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How to Create a School Timetable Without Teacher Clashes

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A step-by-step method for building a clash-free school timetable: fix the period grid, place shared and part-time teachers first, add double periods, then run every clash check before publishing.

A school timetable fails for one predictable reason: a teacher, a class or a room is booked in two places at the same time. The fix is not a bigger spreadsheet — it is a method. Build the timetable in the right order, place your scarcest resources first, and check every clash rule before you publish. This guide walks through that method step by step, whether you use paper, Excel or a timetable generator.

Who this guide is for

This is for the deputy principal, director of studies or administrator who draws up the school timetable each term in a Kenyan primary, junior secondary or secondary school — especially schools running multiple streams per grade and sharing specialist teachers across classes.

Step 1: Fix your period grid before anything else

Decide the skeleton of the week first: how many periods per day, how long each is, and which slots are not lessons at all. Most Kenyan schools run between 8 and 10 periods a day. Mark the non-negotiables as blocked slots:

- Assembly and parade time
- Break and lunch
- Games, clubs or PE afternoons (often Friday)
- Staff meeting slots
- Any fixed shared resource, like a single computer lab used on a rota

Only lesson slots that remain after this step are available for teaching. Write that number down — if you have 40 lesson slots per week per class, every subject's allocation must fit inside them.

Step 2: List teaching loads honestly

For each teacher, list the subjects and classes they teach and the number of periods per week for each. Then check the two numbers that cause most timetable pain:

- **Teacher load:** a teacher cannot exceed the total available slots. If Mr. Otieno has 35 allocated periods and only 34 exist after fixed duties, something must give before you start.
- **Part-time availability:** a teacher who is only in school on Monday, Tuesday and Wednesday must have all their lessons inside those three days. Record availability *before*

placing lessons, not after the clashes appear.

Step 3: Place the scarcest resources first

The rule that prevents most clashes: schedule whoever or whatever is most constrained first, and let everything else fill around it.

- **Shared specialists.** If one science or music teacher serves five streams, place their entire week first.
- **Double periods.** CBE practical lessons — science, agriculture, pre-technical studies, PE — often need back-to-back periods. Doubles have far fewer legal positions than singles, so place them early.
- **Shared rooms.** One lab, one computer room, one home-science room. Allocate them before general lessons.
- **Part-time teachers.** Fill their available days next.
- **Class teachers and remaining subjects.** These are the most flexible and go last.

Step 4: Spread subjects across the week

Even a clash-free timetable can be a bad timetable. Two practical rules help learners and teachers:

- **Spread, don't bunch.** Four English lessons should sit on different days, not Monday periods 1–4. A sensible target is no more than one single-period appearance per subject per day, unless it is a planned double.
- **Respect daily caps.** Many schools cap a subject at a maximum of two lessons per class per day (one double). Also avoid giving one teacher six consecutive periods — exhaustion shows up in week two, not on the draft.

Step 5: Run the clash check — properly

Before you publish, check the finished grid against every rule below. This is where manual timetables usually fail, because it is hard to hold all six checks in your head at once:

- No teacher in two classes in the same period
- No class with two lessons in the same period
- No room or lab double-booked
- No teacher placed on a day or period they marked unavailable
- Every subject's weekly period count matches the scheme of work allocation
- Every teacher's total load matches what you agreed in Step 2

Worked example

A junior secondary school has Grade 7 East and Grade 7 West sharing one science teacher, Madam Wanjiru, and one lab. Science is allocated four periods per week per class, taught as two doubles. Place Madam Wanjiru first: Grade 7 East gets Monday periods 3–4 and Wednesday 5–6; Grade 7 West gets Tuesday 3–4 and Thursday 5–6. The lab is now booked

for those four slots, so Grade 8 science doubles must go elsewhere — say Monday 5–6 and Friday 1–2. Only after the science spine is fixed do you place Kiswahili, Mathematics and the other flexible subjects around it. Trying to place Kiswahili first and "fit science in later" is how the same teacher ends up in two classrooms at 10 a.m.

Common mistakes

- **Starting with easy subjects.** Flexible lessons get placed first and the constrained ones no longer fit — always go scarce-first.
- **Trusting memory for part-timers.** Availability that lives in someone's head always produces a Monday-morning surprise.
- **Checking teacher clashes but not room clashes.** Two classes timetabled for the same lab is a clash too.
- **Publishing without locking.** Once the timetable is out, ad-hoc edits create new clashes. Keep one master version and change it deliberately.
- **No spare-period cover plan.** Absent teachers happen daily; decide now how cover is assigned, or the timetable unravels.

Clash-free timetable checklist

- Period grid fixed: assemblies, breaks and games blocked before lessons
- Every teacher's weekly load adds up and fits the grid
- Part-time and shared teachers' availability recorded in writing
- Shared rooms and labs allocated before general lessons
- Double periods placed before singles
- Subjects spread across days with a daily cap
- Teacher, class and room clash checks all run — and passed
- One published master version; changes go through one person

How Mwalimu Ease can help

Mwalimu Ease includes a timetable module built around exactly this order. Teachers record availability on a grid with three states — available, constrained, not available — and the generator treats "not available" as a hard rule. Subject assignments carry a maximum-per-day limit, a double-lesson mode and a spread-across-the-week option, so Maths doesn't land four times on Monday. The generator produces a clash-checked draft for review, and when you publish a timetable batch it records who published it and locks the entries so the master version stays stable. You can then export the class lesson grid and per-subject timetables as PDFs for the staffroom noticeboard. See how the timetable module works or start a free 40-day trial.

FAQs

How many periods should a Kenyan school timetable have per day?

There is no single mandated number — schools set their own within Ministry of Education school-day guidelines. Most primary and secondary schools run 8–10 periods of 35–40 minutes. Fix what works for your school day first, then make subject allocations fit it.

What causes most teacher clashes?

Shared specialist teachers (science, languages, music) and part-time staff whose availability wasn't written down. Place these teachers first and clashes drop dramatically.

Should double periods be scheduled every day?

Where a subject needs practical time — science, agriculture, pre-technical studies — doubles are appropriate, but keep them within a two-lessons-per-day cap per class. Too many doubles exhaust both the class and the teacher.

How do I handle a teacher who is suddenly absent?

Keep a cover plan alongside the timetable: a rota of staff with light loads in each block, or a rule that the class teacher supervises. Publishing a stable master timetable makes identifying free teachers at any period much faster.

Is software better than Excel for timetabling?

Excel can hold a timetable but cannot check it — every clash rule has to be verified by eye. A timetable generator enforces teacher, class and room rules automatically, which is where manual methods usually fail.

Sources and further reading: Kenya Ministry of Education · Mwalimu Ease timetable documentation. Last reviewed: 12 November 2026.

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