How can I check my data,
before I start scheduling?

A key factor in getting a successful solution to your timetable is to ensure that the data has been entered correctly in your activity batches.
The oldest proverb in computing is "GIGO : Garbage In ➡ Garbage Out".

<u>After</u> you have entered your activities-data, but <u>before</u> you start scheduling it is very worthwhile to check your data using the steps described in this PDF.
You can check the data after you enter each Year/Grade (usually best), or you can wait until all your data is entered.
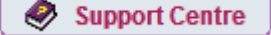
As well as this document about Batches there are two other useful articles:

- **How many Batches should I use?**
  Normally it is one Fixed Points Batch and then one batch per year, but there are occasions (explained in the article) when some Years work better as 2 batches.

- **What is the Best Sequence of loading (and scheduling) your Batches.**
  Most commonly it is 'top down' but you may get a better solution by using a different sequence, as explained in this second article.

You find each of these by going to: [Support Centre]   and entering 'Batch' in the Search box.

When you have your activities entered into Batches, **TimeTabler** provides a number of feasibility tests.
They are accessed via: [Check & Validate]
and they are all explained in outline at: www.timetabler.com/SupportCentre/Feasibility-Tests.pdf

This PDF explains some of the most essential of them.

Contents: page
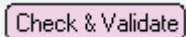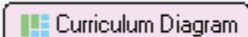
Stage 1   Check the Curricular Structure

You must ensure that the curricular structure of 'pure class' activities, simple Blocks, etc, is correct and as you or the Senior Management Team expected.

Step 1   Choose the correct SuperBatch

You may have many duplicate Batches, so you need to ensure that the current SuperBatch contains just 1 copy of each of the relevant Batches (including any Fixed Points).
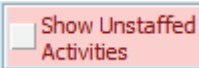
Go to: [Check & Validate] ⇒ [✓ Select the SuperBatch]

Step 2   The Curriculum Diagram Screen
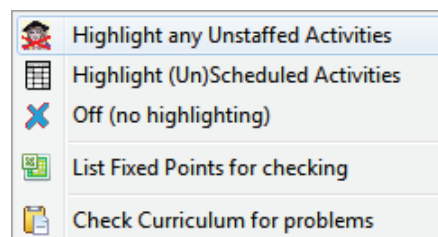
Go to: [Check & Validate] ⇒ [▦ Curriculum Diagram] to the Curriculum Diagram Screen.

All the blocks/boxes should form a neat rectangular shape, and it should agree with the Curriculum Diagram that you used at your curriculum planning stage (though the boxes may be in a different order from left to right).
The number at the left-hand side should equal the number of periods in your timetable cycle.

Any errors need to be corrected now (by double-clicking on any box on the diagram).

Tick [Show Unstaffed Activities] or use the [Checks ▾] button to highlight any unstaffed activities and check for problems:

👺	Highlight any Unstaffed Activities
▦	Highlight (Un)Scheduled Activities
✗	Off (no highlighting)
📊	List Fixed Points for checking
📋	Check Curriculum for problems

Step 3   The Global DayBlocking Report

Check that you haven't made the timetable impossible by accidentally over-using the same Global DayBlocking code for too many (unconnected) activities,
• either by visually checking the DayBlocking Codes on the Curriculum Diagram Screen above,
• or by reading the Report provided at: [Check & Validate] ⇒ [Global DayBlocking]

Step 4 (optional)   The Schematic Diagram Screen

This is an additional way to check your curricular structure. It allows you to see the effect of limited resources for staffing and rooming.

Go to: [Check & Validate] ⇒ [▦ Schematic Diagram] and enter the number of resources for each subject.

(If you have 2 Drama teachers but only one Drama Studio, then enter the 'Max' = **1**.)

Stage 2   Check the numbers

It's important to check the numbers of periods for each Class, for each Subject, and particularly for each Teacher, to ensure that their 'loading' is correct.

Step 5   The Statistics Screen

Go to : [Check & Validate] ➡ [📊 View Statistics] to see:

All the totals in the 'Class Inclusive' column should be correct for your timetable cycle. Any totals shown in red are wrong.

In the example here, the batch containing 8B is short of a lesson. So you'd need to go into the Batch containing 8B lessons and correct it.

Class Statistics

Class or Location	Exclusive	Inclusive	
8A	18	30	🟩
8B	17	29	🟧
8AB	12	-	
8C	27	30	🟩
8D	27	30	🟩
8CD	3	-	

The Printout lists these and also lists the Batch that you need to go to.

If any Staff Totals are not what you expect, click on the Teacher to see which Batches contain his/her lessons, so you know where to go to correct the data :

Staff Statistics   [🧑‍🏫 Select Teachers]

Dept	Teacher	Periods	Max	Diff	
6	JC - Mr J.CLARKE [+P1]	18	18	0	
6	DKe - Mr D.KESTERTON [+P1]	18	20	-2	
6	GM - Mr G.MOORE [+P1]	22	22	0	
6	SW - Mr				

DKe Mr D.KESTERTON   18 Periods

Class	Lessons	Periods	Subject	In Batch(es)
11AB	SSS	3	Geog	1
10AB	SSS	3	Geog	1
9A	SSS	3	Geog	2
9E	SSS	3	Geog	2
8A	SSS	3	Geog	3
7B	SSS	3	Geog	4

Step 6   The Curriculum Audit & Staff Loading Chart

Go: [Check & Validate] ➡ [🧑‍🏫 Audit & Staff Loading] to see the Curriculum Audit and Staff Loading Chart.

Click on one of the 3 top Tabs to see the screen you want:

Curriculum Audit	**Staff Loading Chart**	**Staff-by-Year**

The **Curriculum Audit Screen** allows you to check the Year Totals for each Subject, and to see if there is any Surplus, or Shortfall, in each subject.

The **Staff Loading Chart** shows you the totals for each teacher, which subjects they are due to teach, and whether any of them have a Surplus or a Shortfall.

The **Staff-by-Year Screen** shows you which Years each person is due to teach.

Check that each agrees with the figures that you used at the planning stage.

continued...

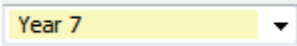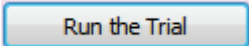# Stage 3   Do a timetable for each Year by itself

Step 7

This is a key test. By doing a quick 'dummy' schedule for each Year **by itself** you can test whether it is possible to schedule that Year.

After all, if Year 10 won't schedule by itself then it certainly won't schedule at the same time as all the other Years.

You can do this test after entering the data for each Year, or you can wait until you have entered all the Years.

You can use this test even if not all the activities have been staffed with a Teacher but in this case the results will not be definitive.

Here is the quickest way to schedule each Year, one at a time:

1	Go to: Check & Validate ➡ Trial a Year	
2	Select the Year that you want to schedule. **TimeTabler** will find all the activities for this Year, in your current SuperBatch, whether in a Fixed Points Batch or in other Batch(es).	
3	Click on: Run the Trial It will schedule them in a few seconds.	
4	Look at the Class Timetable Screen to see whether all the activities have been fitted within the length of the timetable cycle. Note: because this is a quick test the result may have a poor rhythm of lessons. See the Appendix on page 5 for suggestions of what to look for.	

If the data fails the test, then go back to Step 2 and alter the staffing of one or more activities, aiming to keep the correct staffing load for each teacher, then repeat the test.

It's best to do a dummy schedule like this for each Year, separately, before you do the real thing.
Then you'll know if you've entered your data correctly.
(And it always helps to have a little trial run of the scheduling, before the real thing, to practise.)
Key point: If a year won't work by itself then it cannot work when you are trying to schedule all the years!

Double-export: At this stage, after you have checked all your data but before you have scheduled the timetable, it's a good idea to do the first export-import of a 2-stage (double) export-import to your MIS, *if* your MIS supports this double-import (eg. SIMS).

For more information on this, and the advantages of doing a double-import, please see the export documentation at: www.timetabler.com/export

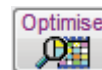or enter 'export' in the Search box at the

Appendix : Judging what it means

When you've done parts 1–4 on the previous page, what do you look for on the Class Timetable Screen?

Note: Because most of the work has been done by Auto-Scheduling, the result is <u>un</u>likely to have the good quality & rhythm that would be obtained if you had done it interactively & carefully.

(You can always see the quality, if you wish, by using the reports & displays on the Quality Optimiser Screen, see also section F24 in the printed Manual).

There are 3 main possibilities, A, B, C :

A.   No kickouts
In the unlikely event of a 100% solution it means that you have a straightforward timetabling situation, and you can possibly afford to develop a more complex curricular structure.

B.   Some straightforward kickouts
If you have several 'kickouts', but they look soluble then it would be worth doing another 'What if...?', with a different sequence, to confirm that it looks achievable.
To decide whether the kickouts are soluble, see all the strategies in Section F6 of the Manual or at:
www.timetabler.com/PDFs/SolvingKickouts.pdf

C.   Many, or difficult, kickouts
If you have many kickouts, or some kickouts that don't look soluble, then you will need to analyse them (the Log printout, section F10, can help).

- *For example,* do the kickouts occur mostly for one particular **Department** (and if so, can the Combing Chart for that department help you to improve the way that department is staffed?).
  Or is it a pair of departments interacting (because they have teachers in common), and so you need to look at the joint Combing Chart?

- *Or,* do the kickouts occur mostly in one **YearGroup** (and if so, can the Curriculum Diagram for that Year be re-structured to give more flexibility?).

- *Or,* can Zarraga's Rule perhaps suggest teacher-exchanges that will give you more flexibility?

- *Or,* it may be mathematically impossible to schedule the proposed new structure with this staffing.
  If this is the case then clearly the sooner you find out about it, the better.
  This is the value of doing '**What if...?**' trial runs with *TimeTabler*.