

Cubepath

From Beginner to 2-Look CFOP

Based on Cube.Academy methods

2026-03-17

Contents

Introduction	1
Notation	2
Phase 1: Beginner Method	2
Phase 1.5: Speed Tricks	4
White Cross on Bottom	4
Yellow Cross (Updated)	4
Orient Corners (Updated)	4
Phase 2: CFOP Switch (+2 Algorithms)	5
Orient Corners: Sune	5
Permute Corners: T-Perm	5
Permute Edges: Ub	5
Phase 3: Complete 2-Look CFOP (+10 Algorithms)	5
Orient Corners: Anti-Sune + 5 New Cases	5
Permute Corners: Y-Perm	6
Permute Edges: Ua + H-Perm + Z-Perm	6
Algorithm Reference	8
Progression	8
What's Next	9

Introduction

This guide bridges the gap from beginner to CFOP in 3 phases:

1. **Phase 1** — Beginner method. Solve the cube reliably.
2. **Phase 1.5** — Speed tricks: white cross on bottom, wide-f Hook, orient corners without flipping.
3. **Phase 2** — Switch to CFOP last-layer order with 2 new algorithms.
4. **Phase 3** — Complete 2-Look CFOP with 10 more algorithms.

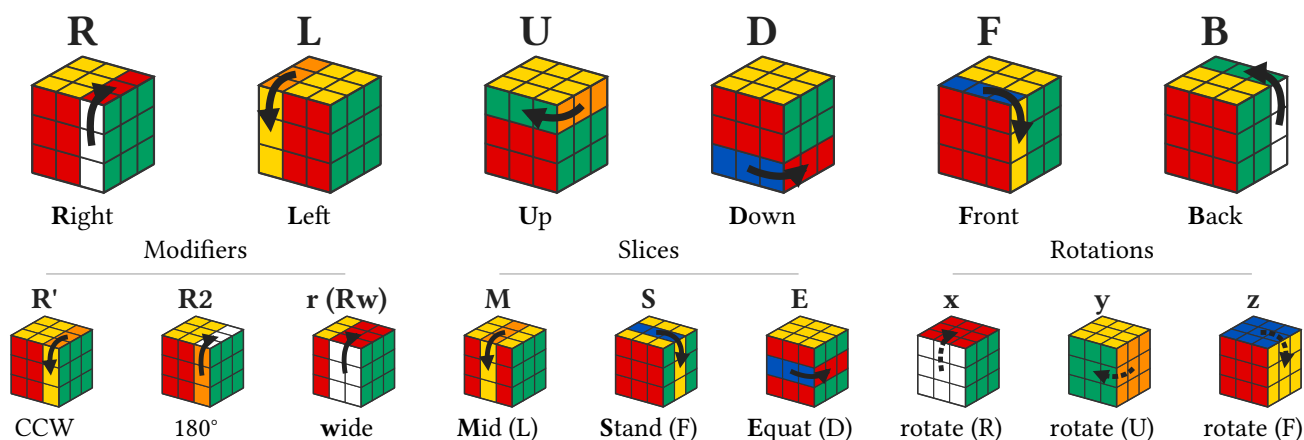
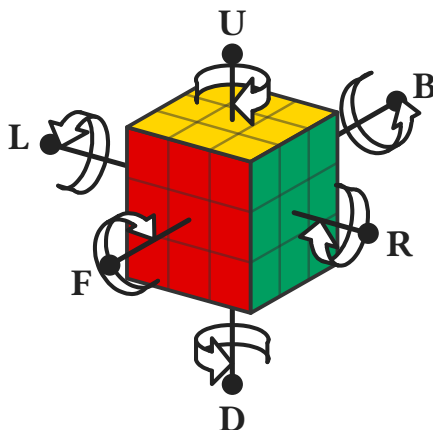
Key idea: nearly every new algorithm reuses triggers you already know — the **sexy move**, Sune, and F-sexy-F'.

Hold the cube with **white on bottom, yellow on top** throughout.

Interactive version — every case playable in 3D, plus trainer and full CFOP: **cubepath-six.vercel.app** (free, works offline).

Notation

Each letter = one 90° CW turn, looking at that face — so from your seat L, D and B look CCW. ' = CCW, 2 = 180°, lowercase (e.g. r) = wide (two layers).



Phase 1: Beginner Method

Righty: R U R' U' — the essential trigger. **Lefty:** L' U' L U

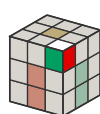
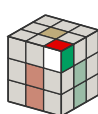
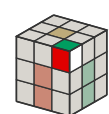


1. Cross — Create a white cross with each edge above its matching center. Solve intuitively.

⌚ Flip — Turn cube upside down (x2). White on bottom, yellow on top from now on.



2. White Corners — Move corner above slot:

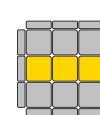
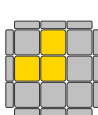
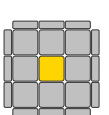


righty ×1

y lefty

righty ×3

4. Yellow Cross — F righty F':

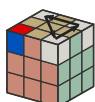
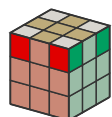


Dot ×3

Hook ×2

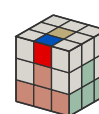
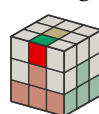
Line ×1

6. Pos. Corners — R U' L' U R' U' L = Niklas



Place corners correctly.
Keeps front-left, cycles rest.

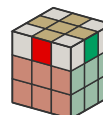
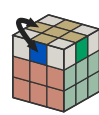
3. Edges — Edge w/o yellow — match side, insert:



U righty y lefty

U' lefty y' righty

5. Align Edges — (R U R' U R U2 R') + U = Sune+U



adj. edges back+right

opp. edges repeat

7. Orient Corners — Flip cube (x2).



Unsolved corner front-right.
Righty ×2-4 until yellow faces down.
Only D to next corner.



Caution

Step 7 — Orient Corners: Flip the cube so **yellow is on bottom**. The cube looks scrambled between corners — this is normal. Repeat **righty** until the current corner's yellow faces down, then turn **only D** to bring the next unsolved corner to front-right. Never rotate the whole cube or turn other faces mid-step.

Phase 1.5: Speed Tricks

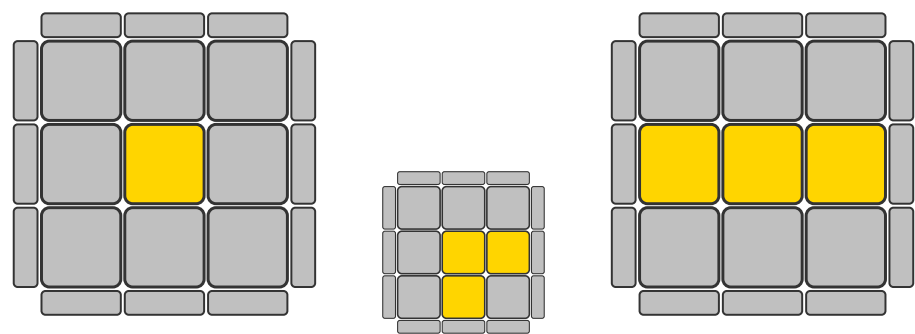
Three improvements that speed up Phase 1 with minimal new learning. One new algorithm – the wide-f Hook – and otherwise smarter use of what you know.

White Cross on Bottom

Build the white cross directly on the **bottom** face instead of on top + flip. Yellow stays on top throughout. Practice inserting edges from the top layer into the bottom – once comfortable, this eliminates the flip step entirely.

Yellow Cross (Updated)

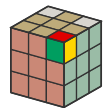
The Hook case gets its own efficient algorithm using wide f:



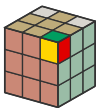
You see	Algorithm
Dot	F RUR'U' F' then f RUR'U' f'
Hook	f RUR'U' f' – wide f, hold L in front-right
Line	F RUR'U' F' – hold line horizontal

Orient Corners (Updated)

Keep yellow on top – no flip needed. Move unsolved corner to **front-right**, then:



Yellow faces **right** → (R' D' R D) ×2



Yellow faces **front** → (D' R' D R) ×2

Turn **only** U between corners to bring the next unsolved corner to front-right.

Phase 2: CFOP Switch (+2 Algorithms)

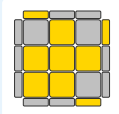
Switch to CFOP last-layer order: **OE** → **OC** → **PC** → **PE** (all orientation first, then all permutation). This never changes again.

Each section teaches ONE algorithm — enough to solve every case. Learning the pair is the natural next step — see Phase 3.

Orient Corners: Sune

After the cross, look at the four corners. **Learn Sune** — apply it repeatedly for unknown cases.

Algorithm

	Case	Algorithm
	Sune — 1 yellow corner, others CW	R U R' U R U2 R'

For any unrecognized corner pattern, apply Sune until you reach a solved or Sune state. Anti-Sune + the remaining 5 corner cases are in Phase 3.

Permute Corners: T-Perm

Yellow face complete. Check side colors for **headlights** (two matching corners on one face).

Algorithm

	Case	Algorithm
	T-Perm — headlights on one face, hold at left	R U R' U' R' F R2 U' R' U' R U R' F'

- **No headlights (diagonal swap)?** Apply T-Perm → creates headlights → T-Perm again.
- **All corners match?** Skip.

Y-Perm (dedicated diagonal solver) in Phase 3.

Caution

Niklas can't be used here — it destroys the yellow face. T-Perm swaps corners while preserving it.

Permute Edges: Ub

Corners done. Turn U — find the solved edge, hold it at **back**.

Algorithm

	Case	Algorithm
	Ub — front edge → left	R2 U R U R' U' R' U' R' U R'

- **No single solved edge?** Apply Ub → creates a solved edge → identify direction, apply again.

Ua (M-slice version) in Phase 3.

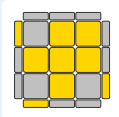
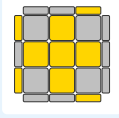
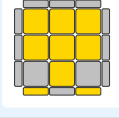
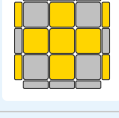
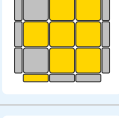
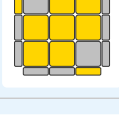
Phase 3: Complete 2-Look CFOP (+10 Algorithms)

Every OLL and PLL case now solved in **one algorithm**. This phase introduces M-slice moves and completes each algorithm pair.

Orient Corners: Anti-Sune + 5 New Cases

Anti-Sune completes the Sune pair. The remaining 5 cases each have a dedicated algorithm.

Algorithm

	Case	Algorithm
	Anti-Sune — 1 yellow corner, others CCW	$R\ U2\ R'\ U'\ R\ U'\ R'$
	Pi — 0 yellow, headlights left only	$f\ \mathbf{RUR'U'}\ f'\ F\ \mathbf{RUR'U'}\ F'$
	Headlights — 2 yellow at back, headlights facing you	$R2\ D\ R'\ U2\ R\ D'\ R'\ U2\ R'$
	Double Headlights — 0 yellow, headlights L+R	$\mathbf{GUR'UR}\ U\ R'\ R'\ U\ R\ U2\ R'$
	Chameleon — 2 adjacent yellow (right)	$r\ U\ R'\ U'\ r'\ \mathbf{FRF'}$
	Bowtie — 2 diagonal yellow	$F'\ r\ U\ R'\ U'\ r'\ F\ R$

Permute Corners: Y-Perm

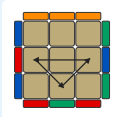
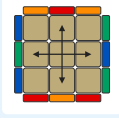
Completes the T-Perm pair. Solves diagonal corner swaps directly (no double T-Perm needed).

Algorithm		
	Case	Algorithm
	Y-Perm — no headlights, any angle	$F\ R\ U'\ R'\ U'\ \mathbf{RUR'F'RUR'U'R'FRF'}$

Permute Edges: Ua + H-Perm + Z-Perm

M-slice moves (M turns the middle layer like L). Practice M2 until smooth — Ua, H-Perm, and Z-Perm all use it.

Algorithm

	Case	Algorithm
	Ua — front edge → right	$M^2 U M U^2 M' U M^2$
	H-Perm — opposite swap	$M^2 U' M^2 U^2 M^2 U' M^2$
	Z-Perm — adjacent swap	$M' U' M^2 U' M^2 U' M' U^2 M^2 U$

H vs Z: No edges match after any U turn. Opposite colors facing each other = H. Adjacent colors = Z.

Algorithm Reference

Phase	Algorithm	Name	Step
1	R U R' U'	Sexy Move	Everywhere
1	L' U' L U	Lefty	White corners
1	U R U R' U' y L' U' L U	Edge Insert Right	Middle edge
1	U' L' U' L U y' R U R' U'	Edge Insert Left	Middle edge
1	F R U R' U' F'	F-sexy-F'	OE
1	R U R' U R U2 R'	Sune	PE (+U)
1	R U' L' U R' U' L	Niklas	PC
1	Repeat R U R' U' + flip	—	OC
1.5	f R U R' U' f'	f-sexy-f'	OE (Hook)
1.5	R' D' R D R' D' R D	Orient Corners Right	OC
1.5	D' R' D R D' R' D R	Orient Corners Front	OC
2	R U R' U R U2 R'	Sune	OC
2	R U R' U' R' F R 2 U' R' U' R U R' F'	T-Perm	PC
2	R2 U R U R' U' R' U' R' U R'	Ub	PE
3	R U2 R' U' R U' R'	Anti-Sune	OC
3	f R U R' U' f' F R U R' U' F'	Pi	OC
3	R2 D R' U2 R D' R' U2 R'	Head-lights	OC
3	R U R' U R U' R' U R U2 R'	Double Head-lights	OC
3	r U R' U' r' F R F'	Chameleon	OC
3	F' r U R' U' r' F R	Bowtie	OC
3	F R U' R' U' R U R' F' R U R' U' R' F R F'	Y-Perm	PC
3	M2 U M U2 M' U M2	Ua	PE
3	M2 U' M2 U2 M2 U' M2	H-Perm	PE
3	M' U' M2 U' M2 U' M' U2 M2 U	Z-Perm	PE

Progression

Phase	New	Total	LL Order
1: Beginner	7	7	OE → PE → PC → OC
1.5: Speed Tricks	+3	10	OE → PE → PC → OC
2: CFOP Switch	+2	12	OE → OC → PC → PE
3: Full 2-Look	+10	22	OE → OC → PC → PE

Total counts algorithms *learned*. Phase 2 retires three beginner-order tools — Niklas, and both Orient Corners finishers — because orienting corners first leaves them no job. The finished method therefore runs on **19**: fifteen last-layer algorithms (2 OE, 7 OC, 2 PC, 4 PE) plus the four you use below the last layer.

What's Next

Everything here assumes Phase 3 above: the full two-look last layer, 2-look OLL then 2-look PLL. That four-look finish comes first and is a prerequisite for what follows, not an alternative to it.

Then take these three in order — the ordering is the advice:

1. **F2L** — replace beginner corner+edge insertion with intuitive pairs. The biggest single speed improvement, and not a memorisation problem: drill it, don't look it up. This is what takes you under 30 seconds, and no last-layer algorithm buys that back.
2. **Full PLL** (21 algorithms) — a closed set of 21 states you tell apart by sight, taking the permute step from two algorithms to one. Printed in full on card 3 of the card set.
3. **Full OLL** (57 algorithms) — last, because 22 of the 57 differ only by a sliver on a side face. Drill it with randomised setups rather than a table.

After those, **cross planning** and **look-ahead** — skills, not case lists.