A Glossary of timetabling terms

This is a Glossary of terms you may meet during options-sorting and during scheduling a timetable.

The more important or common terms are marked with an asterisk *

Activity *
A set of timetabling resources.
eg. 7A for 3 periods of Science with Mr Johnson.   In shorthand: 7A   SSS   KJo
eg. All Year 11 with 14 teachers for 2 Double periods of Option Block B.

Availability *
Classes and Rooms as well as Teachers (eg. part-time staff) may not be available for the whole week (cycle) and you can specify their un/availability.

Backup *
Making a copy of your data, preferably on another device (eg. a memorystick) in case your computer is damaged.

Band
A sub-division of a year-group (ie. a Year or a Grade), representing a population of students with a common curriculum. Bands may be ability-bands (eg. Upper-band, Lower-band).
eg. in Year 9 there are 6 classes 9A, 9B, 9C, 9D, 9E, 9F, and 9AB form a band.
A band may be a 'half-year-group' (eg. 9DEF in this example).

Basic Data *
The basic resources used in timetabling, including: Classes (of students), Teachers, Rooms, Subjects.
See also Resource.

Batch *
A collection of Activities, for example all the Activities to be scheduled in Year 6.

Block *
A group of activities timetabled at the same time ('in parallel').
The activities may be 'setted', or may be 'option choices' ('electives'), or may be part of a 'circus' or 'rota', or may be parallel groups divided on the basis of sex (eg. for PE.)
The diagrams in chapter 2 of 'The Timetabler's CookBook' show a variety of curricular models with different blocking arrangements. See: www.timetabler.com/book

Block timetabling
Sometimes called 'Faculty timetabling'.
An overall Block Timetable is sketched out by a senior member of staff, and then the responsibility for staffing the activities is devolved to each faculty.

Circus, or rota, or carousel *
A blocking arrangement on the timetable which allows students to rotate to different groups during the course of the year.
eg. suppose 7AB is timetabled with 3 Technology teachers in parallel, so the students in 7AB are divided into 3 thirds. After a term (semester) the students rotate so that students who were doing Food Technology change to the Textiles teacher, while the group which was doing Textiles moves to the Design Technology teacher, etc.

Clash Table
A clash table of Subjects chosen by students for their Options (Electives). For more details see the free Tutorial Booklet for the *Options* program, available from www.timetabler.com
Note: this is different from another clash table called a 'Conflict Matrix' (below).

Class *

This can be an ambiguous word for a population of students. 'Class' can mean:

i) A Registration Group (or Tutor Group, Form Group).   eg. class 7A
This is the normal meaning used in *TimeTabler*.

ii) A group of students brought together for the teaching of a particular subject.
eg. 7A-French The more correct name for this is 'Teaching Group'.

Class Scheduling Name

A unique name (eg. 6AB) which describes the curricular structure to *TimeTabler* (in this case 2 Forms or RegistrationGroups, 6A and 6B, combined together, to be scheduled at the same time.

Columns * See Option Blocks.

Combing Chart

A useful graphical method for checking whether a set of teachers (eg. a department) will fit into the timetable cycle. See 'The CookBook'. *TimeTabler* software will draw a Combing Chart for you automatically.

Common Core

The part of the curriculum (usually in Upper School) which is compulsory for all students (as distinct from the optional or elective part).

Composite class

When 2 or more classes (forms, registration groups, tutor groups) combine to form a band. For example, 7ABC is a composite class (of 7A, 7B, 7C). Compare with 'pure class'.

Compromise

A change (a relaxation) in the original data in order to make progress with the timetable. Timetabling has been described as the art of (acceptable) compromise.

Conflict

Activities with common resources are in conflict.
The conflicting requirements mean that they can't be timetabled simultaneously.
eg. Mrs Jones cannot teach both 7A and 8B on Monday-period-1.

Conflict Matrix

A clash table for analysing the conflicts between 2 sets of teacher-teams. Not to be confused with a Clash Table. See chapter 8 in 'The CookBook'. *TimeTabler* will draw a Conflict Matrix for you automatically.

Consistent setting

When a number of subject departments agree to group students consistently, to facilitate scheduling the subjects in a block. See the diagrams in sections 2.10–2.12 in 'The Timetabler's CookBook'.

Contact Ratio

This is equal to the average teaching load of the staff (in periods) divided by the number of periods in a full timetabling cycle. See chapter 5 in 'The Timetabler's CookBook', www.timetabler.com/book
A typical value in the UK is in the range 0.70 – 0.84 (70% – 84%).

Container Blocks

A block of curriculum time into which a number of activities (with classes, teachers, rooms, subjects) must fit, without breaking out of the block of time. In the UK this can include blocks involving:

- Coordinated Science sets (with Physics, Chemistry, Biology taught by 3 teachers in consistent groups), or

- 'Consistent setting' blocks (eg. with History and Geography to be taught in the same setted groups as English, see chapter 2), or

- Option Blocks, particularly in Years 12/13, with split-teaching (eg. the History group is taught by 2 teachers at different times, while the Physics group is taught by 2 teachers at different times, with any permutation of a History teacher plus a Physics teacher to be allowed), etc.

TimeTabler allows you to specify Container Blocks while retaining the flexibility of movement (using 'musical chairs' moves) within the block.

Cross-setting
A method of mixing two subjects in a block when you don't have enough teachers for the entire block.
See chapter 2 in 'The Timetabler's CookBook', www.timetabler.com/book.

Curriculum
The courses of study arranged by the school, to be staffed and timetabled.

Curriculum Analysis   See Staff Deployment Analysis.

Curriculum bonus
A measure of the amount of curriculum time allocated to a class (or student population) in excess of a notional basic provision.

Curriculum Diagram *
A concise and accepted method of showing the structure of a curriculum.
Sometimes called a Curriculum Plan or Curriculum Notation. See chapter 2 in the CookBook.
An essential tool and the starting point of the timetabling process.
See also: www.timetabler.com/SupportCentre/CurriculumDiagram.xls

Cycle
The Curriculum Cycle, or Timetable Cycle, is the period of time after which the timetable repeats itself.
The most common types currently are : 25-period 5-day week, 50-period 10-day fortnight, 30-period 5-day week, 60-period 10-day fortnight, or 33-period 5-day week with fewer periods on Friday.
Sometimes 6-day cycles are used, both the fixed type (eg. Mon-Sat) and the 'rolling 6-day' type (eg. Day1 is on Monday the first week, on Tuesday the second week, etc.)

Day-Blocking *
The intention that similar activities should not be scheduled on the same day.
For example, TimeTabler will automatically ensure that 5 single periods of French are placed on 5 different days. P.E. and Games will often be DayBlocked.

Degrees of Freedom
A measure of how much flexibility exists for the placing of an activity. This in turn has implications for the best sequence of scheduling the activities. *TimeTabler* automatically displays a Priority List for you, based on the number of degrees of freedom and many other criteria.

Disjoint teams
Non-over-lapping teams. ie. with no teachers/resources in common.
The idea also applies to class-combinations and room-combinations.
See also the Principle of Compatibility and the Combing Chart, in 'The Timetabler's CookBook'.

Electives   See Option Blocks.

f.t.e.
This stands for Full-Time-Equivalent when talking about the number of teachers.
eg. a school might have a f.t.e of 61.5 staff.
A part-time teacher who is paid for 2 full days (only) in a 5-day week would have a f.t.e. of 0.4.

FIT *
A very powerful feature in *TimeTabler*, which finds 'musical-chairs' moves of up to 16 steps.

Fixed points *
The parts of the timetable which are at pre-determined times and locked in place.
eg. "Year 11 always have Games on Wednesday afternoon."
eg. "All classes have PSE on Thursday period 1."

Free choice *
A system of Option Blocks (or Pools, or Electives, or Columns) where the students can choose a specified number of subjects from a list, without any restriction on their choice.
The Blocks are then constructed so as to maximise the student satisfaction, while minimising the staffing cost, using a program like *Options*.

Form-entry (f.e.)
A unit used for indicating the size of a school's intake of students, normally based on the number 30. For example, 4 f.e. = 120 students in the year-group.

Grid timetable
A timetable cycle based on a small unit of time, with lessons taking multiple units. For example, a 20-minute grid, with lessons taking 2 units (40-minutes), 3 units (60-minutes), etc. Also called a 'modular' or 'granular' timetable. See chapter 11 in 'The Timetabler's CookBook', www.timetabler.com/book More common in colleges than schools.

Guided choice
A system of Options where 'choice' subjects are arranged in Blocks (or Pools, or Electives, or Columns) and students choose one subject from each Block.
A program like *Options* will check group-sizes and look for swaps to balance the groups.

Heterogeneous option
Where the subjects in an Option Block are from different areas of the curriculum.

Homogeneous option
Where the subjects in an Option Block are basically from one curriculum area.
eg. a Science Block. See chapter 3 in 'The Timetabler's CookBook', www.timetabler.com/book

Key Stage
A description of the stages of education in parts of the UK, where: KS1 = ages 5–7. KS2 = ages 7–11. KS3 = ages 11–14. KS4 = ages 14–16. KS5 = 16–19.

MIS   Management Information System *
An administration system for the school or college. Examples include: Capita SIMS.net, Progresso, SEEMiS, RM Integris, WCBS/PASS, iSAMS, SchoolBase, Arbor, etc.
(*TimeTabler* can export the completed timetable to each one.)

Multiple periods
Consecutive periods of the same activity. eg. doubles (D), triples (T), quadruples (Q), etc.

Musical chairs *
An essential scheduling tactic. An interchange of activities on the timetable in order to allow another activity to be scheduled. Moves can be 2-step, 3-step, 4-step, etc., as illustrated in chapter 11.
TimeTabler software will easily find and use moves of up to 16-steps for you.

Non-class activity, non-teaching activity, non-contact activity
A scheduled activity involving staff but not students. eg. a timetabled departmental meeting.

Non-rectangular week *
When the days are of different length. eg. 6 periods on each day except Friday which has only 5 periods.

Option Blocks *
Also called Option 'Pools', or 'Electives', or 'Columns'.
Areas of the (Upper School) curriculum where 'choice' subjects are grouped into Blocks for simultaneous teaching, and allowing students a choice of curriculum.
For more details of how to organise efficient Option Blocks, see the free download of the Options Tutorial Booklet, and the free *TimeTabler* Tutorial Booklet, at www.timetabler.com

Parallel activity *
Linking of two or more classes for an activity. eg. if you want class 7A and 7B to be together for a **D**ouble and two **S**ingle periods with both teachers PQ and RS, then in *TimeTabler* you would enter :
7AB   DSS   PQ RS

Pattern *
Teaching Groups arranged into Blocks (Columns) in such a way that each pupil/student chooses one subject from each Block/Column in the Pattern.

Period spread or breakdown *

The way in which all the periods of an activity are to be placed across the school week (timetable cycle). eg. 2 Doubles (DD), or 5 Singles (SSSSS) on 5 different days.

Pools

See Teacher Pools.

Pre-assignments See Fixed Points.

Principle of Compatibility

An important timetabling rule. When dividing a larger set of resources into smaller sets, the sub-sets should ideally be disjoint.
It applies mainly to teachers and to classes. See chapter 7 in 'The Timetabler's CookBook'.

Pure class

A single class with one teacher. eg. 7A-History with teacher KJo.
Most common for lower-school activities. Sometimes (in SIMS only) called a 'linear group'.
Compare this with the entry for 'composite class'.

Resource *

The fundamental data: Classes, Teachers, Time, Rooms, (Subjects). See also Basic Data.

Rooms

Areas in which teaching takes place. They can include the Sports Field, Swimming Pool, etc.

Rooming fraction

The ratio of the average usage of rooms (in periods) divided by the number of periods in the timetable cycle. A value of more than 0.85 (85%) will cause increasing difficulties. More details in the CookBook.

Rules

Options allows you to set Rules about:
--which Subjects (combinations) a pupil/student may or may not choose,
--which Subjects may or may not be in the same Block/Column of the Pattern.

TimeTabler allows you to set Rules about:
--Subject DayBlocking, Consistent Grouping, and when period-types may (not) be placed, etc.

Scheduling *

The actual constructing of the timetable, assigning the activities to specific time-slots.
By contrast the word 'timetabling' is typically used for the entire process, from curriculum planning to final publication of the printouts.

Schematic diagram

A diagram (of classes v. time) for checking the theoretical fit into the timetable cycle of one (or more) year-groups, without taking account of period-breakdown. See chapter 4 in 'The Timetabler's CookBook'.

School Structure *

The number of periods in a day, the number of days in a week, the number of school Years and the number of sites.

Set or setted activity or ability set *

Where teaching groups for the same subject are taught in parallel, with students allocated to groups or 'sets' according to their attainment level or ability in that subject.
This allows a student to be taught in the top 'set' for Maths and in the bottom 'set' for English if this is appropriate to his/her level of attainment. In some countries (eg. France) this method is never used.

A more modern terminology is 'grouping according to prior attainment'.
In some MIS, 'Set' is sometimes wrongly used to mean any Teaching Group.

In *TimeTabler*, 4 Maths sets (with teachers Ma1, Ma2, Ma3, Ma4) across classes 7A, 7B, 7C, for 3 Single periods, would be entered simply as: 7ABC   SSS   Ma1 Ma2 Ma3 Ma4

Section
Usually used as another term for a Teaching Group.

SIFA : Systems (Schools) Interoperability Framework Association.
An organisation originating in the USA (but now in the UK and Australia) for software that allows the transfer of data between different MIS and other programs such as *TimeTabler*.

Special Locations *
Class-like items which do not involve pupils/students, but need to be timetabled. For example, Departmental Meetings, Senior Management Team meetings.

Special Resources *
Staff-like items which behave like dummy/unreal teachers, and can be used for a variety of timetabling trickes. For examples, see Section H in your *TimeTabler* Manual.

Split-class, split-teaching *
An adverse feature of a poor timetable when a teaching group unintentionally has different teachers for some of their lessons.
eg. 7A has 4 periods of Maths; three with Mr Smith and one (unintended) with Mrs Jones.

Split-site
Where a school is organised on two (or more) sites, usually with the older students on one site and the younger students on the other. The timetabler has to allow time for staff to commute between the sites.

Staggered lunch
When different year-groups have a lunch-break scheduled at different times (to facilitate better use of resources). See chapter 11 in 'The Timetabler's CookBook'.

Staff Deployment Analysis
A method of analysing the usage of staffing resources, so as to compare schools or to compare year-groups (grades) within a school.
(It is sometimes, wrongly, called Curriculum Analysis.)
It analyses the distribution of teaching time to different parts of the school, by calculating curriculum bonuses or bonus periods for year-groups (or bands, or classes).
This is done for you in *TimeTabler*. See chapter 5 in 'The Timetabler's CookBook'.

Staffing ratio   eg. 1 : 16
The ratio of the total number of (full-time-equivalent) teachers to the total number of students.
PTR (pupil-teacher ratio) is the same quantity inverted (eg. 16 : 1).

Staff Loading Chart *
A table used to check:
i) that each teacher will have a suitable teaching load (contact time), and
ii) that the entire curriculum is covered by teaching staff. See chapter 6 in 'The Timetabler's CookBook'.

Sub-band
Where a population is divided differently at different times of the cycle.
eg. Year 9 is divided into sub-bands **a** and **b** for English/Humanities and sub-bands **x** and **y** for Maths/Science. See chapter 2 in 'The Timetabler's CookBook'.

Subjects
The label to appear on the timetable against a Teaching Group. Eg. Maths, English, French, Physics.

SuperBatch *
A collection of two or more Batches, used when analysing parts of your data.

Support Centre *
This contains the KnowledgeBase (with over 300 articles on aspects of timetabling).
You can also submit a Ticket for free Help & Support.

Teachers

These can include peripatetic Music teachers, Support staff, if you wish them to appear on the timetable.

Teacher Pools *

These allow you to be less-specific about who should teach a group. *For example,* if a 'French' Pool contains 4 teachers, when you specify that the teacher of a group is to be '**=Fr**' then *TimeTabler* will choose any of the 4 French staff who is free. (You can change the teacher later if you wish.)

Teacher-team *

There are 2 possible meanings:

i)   A team of teachers teaching in parallel, at the same time.
    eg. 4 Maths teachers teaching 4 Maths 'sets' at the same time. eg. several teachers teaching the subjects in an option block. This is the usual meaning. This is the meaning in *TimeTabler*.
ii) A team of teachers that teach a class at different times of the week.
    eg. the group of teachers that teach class 7A for different subjects.

Teaching Group *

A group of students brought together for the teaching of a particular subject. eg. 7A-French. In some admin systems (MIS) a Teaching Group is sometimes ambiguously called a 'Set' or a 'Set Group'. See 'Set'.

Teaching Group information can be transferred from *TimeTabler* to an MIS, using TGNs.

TeachingGroupName or TGN *

A unique code given to a Teaching Group, so that the data can be imported into an MIS unambiguously. It is often in the format: 6A/EnB3   (meaning Set 3 in Block B, an English Block for class 6A.

Time-slot

A time (period) during the timetable cycle, to which a lesson can be assigned (scheduled).

Time-frame

The timetable cycle (school week/fortnight), divided by periods, breaks, days, etc.

Trapped time

A feature of a poor timetable when a part-time teacher has unpaid periods trapped between paid periods, rather than grouped together.

Zarraga's Rule

This states that: "as far as possible, teachers who are members of the same teacher team in one part of the school should be allocated to different classes for pure-class activities in another part of the school". The reasons are explained in chapter 10 of 'A Timetabler's CookBook', www.timetabler.com/book. *TimeTabler* will automatically do this analysis for you.

A Glossary is also shown at the back of 'A Timetabler's CookBook', www.timetabler.com/book