

Timetabling Triple Science lessons when some groups are in Option Blocks

It's fairly common for some Triple Science lessons to be scheduled within Option blocks. Typically two-thirds of the lessons are in a dedicated Science Block, while the remaining third are scattered within the Option Blocks for optional subjects.

This can cause a difficulty as *TimeTabler* sees the lessons within the Option Blocks as being unconnected to the other Science lessons within the dedicated Science Block, perhaps leading to two or more lessons of the same Science on the same day.

This article explains a method used by a school to avoid that. By studying the principle explained on the next 2 pages, you should be able to adapt the method to your particular situation. If in doubt, contact the Support Centre as explained in HelpMovie 4.

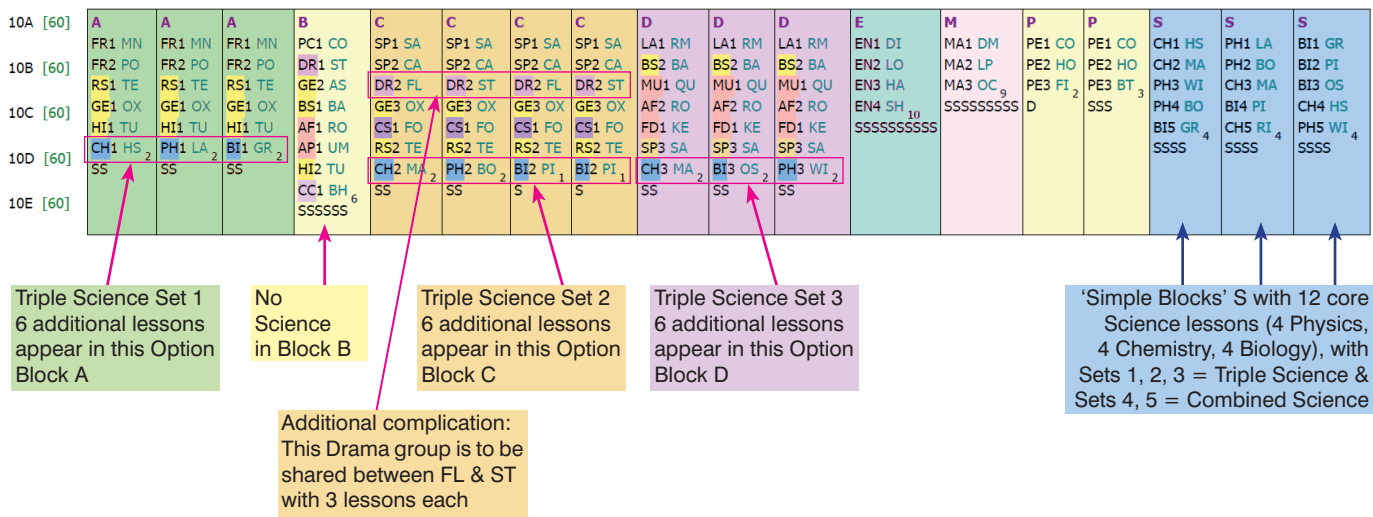
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The Problem:

Ian Cradick writes: When choosing their GCSE options our Year 9 students can opt for combined science or triple 'separate' sciences.

We operate a two-week timetable and the Year 10 & 11 students - combined and triple – always had 4 'core' lessons each of Biology, Chemistry and Physics per fortnight, ie. 12 core in total, which were placed in dedicated science simple blocks (with block label S), as shown below.

The extra lessons for the Triple Science students are treated as one of their Option subjects, and so those students who opt for Triple have a further 6 lessons per fortnight, ie. 2 each of Biology, Chemistry and Physics which appear in the various option blocks, as shown below. (This makes their total number of science lessons per fortnight equal 18.) So Year 10 looks like this:



Notes:

- Both option blocks A and D had to be split into 3 sub-blocks as both needed to include 2 lessons of each Biology, Chemistry & Physics.
- Option block C is in 4 sub-blocks as the Drama group is shared between teachers FL and ST with 3 lessons each, and this block also needs to include 2 lessons each of Biology, Chemistry & Physics. I have subdivided a block so that both include a Biology lesson with PI, but one has a Drama lesson with ST and the other has a Drama lesson with FL. It is difficult to know how best to divide such a block.
- All blocks have been assigned to classes ABCDE. Compare this with the next diagram.

Which option block (and also which Triple Science Set they will be in) is dictated by their other subject option choices. ie. Students wanting to do Triple Science are told to choose Science in **one** of the Option Blocks A, C, D. The **Options** software is used to design the blocks.

(In some year groups, we may have two triple science classes and three combined, and in other years we may have three triple classes and two combined, or two and two; the students' choices dictate this.)

In the past this always proved to be very restricting as some science staff would have more than one science set in a particular key stage 4 year group, so the simple blocks had to be designed carefully and proved highly inflexible. Furthermore, the software could not recognise that the core science activities in the Science Block S were the same as the equivalent activities for the Triple Science groups in the option blocks. This led to the occasional situation where a particular science set would end up with two lessons of the same science, with the same teacher, on the same day.

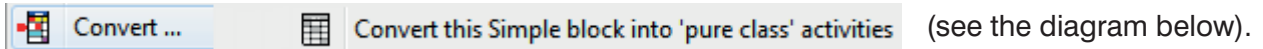
Ordinarily this would have been flagged up as a '5' rating during scheduling in **TimeTabler**, but because the extra Triple Science activities were in separate blocks, with a different block labels, this was not flagged. This would then require hours manually trying to shuffle the science activities to improve the quality or spread across the two-week cycle.

After unsuccessfully experimenting with alternative arrangements including the use of container blocks, a quick and elegant solution (suggested by Chris Knights-Branch via the **TimeTabler** Support Centre) solved the problem.

The Solution:

For this Year 10 Batch:

1. Make sure that the number of classes (at the left-hand side) is equal to the number of Science sets. ie. 10ABCDE =5 in this example.
2. Convert all Science activities (combined & triple) in the Science Block S into 'pure class' activities. The quick way to do this is via the right-click menu:



3. Double-click on each Science activity and increase the number of periods to 6 as shown below.
4. Remove the now-redundant science lessons for the Triple groups from the relevant option blocks (A, C, D in this example), by double-clicking each of these blocks in turn and selecting a Class Name as follows:

Option Block **A** is now given a Class name of 10BCDE, and as a single block, of 6 periods.

(Option Block **B** is left unchanged as 10ABCDE)

Option Block **C** given a Class name 10ACDE, as 2 blocks (because of the split Drama), of 3 pds each.

Option Block **D** allocated a Class name of 10ABDE, as a single block (all the same staff), of 6 periods.

At this stage the Curriculum Diagram looks like this:

10A [60]		B PC1 CO DR1 ST GE2 AS BS1 BA AF1 RO AP1 UM HI2 TU CC1 BH ₆ SSSSSS	C SP1 SA SP2 CA DR2 FL GE3 OX CS1 FO RS2 TE ₃ SSS	C SP1 SA SP2 CA DR2 ST GE3 OX CS1 FO RS2 TE ₃ SSS	D LA1 RM BS2 BA MU1 QU AF2 RO FD1 KE SP3 SA ₆ SSSSSS	E EN1 DI EN2 LO EN3 HA EN4 SH ₁₀ SSSSSSSSSS	M MA1 DM MA2 LP MA3 OC ₉ SSSSSSSSSS	P PE1 CO PE2 HO PE3 FI ₂ D	P PE1 CO PE2 HO PE3 BT ₃ SSS	S CH1 HS ₆ SSSSSS	S PH1 LA ₆ SSSSSS	S BI1 GR ₆ SSSSSS
10B [60]	A FR1 MN FF2 PO RS1 TE GE1 OX HI1 TU ₆ SSSSSS									S CH2 MA ₆ SSSSSS	S PH2 BO ₆ SSSSSS	S BI2 PI ₆ SSSSSS
10C [60]			C SP1 SA SP2 CA DR2 FL GE3 OX CS1 FO RS2 TE ₃ SSS	C SP1 SA SP2 CA DR2 ST GE3 OX CS1 FO RS2 TE ₃ SSS						S CH3 MA ₆ SSSSSS	S PH3 WI ₆ SSSSSS	S BI3 OS ₆ SSSSSS
10D [60]					D LA1 RM BS2 BA MU1 QU AF2 RO FD1 KE SP3 SA ₆ SSSSSS					S CH4 HS ₄ SSSS	S PH4 BO ₄ SSSS	S BI4 PI ₄ SSSS
10E [60]										S CH5 HS ₄ SSSS	S PH5 WI ₄ SSSS	S BI5 GR ₄ SSSS

The gap in Option Block A will be filled with 6 additional lessons of Triple Science for Set 1.

The gap in Option Block C will be filled with 6 additional lessons for Triple Science Set 2.

The gap in Option Block D will be filled with the additional lessons for Triple Science Set 3.

Option Block B has no science lessons, so no gaps.

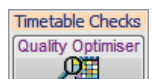
Block C is still in 2 sub-blocks as Drama is shared between ST & FL.

All the Science lessons have been converted to pure class activities, with:

- Triple Science Sets 1, 2 & 3 taking 6 single lessons of biology, chemistry & physics (18 in total). The 'extra 6' will fill the gaps in the option blocks to the left.
- Combined Science Sets 4 & 5 taking 4 single lessons of biology, chemistry & physics (12 in total).

Scheduling:

5. Schedule all the 'simple block' activities for all other subjects in manual mode, leaving the sciences until last.
6. Although it is not strictly necessary to, lock all the Year 10 or 11 activities into place. This only takes a couple of clicks and reassures the timetabler that nothing else will move. See also the next page.
7. Then schedule all the science activities in semi-automatic mode.
8. After scheduling, run a check of the placing of the science activities. The Quality Optimiser can be used here.



continued...

Comments:

This method proved to be highly successful, saved hours of time and the quality of the spread across the two weeks was significantly improved. The Head of Science commented on this in the science minutes!

Note that if you have other GCSE option subjects that are shared between two teaching staff, the above method could again be used. However, having already scheduled the 'pure class' science activities, the timetabler will now need to exercise caution and may wish to lock into place all activities of that year group prior to trying this. If not, the quality of the spread of the sciences that have already been checked may require a further check. The Drama group in Block C of the screenshots is one such example where this strategy might be used; but in any case DayBlocking should be used to ensure the lessons are on different days.

Part-timers

The method proved to be a very helpful strategy when faced with a number of Part-time staff requiring certain days off. Scheduling 'pure class' activities for Part-timers is a much more manageable task than scheduling simple blocks with Part-timers, particularly when they require different days off.

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