



MyEducationBC

Scheduling Module 3

Scenarios, Preferences and Time Structures

Jan. 2020 v1.9

Version History

Version	Date	Description
1.0	Jan 11, 2015	Initial Document
1.1	Jan 21, 2015	Added - Appendix B: Determining a School's Rotation
1.2	Jan 20, 2016	Removed Rotations, Patterns and Pattern Sets and added to SM6a
1.3	Jan 3, 2017	Updated for 5.6. Added information section 1.4 on Shared build year scenario
1.4	Jan 19, 2017	Section 1.2.2. Numeric vs Alpha Section numbers – section must use Numeric values.
1.5	Dec 4, 2017	Added information on Term Start and End Dates to section 1.6 & 1.6.2
1.6	Feb 13, 2018	Review and general updates throughout
1.7	Feb. 22, 2018	Added information to section 1.1.2 Copy Active Schedule
1.8	Apr 29, 2019	Added hyperlinks to Table of Contents
1.9	Jan. 3, 2020	Update to section 1.7.2 Deleting Days

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1.0 Scenarios

A build scenario defines the structure of the schedule that a school would like to build for next year, including the schedule terms, number of periods, and number of days per cycle.

Several build scenarios can be created to test out different structures. For example, a school might use a scenario to build their traditional master schedule. Even if they are happy with the schedule, they may want to tweak it to see if they can get a better schedule. To be safe, schools should copy the scenario and schedule and just tweak the copy. Then, they would only commit the schedule they will actually use next year. Depending on the scenario preferences selected, attributes of each can be shared or they can be distinctly unique.

1.1 Creating Scenarios

There are two ways to create the schools initial scenario: by Adding new or Copying the existing active schedule.

1.1.1 Add new

1. Build view.
2. Click the Scenario tab.
3. On the Options menu, click Add. The New Schedule page appears.
4. Enter a name for the scenario. If more than one scenario is being created, use short descriptive names, e.g. 1-12Feb.
5. The system enters the start and end dates that coincide with the build context year. There is no need to change these dates.
6. Comments area: This is a text box which can be used to describe this scenario. Comments are very helpful if you will be creating multiple scenarios.
7. Click Save.

Hugh Boyd Secondary 2017-2018
1.3 Test 5.6 DB

Build View Select School Cultura, Sbrneighbourhood Log Off

Pages Scenario Workspace Courses Student Staff Rooms Rules Global

Scenarios :: 1.3 Test 5.6 DB

Details Options Reports Help

Save Cancel Default Template

Name * 1.3 Test 5.6 DB

Start date * 09/08/2017

End date * 08/08/2018

Schedule terms 1/3, 1/2, 1/1

Days per cycle 8

Periods per day 7

Commit date

Comment

Completed Schedule
Will create Rotation in this scenario
Rotate
Unrotate

Last build time 02/12/2016 9:24 AM

Last load time 08/12/2016 11:27 AM

Students satisfied percent 99%

Requests satisfied percent 99%

Save Cancel

1.1.2 Copy Active Schedule

Build view > Scenario > Options > Copy Active Schedule...

A new parameter window opens providing options on specific parts you would like to copy.

NOTE: It is important to understand both *what the school did last year* and *how they would like to schedule this year*, when choosing these check boxes.

Copy Scenario - Google Chrome

ts2.myeducation.gov.bc.ca/asp/copyScenario.do?activeS

New scenario name Copy of 2017-2018 Active Schedule

Items to include

Master schedule ☒

Clear platoon code ☐

Student schedules ☐

Rules ☐

Rotation ☐

Unrotate schedule ☐

Bell schedule ☐

** Time structure and schedule attributes will be copied automatically.

OK Cancel

Field	Description
New scenario name	Enter a name for the scenario. If you plan to create more than one scenario, use short descriptive names. E.g. 1-12Feb
Master schedule	Check if you want to copy the current year Master Schedule
Clear platoon codes	Check if you do not want to copy platoon codes from students and sections
Student schedules	Check if you want to copy students existing schedule
Rules	Check if you want to copy Load rules. Build rules do not exist in the School view. All Rules can be copied into the scenario later.
Rotation*	Check if you want to copy the existing rotation. If this is selected, the schedule CANNOT be rotated again. NOTE: Field is only present if a Rotation existed for last year.
Unrotate schedule*	Check if you want to copy the schedule with the original structure, prior to a rotation being applied last year. NOTE: Field is only present if the schedule was rotated last year and applied.
Bell schedule	Check if you want to copy existing Bell schedules All Bell schedules can be copied into the scenario later.

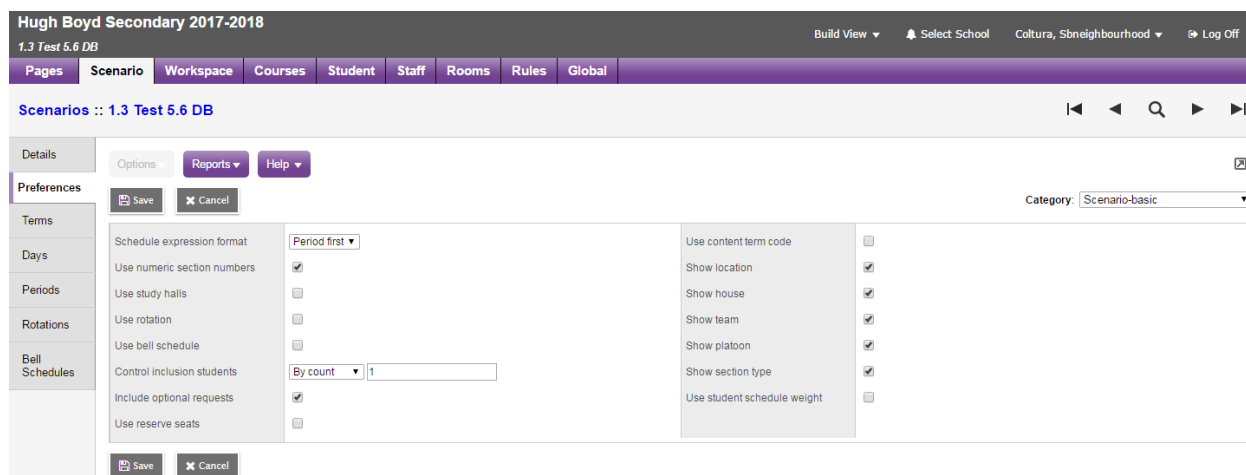
1.2 Scenario Preferences – Scenario Basic

Define build scenario preferences that you want the system to consider when building the schedule with this scenario.

Note: During the School year, you can view the build scenario preferences for the current master schedule in the School view. Click the Schedule tab, and the Preferences side-tab.

To define build scenario preferences:

Build view > Scenario > Select the scenario > Preferences > Category defaults to Scenario – basic



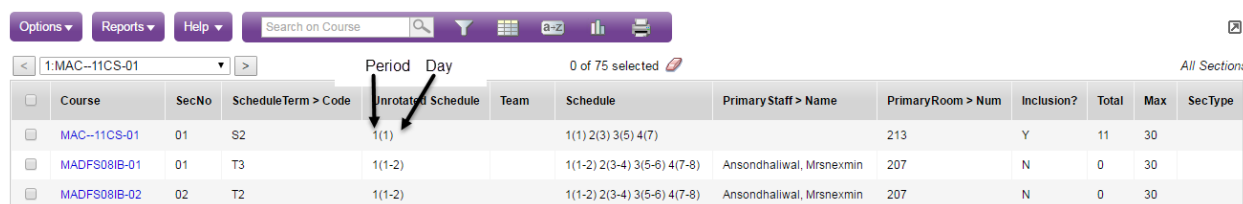
The screenshot shows the 'Scenario Preferences' window for 'Hugh Boyd Secondary 2017-2018'. The interface includes a top navigation bar with tabs for Pages, Scenario, Workspace, Courses, Student, Staff, Rooms, Rules, and Global. The 'Scenario' tab is active, showing 'Scenarios :: 1.3 Test 5.6 DB'. The 'Preferences' section is expanded, displaying a list of settings categorized by 'Scenario-basic'. The settings are organized into two columns:

- Left Column:**
 - Schedule expression format:
 - Use numeric section numbers: ☒
 - Use study halls: ☐
 - Use rotation: ☐
 - Use bell schedule: ☐
 - Control inclusion students:
 - Include optional requests: ☒
 - Use reserve seats: ☐
- Right Column:**
 - Use content term code: ☐
 - Show location: ☒
 - Show house: ☒
 - Show team: ☒
 - Show platoon: ☒
 - Show section type: ☒
 - Use student schedule weight: ☐

At the bottom of the preferences section, there are 'Save' and 'Cancel' buttons. The 'Category' dropdown is set to 'Scenario-basic'.

1.2.1 Schedule Expression Format

The default for the schedule expression is Period first. The period is displayed in the schedule expression first, followed by the day i.e. P(D).



Course	SecNo	ScheduleTerm > Code	Period	Day	Unrotated Schedule	Team	Schedule	Primary Staff > Name	Primary Room > Num	Inclusion?	Total	Max	SecType
MAC-11CS-01	01	S2	1(1)				1(1) 2(3) 3(5) 4(7)		213	Y	11	30	
MADFS08IB-01	01	T3	1(1-2)				1(1-2) 2(3-4) 3(5-6) 4(7-8)	Ansondhaliwal, Mrsnexmin	207	N	0	30	
MADFS08IB-02	02	T2	1(1-2)				1(1-2) 2(3-4) 3(5-6) 4(7-8)	Ansondhaliwal, Mrsnexmin	207	N	0	30	

Note: It is recommended that districts decide on a standard expression format for all schools to follow. The only indication of this setting in the School View is found from Schedule > Preferences which will display the preferences as shown above, for the current school year. Viewing schedule expressions as displayed within the application will not indicate the set preference.

1.2.2 Use Numeric Section Numbers

Check this box to have the system generate numeric section numbers. Section numbers can be manually changed. If this box is checked it will ensure when a section is added, it will be sequential in numbering.

1.2.3 Use Study Halls

This functionality is not currently used in BC.

1.2.4 Use Rotation

Select this checkbox if you will be using a schedule rotation.

1.2.5 Use Bell Schedule

Only check if the school operates with multiple time structures. For example

- Grade 9 students attend 5 periods in a day and;
- Grades 10-12 students attend 4 periods per day.

Note: If this is the case schools will need to ensure they use a Bell – Course Restrictions rule see Module 7 Rules for additional information on this.

1.2.6 Control Inclusion Students

Controls the number of inclusion requests, per section.

This can be set by Ratio % of the class enrollment total, or by Count with an overall limit set by number.

This preference setting controls the number of student requests (flagged as inclusion requests) that can be loaded into sections.

Example:

A school has three sections of MEN—09, all of which are set as inclusion sections.

There are 90 student requests for this course.

Of these, nine requests have been flagged as '*Is inclusion section?*'.

If the preference is set to *By count* = 3, then the Load engine will schedule three of these requests, into each section.

Note: There is no link between a student having a Ministry Designation and the student's request being flagged as an inclusion request.

The image below shows how a student's request can be flagged as an inclusion request.

The screenshot shows the 'Student' tab in the MyEducationBC interface for 'Hugh Boyd Secondary 2017-2018'. The student profile for '1369261 - Aaron, Duncandetch :: ACAL-12' is displayed. In the 'Requests' section, the 'Is inclusion section?' checkbox is checked, indicated by a black arrow. Other fields include 'School Course > Number' (ACAL-12), 'Section type', and 'Content term code'.

1.2.7 Include Optional Requests

Student course requests can be set as '*Is optional?*'. Where this is the case, checking this scenario preference will treat these requests as primary. This is rarely used and will be covered more thoroughly in Module 4: Student Course Requests.

1.2.8 Use Reserve Seats

Checking this preference allows for setting aside seats in a section of a course on the Workspace that can be filled after the schedule has been built. This feature could be useful in managing the number of students loaded into a section, to ensure space is retained for students arriving in Sept. or returning in the following spring.

Examples:

1. Hockey players who you know are coming to your school in Sept., but you don't know who they are and therefore don't have specific requests for them.
2. International students, you know x number are arriving, but during the scheduling process you do not have requests for them.

3. Hockey players returning, after their season is complete, and therefore require a seat in a section.

1.2.9 Use Content Term Code

This preference is checked where schools will be offering students the means of completing term portions of a course where they did not meet requirements in an earlier attempt. For example as student did not pass semester one of a full year course, they could request to repeat only semester one of the course. Where this preference is not checked, the student request will be treated as that for the entire duration of the course.

1.2.10 Show: Location, House, Team, Platoon, Section Type

Checking these preferences controls whether these fields are displayed for use with student groupings in the Workspace, course section details and student details in the build view. Should the user expect to see any of these fields and does not, they only need to check the appropriate preference and save.

1.2.11 Use Student Schedule Weight

Select this checkbox if this scenario uses student schedule weights.

By default students are scheduled with a weight of 1, which is interpreted by the builder as occupying one seat. If selected, this option displays a Schedule weight option on the student details in the Build View enabling the user to define this field. For example, a special needs student requires equipment and an aide. By assigning a schedule weight of 2; the course enrollment is now two seats closer to the maximum enrollment.

1.3 Scenario Preferences – Scenario Advanced

1.3.1 Engine Processing Time

Recommendation: Do not change any of these preference settings: Teacher look ahead, Room look ahead, or Schedule student.

1.3.2 Max Count for Same Validation

This preference setting limits the maximum number of times the system will display the same validation error when you validate your workspace. The default value for this field is set to 20.

1.3.3 Use Shared Attributes

Users can choose to share various scenario attributes which include: course attributes, staff attributes, student attributes, and time structure. Selecting any of these checkboxes uses the same attributes shared by other scenarios of the same build year. Changes to shared attributes are applied to all scenarios which have the given attribute checked.

1.3.4 Relax Room Constraint

Recommendation: Schools should not use this preference, rooms can be managed best using other means.

1.4 Scenario Preferences – School

The 5.6 release of MyEd made a couple of changes to this screen, an Advanced tab was added and 'Shared build year scenario' functionality allows for sharing secondary student schedules, with the student's other school's

The screenshot shows the 'Scenario Preferences' screen for a 'School' category. The interface includes a top navigation bar with tabs for Pages, Scenario, Workspace, Courses, Student, Staff, Rooms, Rules, and Global. A left sidebar contains links for Details, Preferences, Terms, Days, Periods, Rotations, and Bell Schedules. The main content area is divided into two tabs: Basic and Advanced. The Basic tab is active, showing sections for General, Student Subject Selection, and Teacher Recommendation. The General section includes fields for Schedule mode (Secondary), Elementary schedule grade level cut-off (07), Section number pad length (2), and Shared build year scenario (2 Test 5.6 DB). The Student Subject Selection section includes fields for Disabling automatic recommendation acceptance and Subject selection fields (academicLevel, credit). The Teacher Recommendation section includes fields for Show recommendations in School view, Enforce recommendation code match, and Teacher recommendation fields. The Advanced tab is also visible, showing sections for Student Schedules, Student Schedule Workspace, and Miscellaneous. The Miscellaneous section includes fields for Pattern day IDs (1,2,3,4,5,6,7,8,9), Pattern period IDs (A,B,C,D,E,F,G,H,I,J,K,L,M,N), and Number of sections deleted with warning (0).

1.4.1 Schedule Mode

Schedule mode must be set to Secondary for all schools.

1.4.2 Elementary Schedule Grade Level Cut-off

This setting has no effect with the schedule mode set to secondary.

1.4.3 Section Number Pad Length

Section number pad length refers to the system default length of the section number. This can be manually changed for any given section. The default setting is 3.

Recommendation: Do not set the length to 1. This can result in schedule issues should more than nine sections be required for a given course or courses.

See Appendix A for a detailed table of scenario preference definitions.

1.4.4 Pattern Day and Period IDs (Advanced tab)

By default pattern day IDs are set as alpha and period IDs are set as numeric. These settings determine how patterns are displayed and how the schedule expression is displayed. For example, with a schedule expression format of period first the examples below shown from left to right would look like: 1(A), 1(1) and A(1) respectively to show period 1/day 1.

		Days				
		A	B	C	D	
Periods	1					
	2					
	3					
	4					

		Days				
		1	2	3	4	
Periods	1					
	2					
	3					
	4					

		Days				
		1	2	3	4	
Periods	A					
	B					
	C					
	D					

1.4.5 Shared build year scenario

This allows a school to 'share out' their scenario, so student's secondary school(s) can see the student's schedule.

1.5 Copy a Scenario

Users can create a new scenario copied from an existing scenario. If you copy a scenario from a different schedule build year, the system does not copy the term dates from that year.

To copy a build scenario:

1. Log on to the Build view.
2. Click the Scenario tab.
3. Select the scenario you want to copy, and click the Details side-tab.
4. On the Options menu, click Copy Scenario. The Copy Scenario dialog box appears:

New scenario name
 Items to include
 Master schedule
 Clear platoon code
 Student schedules
 Rules
 Rotation

☒
☐
☐
☒
☒

** Time structure and schedule attributes will be copied automatically.

5. Type a name for the new scenario.
6. Select the checkbox of the items you want to copy from the original scenario to the new scenario. For example, you might want to carry over the rules created but not the student schedules.

1.5.1 Copy Active Schedule

MyEducation BC provides the ability to copy the currently active schedule in the school to create a new scenario in the Build View. This scenario can then be used to create next year's schedule.

To copy the active schedule:

1. Log on to the Build view.
2. Click the Scenario tab.
3. On the Options menu, click Copy Active Schedule. The Copy Scenario dialog box appears:

New scenario name
 Items to include
 Master schedule
 Clear platoon code
 Student schedules
 Rules
 Rotation

☒
☐
☐
☒
☒

** Time structure and schedule attributes will be copied automatically.

4. Select the pieces of the active schedule you want to copy into this new scenario, such as the master schedule, rules, and rotations. Select the Clear platoon code check- box if you want to clear the platoon codes associated with the active schedule.

Note: Only checkboxes for items that apply to your scenario appear. For example, if the active schedule does not use a bell schedule, you will not see a Bell schedule checkbox.

5. Click **OK**.

1.6 Terms

Schedule terms are the date ranges during which a course can begin and end.

For the functionality of *Update Designation/ELL Tallies*, to accurately determine student program participation (ELL) Term start and end dates need to be added.

From the Build View, go to the Scenario top tab and click on the desired scenario. Go to the Terms side tab. Terms carried over from the current year will be displayed. It is important to click into the details of each schedule term. All schedule terms must have a schedule term code in the Schedule Term reference table. Some current year codes have been converted without existing in the reference table. These can be identified by an asterisk (*) beside the code.

Pages Scenario Workspace Courses Student Staff Rooms Rules Global

Scenarios :: 1.3 Test 5.6 DB

Details Preferences

Options Reports Help Search on Code

0 of 6 selected

Code	Name	BaseTPY	CoveredTPY	BaseMap	UniversalMap
FY	Full Year	1	1	1	111111
S1	Semester 1	2	1	10	111000
S2	Semester 2	2	1	01	000111
T1	T1	3	1	100	110000
T2	T2	3	1	010	001100
T3	T3	3	1	001	000011

1.6.1 Adding Schedule Terms to the Reference Table

To add schedule terms to the reference table, go to the Build View > Global > Reference > Schedule Term Codes > Codes > Options > Add. Enter a code that will be meaningful to the users and Save.

Pages Scenario Workspace Courses Student Staff Rooms Rules Global

References :: Schedule Term Codes

Pattern Library Pattern Sets Requests Logs

Options Reports Help Search on Code

ROOT List View >> Categories Only

0 of 3 selected

Code	Description	Local
T1		
T2		
T3		

Reference Details Codes

1.6.2 Adding and Defining Schedule Terms

1. To add additional schedule terms go to Scenario > Terms > Options > Add.
2. From the **Code** drop down list select the desired schedule term. If the term code representing the required schedule term does not appear, add the code into the reference table as described above.

Pages | **Scenario** | Workspace | Courses | Student | Staff | Rooms | Rules | Global

Scenarios :: 1.3 Test 5.6 DB :: S1

Details
Preferences
Terms
 ▶ Details
 Days
 Periods
 Rotations
 Bell Schedules

Options ▼ | Reports ▼ | Help ▼
 Save | Cancel
 Code: S1 ▼
 Name: Semester 1
 Base terms per year: 2 | Set
 Term map: ☒ ☐ | Set date
 Save | Cancel

3. Use the following table to enter information in the fields:

Field	Description
Code	Select the code for the schedule term. For example, you might select FY for a full-year term, and S1 for Semester 1. Note: School users with the security role of Schedule Builder can create these schedule term codes from the Build View > Global > Reference > Schedule Term Codes > Codes > Options > Add
Name	Type a name for the schedule term.
Base terms per year	Type the total number of this type of schedule term in your schedule. For example, for a course that meets one-third of the year (a single trimester), there are three base terms. For a course that meets half of the year (a single semester), there are two base terms.
Term map	Select the checkbox that represents which of the base terms this specific schedule term covers. For example, if you are defining Semester 1 and there are two base terms, select the first checkbox to indicate that this term is the first of the two terms. Note: The system displays checkboxes that equal the number of base terms you identify at the Base terms per year field. For example, if you identify 3 base terms, three checkboxes appear.

Field	Description
Term date ranges	Type or click to select the start and end dates of this schedule term. The system validates these dates against the school year dates . For example, you cannot enter a start date that is before the first day of the school year. For the functionality of <i>Update Designation/ELL Tallies</i> , to accurately determine student program participation (ELL) Term start and end dates need to be added.
Grade term cover map	Entered in the School view, after schedule has been Committed.

- If schedule terms exist that are not required, these can be deleted by clicking into the details of the schedule term and going to Options > Delete.

1.7 Days

Your schedule might consist of several days per schedule cycle. This way, students can attend different classes on different days in a schedule. Many schools follow a flat, two day schedule where full year courses are offered on a day 1 or day 2 while the semester courses are offered on both. Schools that offer back to back or double blocks of courses where attendance is taken in both blocks will require a rotated schedule. In order to accommodate the full rotation schools may have multiple days. For example, a school that has eight rotations for their cycle to complete would need eight days for their rotated schedule.

1.7.1 To Add schedule days:

- Log on to the Build view.
- Click the Scenario tab.
- Select the scenario you want to work with, and click the Days side-tab.
- On the Options menu, click Add. The Add Day dialog box appears:

The screenshot shows the MyEducationBC interface. The top navigation bar includes tabs for Pages, Scenario, Workspace, Courses, Student, Staff, Rooms, Rules, and Global. The 'Scenario' tab is selected, showing a list of scenarios. The 'Days' side-tab is also visible. The 'Add Day' dialog box is open, displaying a 'Day count' field with the value 8. Below this is a table with 8 rows, each with a 'Number' column, an 'Identifier' column, and a 'Name' column. The 'Number' column contains values 1 through 8. The 'Identifier' and 'Name' columns are empty. At the bottom of the dialog are 'Save' and 'Cancel' buttons.

5. In the Day count field, type the number of days in the schedule scenario. For example, if you are adding another day to a list of existing days, increase the number by one. The dialog box displays the appropriate number of rows, with each row representing one day.
6. For each day, type an identifier in the Identifier column.
Note: It is suggested using different identifiers for days and periods. For example, if you use letters for periods, use numbers for days.
7. Type a name for each day in the Name column.
8. Click Save.

1.7.2 To Delete schedule days:

If you rotated your schedule last year, you will want to DELETE the days that were added to accommodate your Rotation and reset the number of days, to what you schedule with. In the example below, this school rotates out the schedule to 8 Days, but schedules with 2 Days. Therefore, prior to starting scheduling, the number of Days needs to be adjusted back to 2.

1. Select the scenario you want to work with, and click the Days side-tab.
2. Click into the Details of the Day you would like to Delete.
3. Click Options > Delete
4. Click Save.

Scenarios :: 1.3 Test 5.6 DB

Details
Preferences
Terms
Days
Days Details
Periods

Options ▾ Reports ▾ Help ▾ Search on Number 🔍

0 of 8 selected

<input type="checkbox"/>	Number	ID	Name
<input type="checkbox"/>	1	1	1
<input type="checkbox"/>	2	2	2

1.8 Periods

Define the number of periods in your schedule.

To define your periods:

1. Log on to the Build view.
2. Click the Scenario tab.
3. Click the Periods side-tab.
4. On the Options menu, click Add. The Add Period dialog box appears:

Scenarios :: 1.3 Test 5.6 DB

Options ▾ Reports ▾ Help ▾ Search on Number 🔍

0 of 7 selected

Number	ID	Name
<input type="checkbox"/> 1	1	1
<input type="checkbox"/> 2	2	2
<input type="checkbox"/> 3	3	3
<input type="checkbox"/> 4	4	4
<input type="checkbox"/> 5	5	5
<input type="checkbox"/> 6	6	6
<input type="checkbox"/> 7	7	7

Period count:

Number	Identifier	Name
1	<input type="text" value="1"/>	<input type="text" value="1"/>
2	<input type="text" value="2"/>	<input type="text" value="2"/>
3	<input type="text" value="3"/>	<input type="text" value="3"/>
4	<input type="text" value="4"/>	<input type="text" value="4"/>
5	<input type="text" value="5"/>	<input type="text" value="5"/>
6	<input type="text" value="6"/>	<input type="text" value="6"/>
7	<input type="text" value="7"/>	<input type="text" value="7"/>

Save Cancel

5. In the Period count field, type the number of periods in this schedule scenario. The dialog box displays the appropriate number of rows, with each row representing a period.
6. For each period, type an identifier in the Identifier column.
7. For each period, type a name in the Name column.
8. Click Save.

1.9 Bell Schedules

During the 'prepare to build' schedule process, you might want to define your school's bell schedules.

Note: If your school uses more than one bell schedule during the same schedule day, you need to define bell schedules before you build. Otherwise, you can wait to define your bell schedules in the School view, after you commit your schedule.

When you define your bell schedules, you define the start time and duration for each schedule period in your school. Then, when you validate your 'prepare to build' data, the schedule engine checks for any conflicts arising from the bell schedules.

Not all schools need to define bell schedules. You need to define bell schedules for one or more of the following reasons:

1. Your school has periods that overlap. For example, some schools have lunch spanning three periods – 4, 5, and 6. You need to define the times of these periods to determine if and when there is a schedule conflict.
2. Some schools have shorter periods in the afternoon (20 minutes) than in the morning (40 minutes). You need to define bell schedules to determine schedule conflicts for students.
3. Grades in the same school might have different schedule shapes. For example, 5th, 6th, 7th graders might operate with a 2-day/6-period schedule, and grades 8-12 might operate with a 2-day/4-period schedule. Because you can only define one schedule shape per school, you can use bell schedules to differentiate between the two schedules. If you create more than one bell schedule for your school, you must use Bell Schedule rules to assign the appropriate bell schedules to rooms and courses.

Note: If you want the build schedule engine to reference bell schedules when building the master schedule, select the Include in scheduling checkbox when defining bell schedules.

Note: To copy bell schedules from a previous year, on the Options menu, click Copy From.

To define bell schedules:

1. Log on to the School view.
2. Click the Schedule tab.
3. Click the Structure side-tab, then click Bell Schedules.
4. On the Options menu, click Add. The New Schedule Bell page appears:

Bell period number	Bell period Identifier	Period name	Start time	Duration (Minutes)
1	1	1	8:20 AM	60
2	2	2	9:25 AM	65
3	3	3	10:40 AM	60
4	4	4	11:45 AM	64

5. Type a unique identifier, name, and description for the bell schedule.
6. Select the Include in scheduling? checkbox if you want the build engine to use this bell schedule to schedule sections to avoid conflicts.
7. In the Number of days field, type the number of days in this bell schedule.
8. At the Combine day's field, to select multiple days that can feed to the particular bell schedule day. This allows different days' schedules to appear on one day on the fly without modifying the actual schedule.
9. For each period, define the start time and duration.


Note: The start time for each period does not have to be sequential like the period number order. This way, you can change the order of periods on the fly for a particular day without modifying the actual schedule.

Appendix A: Scenario Preferences Table



Field	Description
To define basic preferences:	
Schedule expression format	<p>Select one of the following to determine how you want your days and periods to appear on the master and student schedules:</p> <ul style="list-style-type: none"> Period first Day first <p>For example, your schedule contains 7 periods (1-7) in a six-day cycle (A-F), and a section meets period 2 on day A. If you select to display 'period' first, the schedule expression will be 2(A). If you select to display 'day' first, the schedule expression will be A(2).</p> <p>Note: You might want to use one alpha character and one numeric to avoid confusion. For example, the schedule expression for Period 1, Day 1 would be 1(1).</p>
Use numeric section numbers	<p>Select this checkbox if you want the system to generate numeric section numbers.</p> <p>Note: If you select this option and later add a course section, the system will automatically populate the section number field with the next available number.</p>
Use study halls	<p>Select this checkbox if you want the system to schedule students in study halls when their schedule permits.</p>
Use rotation	<p>Select this checkbox if you want the system to consider the schedule rotation when building the master schedule to prevent certain rules from breaking, such as the teacher's max-in-a-row value.</p> <p>Note: This checkbox does not trigger the rotation to happen.</p>
Use bell schedule	<p>Select this checkbox if you are going to use one or more bell schedules to create a schedule with this scenario. Rarely used.</p> <p>Note: If you plan to use more than one bell schedule, you need to define bell schedule rules to assign the appropriate bell schedules the appropriate rooms and courses.</p>

Field	Description
Control inclusion students	<p>Use this drop-down to select one of the following:</p> <ul style="list-style-type: none"> By ratio (%) to control the ratio of inclusion students in inclusion sections by a specific percentage. Type the percentage in the field. By count to control the ratio of inclusion students in inclusion sections by specifying the exact number of inclusion students the system can schedule in each inclusion section. Type the number in the field. <p>For example, a school can determine that inclusion sections can only contain four inclusion students (By count), or 10% of inclusion students (By ratio %).</p> <p>Notes:</p> <ul style="list-style-type: none"> If you do not define a number or percentage of inclusion students, you could inadvertently fill a class with all inclusion requests. This works off the actual enrollment, not the enrollment max. For example, if the enrollment max is 30 and the inclusion ratio is 50% and 12 non-inclusion students are enrolled, a maximum of 12 inclusion students will be scheduled in the class.
Include optional requests	<p>Select this checkbox if optional requests are considered primary requests in this scenario. Optional requests are primary requests that can be ignored under some conditions.</p> <p>Note: This option provides an easy way to remove particular requests without deleting them. For example, you might need to investigate decreasing your current 8-period day down to a 6-period day. You could mark some requests as optional and then deselect this checkbox.</p>
Use reserve seats	<p>Select this checkbox if you want to enable reserve seating for all course sections. You can set aside a number of seats in a section on the Workspace, which you can fill after the schedule has been built.</p>
Use content term code	<p>Select this checkbox if you want the system to use the content term codes you define for sections when building this scenario.</p> <p>For example, maybe you want to allow students who fail part of a full-year course to retake that portion of it.</p> <p>Note: This field is related to the Content termcode on the student request. Remember that if a student fails first semester of a full-</p>

Field	Description
	<p>year course, they can request S1 only. The engine schedules the student in a section, but notes that the student is enrolled for the content term code only. Also, the student appears in the teacher's gradebook for that term only.</p> <p>If you do not select this checkbox, the system ignores the Content termcode on the student's request, and schedules the student for the entire duration of the course.</p>
Show location, Show house, Show team, Show platoon, Show section type	<p>Select these checkboxes if you are going to use these student grouping options when building this scenario. The grouping fields (team, house, etc.) only appear on the Details page for a section on the Workspace tab if you select these checkboxes.</p>
Use student schedule weight	<p>Select this checkbox if this scenario uses student schedule weights.</p> <p>The system uses student scheduling weights when building and you have determined to close sections at maximum enrollment.</p> <p>By default, students have a schedule weight of 1. You might define a weight of 1.5 or 2 to determine specific students fill more than one seat due to his or her IEP requirements.</p> <p>Define student scheduling weights for each student in the student scheduling preferences.</p> <p>Note: You can determine that specific courses do not use schedule weights.</p>
To define advanced preferences:	
Engine processing time (seconds)	<p>Type the number of seconds you want the system to use to look ahead to teachers and rooms when trying to schedule a course.</p> <p>Use these fields when you are building the workspace and the scheduling engine is stopping repeatedly when it attempts to schedule courses because of teachers or rooms.</p> <p>Defining seconds in these fields allows the scheduling engine to look for unassigned teachers or rooms for the number of seconds you identify, instead of immediately presenting you with a conflict.</p> <p>Note: Entering a half-second adds significant processing time, and should help the system find the appropriate teachers or rooms.</p>

Field	Description
Max count for same validation	Type the maximum number of times you want to view the same validation error when you validate your workspace. The default value for this field is 20 .
Use shared attributes: <ul style="list-style-type: none"> • course • staff • student • time structure 	<p>If you select any of these checkboxes, the current scenario uses the same attributes shared by other scenarios of the same context year. The system applies any changes you make to these attributes to the other scenarios.</p> <p>If you do not select this checkbox, the current scenario has its own set of attributes. Any change made to the these attributes belongs to the current scenario only.</p> <p>Note: For example, if you share staff attributes and delete a staff member from one scenario, that person will automatically be deleted from any shared scenarios. Therefore, to minimize confusion and possible errors, it is recommended that you <i>do not select</i> these checkboxes.</p>
Relaxed room constraint, Order to relax room constraints, Relaxed room capacity reduction threshold	<p>Select the Relaxed room constraint checkbox if certain room constraints can be relaxed during the build process. For example, maybe you want to let teachers teach in their preferred room. However, after analyzing the schedule the system built, you realize you want to try letting the system relax this constraint and see the results.</p> <p>Below the Order to relax room constraints box, click Add to select from all types of room constraints you define, such as Capacity and Teacher's preferred room. Select each constraint and click Up and Down to order the constraints from top to bottom; the scheduling engine relaxes the top constraint on the list first.</p> <p>If you select Room Capacity in the Order to relax room constraints box, in the Relaxed room capacity reduction threshold field, type the maximum percentage for rooms with less than desired capacity that can be used during the build process when necessary.</p> <p>Note: These options are usually used for adjusting the schedule later on in the process.</p>
<p>Note: If a scenario does not use shared schedule attributes,  appears next to each of the schedule attributes to indicate they are privately owned by the current scenario.</p>	

Field	Description
<u>General</u>	
Schedule mode	<p>Select one of the following:</p> <ul style="list-style-type: none"> • Elementary • Secondary • Both
Elementary schedule grade level cut-off	Type the grade at which the schedule shifts to Secondary mode. This only applies if you selected Both at the Schedule mode drop-down.
Section number pad length	<p>Type the maximum number length for a section number. The default value is 3.</p> <div> Note: Keep leading zeroes for sorting purposes. </div>
Shared build year scenario	Select the build scenario that contains sections that will be taken by incoming secondary students.
Allow build year request edits	Select this checkbox to allow the school to manage requests for incoming students (based on a student's next school).
Align teacher assignment with certification	Select this checkbox to indicate if a teacher is certified to teach a course when creating teacher assignments.
<u>Student Subject Recommendation</u>	
Do the following to customize how students select courses to request for the next year:	
Disable automatic recommendation acceptance	<p>Select this checkbox to stop Aspen from automatically creating requests for courses teachers recommend when the track selection that contains the course is set to 'force recommendations'. If you select this, students or counselors need to manually select the course recommended on the student's Requests page to request it.</p> <p>For example, if your counselors review teacher recommendations for each student, selecting this checkbox allows them to determine if each recommendation is the best option before making it a request.</p>

Field	Description
Subject selection fields	Click  to select any additional fields to display in the Course Selection pick list students use to select courses to request.
<u>Teacher Recommendation</u> Do the following to customize how teachers select courses to recommend for their current students to take next year:	
Show recommendations in School view	Select this checkbox to display teacher recommendations on the Grades tab, Grade Input side-tab in the School view. <div> Note: Recommendations in the School view are read-only. </div>
Enforce recommendation code match	Select this checkbox to force the scheduler to match any build courses with a matching recommendation code. If the checkbox is not selected, the scheduler looks for a matching department code.
Teacher recommendation fields	Click  to select additional fields to be included in the pick list teachers use to select the courses to recommend for students.
<u>Student Schedules</u>	
Student schedule sort order	Type the student schedule sort order using the Java name for fields. The system uses this order to sort the student schedule list in both the School and Build views. The default value is scheduleDisplay,termView,masterSchedule.scheduleTrackId, masterSchedule.courseView . These values are ones found in the JavaName field for the field in the Data Dictionary.
Student schedule matrix cell	Type the fields used in the student schedule matrix.
<u>Student Schedule Workspace</u>	
Student schedule fields	Type the columns to appear on the student schedule workspace you use to manage student schedules.
Master select fields	Type the columns that appear in the master schedule pop-up when you add a section to a student's schedule on the student schedule workspace.

Field	Description
Allow future add/drop	<p>Select this checkbox to be able to enter a future effective date when adding or dropping student course sections on the student schedule workspace (School view, Student > Schedule > Workspace). These changes will be reflected in the student's schedule on the effective date.</p> <p>If you do not select this checkbox, the Pending student schedule change fields preference will not be enabled.</p>
Allow past add/drop	<p>Select this checkbox to be able to enter a past effective date when adding or dropping student course sections on the student schedule workspace (School view, Student > Schedule > Workspace). These changes will be reflected in the student's schedule on the effective date.</p> <p>If this checkbox is not selected, the school administrator cannot specify a past date when posting Student Schedule changes from the student schedule workspace.</p>
Pending student schedule change fields	<p>This preference works in conjunction with Allow future add/drop. If you did not select that checkbox, this field is ignored.</p> <p>If you selected Allow future add/drop, enter the fields you want to appear in the Pending Student Schedule Changes section of the student schedule workspace (School view, Student > Schedule > Workspace).</p>
Align add/drop date window (days)	<p>Type the number of days after the school year starts that student schedule adds/drops need to be aligned.</p>

For additional preferences, click the **Advanced** sub-tab:

The screenshot shows the 'School Setup' interface for 'Bay Middle School'. The top navigation bar includes tabs for Pages, School, Student, Staff, Attendance, Conduct, Grades, Assessment, Schedule, Global, Tools, and Admin. The 'Schedule' tab is selected. Below the navigation bar, the 'School Setup :: Bay Middle School' header is visible. The main content area is divided into a left sidebar with 'Setup' (Details, Preferences), 'Guided Tasks' (Schedules, Calendars, Events, Lockers, Membership), and a main panel. The main panel has tabs for 'Basic' and 'Advanced', with 'Advanced' selected. Under the 'Advanced' tab, there is a 'Miscellaneous' section with the following fields: 'Pattern day IDs' (containing 'A,B,C,D,E,F,G,H,I,J,K,L'), 'Pattern period IDs' (containing '1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20'), 'Schedule on client machine' (with a checkbox), and 'Number of sections deleted with warning' (with an empty text box). At the top of the main panel, there are buttons for 'Options', 'Reports', and 'Help', and a 'Category' dropdown menu set to 'Schedule'. At the bottom of the main panel, there are 'Save' and 'Cancel' buttons.

Use the following table to enter information in the fields:

Field	Description
Miscellaneous	
Pattern day IDs	Type the default day for school patterns. The system default value is A-L .
Pattern period IDs	Type the default period IDs for school patterns. The system default value is 1-20 .
Schedule on client machine	Select this checkbox to run the scheduling engine on the user's workstation instead of the server.
	<p>Notes:</p> <ul style="list-style-type: none"> The primary purpose of this feature is to conserve server processing resources. If many users are running builds and loads at the same time, server performance can be affected. Running the engine locally leverages the workstation's processing power to reduce the load on the server. If you select this checkbox, the user who builds the schedule must specify where the scheduling engine should write files to when they set their user preferences (Build view, Set Preferences > Schedule).
Number of sections deleted with warning	Type the minimum number of sections being deleted that will prompt a system warning upon deletion.