2. If **One Corner** Cube is Yellow match your top (U) face as shown and do the sequence below.
- State 3. If Any **Two Corner** Cubes are Yellow don't worry about their position. You **MUST** match the front (F) face with a Yellow Left Corner as shown.



Do this sequence **1, 2 or 3 times** to achieve a complete yellow top (U) face. After each sequence, orient the cube to **REMATCH** the top (U) face to the appropriate state and repeat the sequence until all corners are yellow.



**Congratulations!**

If your cube looks like this picture you can move to **Stage 6!**



The hardest part about this phase is having the cube in the right position before doing this sequence. If you are unsure please look back at the different states on the previous page.

Also you may need to repeat this process lots and change the position of the cube each time.



This tells its own easy to remember story if you say it out loud assuming R can be pronounced as ARE and U pronounced as YOU.

a**R**e yo**U**

**R**i yo**U**

a**R**e yo**U**

yo**U** **R**i

# POSITION THE YELLOW CORNERS CORRECTLY

## STAGE 6:

### Holding Your Cube:

- 1) While holding cube as shown, **NOW** twist the top (u) face until at least 2 corners are in the right location. 2 corners **MUST** be in the right location as A, B or A, D or B, C as shown below. If all 4 corners are in the right place then proceed to 2nd step on next page.



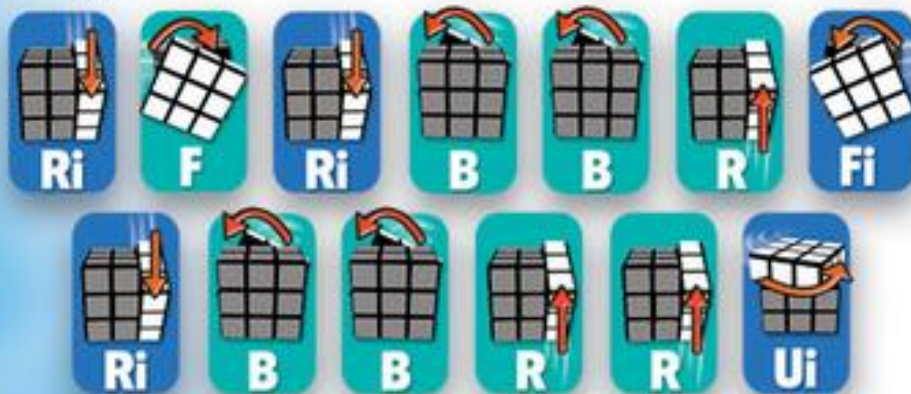
Your Goal

### 1<sup>st</sup> Step: Position yellow corners correctly

While holding your cube as shown above, look at the top (u) face. Place the 2 correct corners in the back A, B or diagonally A, D or B, C across from each other.



If Corners A and B are in the right place then to switch C and D, do the sequence below:



If you need to **switch diagonal corners** like B and C or D and A, then do the sequence once. Then, orient the cube so the 2 correct corners are in the back and do the sequence again.

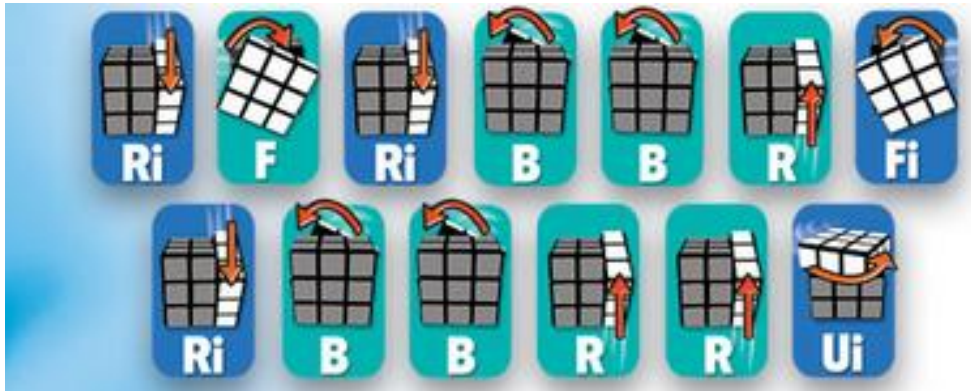
**Congratulations!**

If your cube looks like this picture you can move to the 2nd Step!



## Stage 6

Now this algorithm is quite long but this story should help you remember it



**R**ichard **I**nsists

**F**ashion

**R**eally **I**s

double **B**onkers (2x B)

**R**achel's

**F**ashion **I**s

**R**eally **I**nteresting

**B**ecause

**B**ras

**R**eally

**R**eally

**U**seful **I**tems

# POSITION YELLOW EDGES CORRECTLY

## 2<sup>nd</sup> Step: Position yellow edges correctly



If **1** edge is correct and **3** edges are incorrect orient the cube so the face with the correct edge is the back (**B**) face. Then, determine if the edge pieces need to move **clockwise** or **counter-clockwise** and do the correct sequence below.



If all **4** edges are incorrect, then do either sequence below once, and then determine what direction the three edge pieces need to move and do the correct sequence below.

To cycle **E F G** Clockwise or **E F G H** Clockwise



To cycle **E F G** Counter-Clockwise or **E F G H** Counter-Clockwise



**Congratulations!**





## Final Algorithm

You technically don't need to worry about clockwise or anti clockwise because if you do this last algorithm enough times you will complete the cube. I've changed the way it's presented so it's easier to remember.

It's basically:

Front Front Upper Left Right

Front Front Left Right Upper

Front Front

but be aware of its direction of turn and when you perform the moves you'll see it's easy to remember



When you're ready to learn clockwise and anti-clockwise moves then all you have to do is change the U to Ui.