

Class Maker

User Guide

(Updated 20 January 2019)



CLASSMAKER
AA EDUCATIONAL SOFTWARE

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Class Maker 2019 description

Creating classes for the new school year is a time consuming task that teachers are asked to complete each year. Many schools offer their students the opportunity to request friends to accompany them into the new year. The task of trying to balance class size with student academic ability, behaviour, classroom participation and gender while ensuring that everyone has a friend is considerable.

Class Maker is an innovative software solution, developed to streamline this process and provide a number of balanced grade alternatives for teachers to choose from. Class groups can be sorted according to the following criteria.

- Friend Requests

Students have the opportunity to nominate up to 5 friends who they would like to be with the following year. Class Maker uses advanced matching algorithms to satisfy these requests. The program also offers the option to relax these requirements by allowing some friend requests to remain unfulfilled.

- Student Separation

Class Maker provides teachers the ability to separate students, even if the student has requested a particular friend. The teacher's condition overrides the student's request.

- Essential Student Grouping

There are times when students need to be kept together. Class Maker allows teachers to fix any number of student pairs or multiple groups of students into the same class.

- Multi-age (composite) classes

Class Maker provides the teacher the ability to create multi-age classes with 2 or 3 different year levels, and to control the numbers of each year level in the created classes.

- Manual Class Size

By default, Class Maker creates grades of equal or near-equal size. However, it also offers the ability to create classes of any size to suit the requirements of the school.

- Gender Ratio

It can be important to maintain a mix of male and female students in a particular grade. Class Maker provides the teacher the ability to produce class sets with any gender ratio required.

- Teacher choice

A student may need to be placed in a particular teacher's class, or alternatively there may be a request to not be placed with that teacher. Class Maker offers this choice as an option.

Quick Start Guide

Class Maker is designed to sort students into classes using student friend requests and teacher requirements to produce class sets with an even gender balance, student academic ability and social skills, while ensuring that every student has at least one friend in their new class. The basic steps required to use Class Maker are:

1. Use Microsoft Excel to create the Student Database File for a single year level (or composite) containing the student friend requests, ability levels, and any teacher requirements such as essential groupings or student separation. A template comes in the Class Maker zip file.
2. Load your Student Data File into Class Maker and run the program, setting the number of classes required, maximum gender ratio for each class, or any special requirements.
3. Tweak the automatically created Class Sets (if necessary) to fine tune the results.
4. Save the generated Class Sets into an Excel compatible format for later use.

Details on how to create the Student Data File are on page 5. This is the most important part of the process, for without good data files, the process will be hampered from the outset. Some points to remember when creating your Student Database File are:

- Use Essential Friend and Incompatible student pairings only when necessary. Class Maker will prioritise these requirements over the students' friend requests, and overuse may cause Class Maker to be unable to find any solution
- Make sure you spell the students names correctly – entering misspelled names makes it impossible for Class Maker to match the names in the file
- The more friend requests each student has, the easier it is to find a solution where every student has at least one friend in their new class. It is often the case that when Class Maker takes a long time to find any solution, there are a number of students with only 1 or 2 friend requests, and with all the other requirements placed on the class sets there is simply no solution where each child has at least one friend. More is more!
- When adding teachers to the Student Database File, please make sure you enter the letter "T" in the third column, otherwise Class Maker will treat them just like any other student!
- You can save the class sets generated by Class Maker in two formats:
 - "Summary" Data format, containing just the student names in the sorted class lists. This format is most useful for the final Class Set.
 - "Full" Data format, containing all the student data in the sorted class lists. This format is most useful for sharing amongst other school staff for later editing or fine tuning prior to final approval.

Both file formats can be imported back into Class Maker for further fine tuning, however data saved in "Full" Data format is easier to import later.

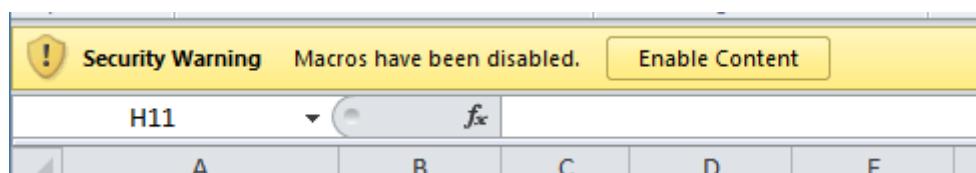
- Sometimes it may be necessary to allow some "Friendless" students or "Incompatible" pairs to be present when making the Class Sets. If you have too many "Essential" friends or "Incompatible" pairs specified and Class Maker hasn't found any solutions, try increasing the number of friendless or incompatible students and try tweaking the resulting classes.

Student Information database file

Class Maker uses a familiar Excel file format for entering student information. A template is included with the software to help you create your own class sets. It is **highly recommended** that you use this template for your own class lists, as it contains macros and internal checks to ensure the students' names are spelled correctly and in the correct format. The image below shows an example Excel student template data file which can be used for demonstration of the software. **To enter your own school's student information, please use Excel to open the template file ("Class list 2019 template empty.xls"), which you can find in the "C:\Class Maker\Data Files" folder.** There are also some example student template files included with the Class Maker zip file which you can use as a guide (for instance the file named "Class list 2019 template demo.xls"). An extract of this file is shown below to describe the features of the template files.

Student Name Do not leave blank rows between names!	Gender	Year Level	Numeracy	Literacy	Behaviour	Participation	Accelerated	ESL	Essential Friend	Friend 1	Friend 2	Friend 3	Friend 4
1													
2	Daisy Aardvark	F	1RA	E	C	3	3	Yes		Maeve Gorilla	Penny Kangaroo	Leia Numbat	Charlotte Iguana
3	Sophie Butterfly	F	1D	B	C	4	5		Frank Yak	Charlotte Iguana	Archer Emu	Imogen Unicorn	Mia Ostrich
4	Campbell Camel	M	1B	A	E	2	1			River Reindeer	Andrew Mongoose	Quinten Lemur	Isabella Possum
5	Deshitha Dog	F	1A	E	D	2	1	Yes		Penny Kangaroo	Laura Frog	Jessie Snake	Charlotte Iguana
6	Archer Emu	M	1A	C	A	4	2			Ross Snail	Liam Owl	Campbell Camel	Arrhav Jellyfish
7	Laura Frog	F	1B	C	B	3	2			Imogen Unicorn	Mia Ostrich	Daisy Aardvark	Penny Kangaroo
8	Genevieve Giraffe	F	1RA	C	B	1	5			Zoe Velociraptor	Imogen Unicorn	Laura Frog	Charlotte Iguana
9	Jules Hippo	M	1D	B	D	3	4			Andrew Mongoose	Quinten Lemur	Campbell Camel	James Turtle
10	Charlotte Iguana	F	1A	D	B	2	5		James Turtle	Ashwin Quokka	Penny Kangaroo	James Turtle	Sophie Butterfly
11	Simon Jackal	M	1B	C	C	2	5			Sophie Buffalo	Jessie Snake	Isabella Possum	Deshitha Dog
12	Penny Kangaroo	F	1RA	A	D	4	1			Mia Ostrich	James Turtle	Eva Duck	Leia Numbat
13	Quinten Lemur	M	1D	B	C	3	2			Ben Bat	Campbell Camel	Andrew Mongoose	James Turtle
14	Andrew Mongoose	M	1A	A	E	3	2	Yes		James Turtle	Campbell Camel	Quinten Lemur	Jules Hippo
15	Leia Numbat	F	1B	D	B	3	1			Laura Frog	Penny Kangaroo	Mia Ostrich	Imogen Unicorn
16	Mia Ostrich	F	1RA	C	A	4	2			Penny Kangaroo	Imogen Unicorn	Laura Frog	Charlotte Iguana
17	Isabella Possum	F	1D	C	C	3	3			Simon Jackal	Deshitha Dog	Alissa Horse	Giorgia Horse
18	Ashwin Quokka	M	1A	B	D	5	2			Mia Ostrich	Charlotte Iguana	Campbell Camel	Quinten Lemur
19	Maddison Rabbit	F	1B	E	C	1	5		Yes	Mia Ostrich	Charlotte Iguana	Imogen Unicorn	Genevieve Girat
20	Jessie Snake	F	1RA	B	C	4	4			Penny Kangaroo	Daisy Aardvark	James Turtle	Mia Ostrich
21	James Turtle	M	1D	A	E	4	2			Perry Wallaby	Campbell Camel	Andrew Mongoose	Jules Hippo
22	Imogen Unicorn	F	1A	E	A	5	4			Laura Frog	Penny Kangaroo	Eva Duck	Alexandra Falco

The Excel student template file which comes with Class Maker 2019 will check for incorrect spelling of the students' names using the "Conditional Formatting" option in Excel. Copying names from one cell to another can break this conditional formatting, but it can be restored using a Macro included with the file. Make sure that "Macros" are enabled when opening the file, and hit "Ctrl q" to restore the conditional formatting. ("Ctrl q" means hold the "Ctrl" button down, then hit the "q" key). When you open the template file you may see the warning message in yellow at the top of the spreadsheet which looks something like this.



You **must** click on the "Enable Content" button to enable the macro. The macro will also remove any additional spaces in the student names, whether in front of the first name, behind the second name, or even double spaces in between the names. It is good practice to use the macro to check your student data file before trying to run Class Maker.

Once you have updated the file and you are happy with all the spelling, save the file in Excel format using your own file name (eg. Grade 2 list 2020.xls). This file will be used to generate your new class data.

In Class Maker 2019 and users of Office 2010 or later is the ability to select the student names in Excel from a drop down list. It is not essential to enter the data this way, as you can still type in the names manually, however some people prefer the drop-down method. It ensures that the spelling of the student names is correct, as the only available data is the list of names in column A. Therefore it is necessary that the full list of student (and staff if desired) names are available in Column A, and that there are **no empty rows** in the Student Name column (Column A) since an empty row will cause the drop-down menu to fail to include all the students' names.

In the example shown below, the “down arrow” symbol has been selected in cell J14, which shows the list of available names from column A. Note the name in Charlotte Iguana’s row (cell J10), where the name “Wrong Spelling” has been entered (see example spreadsheet above). This background colour of this cell is not coloured green and the name is circled, as the Excel file has been set up to cross-check all the cells containing student names against the names entered in Column A – if an *exact* match is found, the cell will turn green. Using the macro “**Ctrl q**” will also circle this cell to show you that the spelling is incorrect. Once corrected, pressing “**Ctrl q**” again will clear this circle.

4	Campbell Camel	M	1B	A	E	2	1		River Reindeer	Andrew Mor
5	Deshitha Dog	F	1A	E	D	2	1	Yes	Penny Kangaroo	Laura Frog
6	Archer Emu	M	1A	C	A	4	2		Ross Snail	Liam Owl
7	Laura Frog	F	1B	C	B	3	2		Imogen Unicorn	Mia Ostrich
8	Genevieve Giraffe	F	1RA	C	B	1	5		Zoe Velociraptor	Imogen Unic
9	Jules Hippo	M	1D	B	D	3	4		Andrew Mongoose	Quinten Lerr
10	Charlotte Iguana	F	1A	D	B	2	5	Wrong Spelling	Ashwin Quokka	Penny Kanga
11	Simon Jackal	M	1B	C	C	2	5		Sophie Buffalo	Jessie Snake
12	Penny Kangaroo	F	1RA	A	D	4	1		Mia Ostrich	James Turtle
13	Quinten Lemur	M	1D	B	C	3	2		Ben Bat	Campbell Ca
14	Andrew Mongoose	M	1A	A	E	3	2	Yes	hes Turtle	Campbell Ca
15	Leia Numbat	F	1B	D	B	3	1		lra Frog	Penny Kanga
16	Mia Ostrich	F	1RA	C	A	4	2		hny Kangaroo	Imogen Unic
17	Isabella Possum	F	1D	C	C	3	3		hny Jackal	Deshitha Dc
18	Ashwin Quokka	M	1A	B	D	5	2		h Ostrich	Charlotte Igi
19	Maddison Rabbit	F	1B	E	C	1	5	Yes	h Ostrich	Charlotte Igi
20	Jessie Snake	F	1RA	B	C	4	4		Penny Kangaroo	Daisy Aardv
21	James Turtle	M	1D	A	F	4	?		Penny Wallaby	Campbell Ca

Some important points to remember when creating your student database file:

- Do not add or delete any columns (you can hide them if you don't want to use them)
- Do not add text in columns R or higher
- You can change the column headers in cells D1 to I1 to suit your requirements
- Do not use commas in the column headers
- When entering teachers' names in column A, type the letter "T" in column C (no “quotes”)
- Try to keep Essential Friends to below 10%, and Incompatible students to below 20% of total student numbers – Class Maker will still work if there are more, but it will take longer
- Class Maker works best with at least 4 friends per student
- For new students to the school who don't have any friend requests, just leave their friend columns blank – Class Maker will automatically add their own name to their friend area
- Use the “**Ctrl q**” macro to check your database file regularly – the macro will fix many common errors encountered when creating the student database file

Student template column descriptions

Column A – Student ID

Column A is where the students' names are placed. In Class Maker 2019 names can be in either "Firstname Lastname" format, or "Lastname, Firstname" format. Class Maker will sort the names alphabetically with what it believes is the student's last name, however if your data is in the form "Lastname Firstname", Class Maker will sort the class lists alphabetically with the student's first name. It is important to remember to keep the formatting consistent for all the names (including teachers' names), otherwise Class Maker may generate errors or give unpredictable results.

Some education departments issue student names in "Lastname, Firstname" format. If you have your student data in this format and you would like to use "Firstname Lastname" format, another Excel file which is included in the Class Maker 2019 package will reformat the student names for you. This file is called "Firstname Lastname swap with commas updated.xlsx".

Columns B to C – Student information

Column B contains the gender of the student, which must be either "M" or "F" (without the "quotes"). Column C contains the student's current year level. For kinder/prep/foundation students you can enter the number zero ("0"). This column is used for multi-aged (composite) class creation and to show the students' current class designation (eg 1A, 4DA etc).

Column C is where you can identify a teacher by entering the letter "T". If you want to link students with particular teachers to make your classes, you must include the same number of teachers in your data file as you have classes (ie 4 teachers for 4 classes). Teachers only need a name (eg "Mr. A" or "A, Mr.") and the letter "T" placed in column C.

Columns D to I – Student ability and personality levels

These optional columns provide additional information about the classes the program makes. When Class Maker finds a class set where all the students have friends, it then uses the data in these columns to calculate averages for each class. This will help avoid the situation where one class has all the high achievers while another is relatively low. It can also avoid having all of the quieter students in one class while filling another with students who have poor behaviour.

Class Maker 2019 allows you to customise columns D to I to suit your own school requirements. By changing the text in the appropriate column in row 1 of the spreadsheet, you can specify your own identifier. For instance, you may not need the "Participation" column, but may instead wish to identify ESL ability levels, or musical ability etc. By changing the text in the column header, Class Maker 2019 will use this identifier in its class averages.

Class Maker 2019 allows you to enter either five levels of performance or three. You can enter the ability score as a number from 1 to 5 or as letter grades A to E (where A=5, B=4, C=3, D=2 and E=1), and Class Maker 2019 will calculate an average for the entire class based on these scores, centred about 3. You can also enter L, M or H in these columns which will be given scores of 1, 3 and 5 respectively. You can also enter "Yes" or "No" if you would like to use this column to indicate if the students are members of a group. Entering "Yes" (or "Y") gets a value of 5, while "No" or "N" gets a value of 1. If you leave a cell blank, Class Maker 2019 will assign a value of 3 to that cell.

Class Maker 2019 allows teachers to identify students who may be a member of a group who may need to be treated differently to the rest of the students. For instance, they may be on an accelerated program, or may require additional assistance (for example ESL/EAL). Class Maker 2019 allows teachers to easily identify in which classes these students were placed. The default descriptors are “Accelerated” and “ESL”, but these are easily changed in the Excel template by modifying cells **H1** and **I1**. To mark a student as belonging to either group, simply type “Yes” or “Y” in the student’s row Class Maker will note that accordingly. The demo file which comes with Class Maker 2019 shows an example of the correct format to use. If a student is not a member of either group, or you do not wish to use this feature, just leave the cell blank.

Column J – Essential friend or teacher

This column is used to force two students (or a student with a teacher) together into a particular class. Enter a student’s name in column J to keep the students together, or leave blank if there is no requirement. When the program runs, it will only produce solutions where these two students are together.

In the example above, “Frank Yak” has been identified as needing to be in the same class as “Samantha Butterfly”. Note that you do not need to put Samantha into Frank’s Essential friend area, one link is sufficient. If you need more than two friends together, you can “daisy chain” the friends. For instance, if you put, say, Lisa Lemur into Frank Yak’s “Essential Friends” column, the program will only output solutions where all 3 students are in the same class.

To place students with teachers, please follow these steps:

- Enter the student’s name (eg Andrew Aardvark) in the teacher’s “Essential” cell
- If you have another student who needs to be placed with the same teacher, enter their name into Andrew Aardvark’s “Essential” cell
- Continue to “daisy chain” the students together in this way until you have finished with all the students in Mr. A’s class
- If you have students who need to go in another teacher’s class (eg Ms. B), continue with the same pattern.

It is important you follow this pattern, as this will allow Class Maker to assign students correctly.

This feature should only be used for those situations where it is absolutely essential, as forcing too many students together can significantly reduce the number of solutions available for Class Maker to find! It will also significantly increase the time Class Maker will take to find a solution. Best practice is to have no more than about 10% of students with an Essential friend specified.

Columns K to O – Friend requests

This is where the student friend requests are placed. Up to **5** friends per student can be specified, but having less than 4 makes finding a solution far more difficult, especially if there are a lot of students in your class list. It will also increase the time taken to find a solution, and in extreme cases it may be impossible! If less than 5 friends are requested, please leave the other cells blank or fill with “0” (zero).

For new students, you can leave columns K to O blank. Class Maker will assign their own name into Column K, meaning that wherever they are placed they will have a friend (ie themselves).

Columns P to Q – Incompatible student pairs

This is where you can force students to be separated from each other in the classes. Names in these columns override any of the student's friend requests, and only needs to be in one of the incompatible students' area, not both. Use this option carefully, as forcing too many students apart from each other can lead to no solution being able to be found!

Like specifying Essential friends, this feature should only be used for those situations where it is absolutely essential, as forcing too many students apart can significantly reduce the number of solutions! It will also significantly increase the time Class Maker will take to find a solution. You should have no more than about 20% of students with Incompatible students specified. If you accidentally place a student in both the Essential column and the Incompatible column, Class Maker will alert you to this fact, otherwise the program will run forever and never come up with a solution!

Working with teachers in Class Maker

Teachers are treated slightly differently to students in Class Maker.

In Column A, you must enter the teachers' names in the same format as the students. If the students' names are in "Firstname Lastname" format, then the teachers' names must be entered as "Mr. A", "Ms B" etc. (without the "quotes"). If the students names are in "Lastname, Firstname" format, then the teachers' names are entered as "C, Miss" or "D, Mrs".

In Column C, enter the letter "T". You do not need to enter any other information about the teacher in columns B, or D to I.

To place students with teachers, please follow these steps:

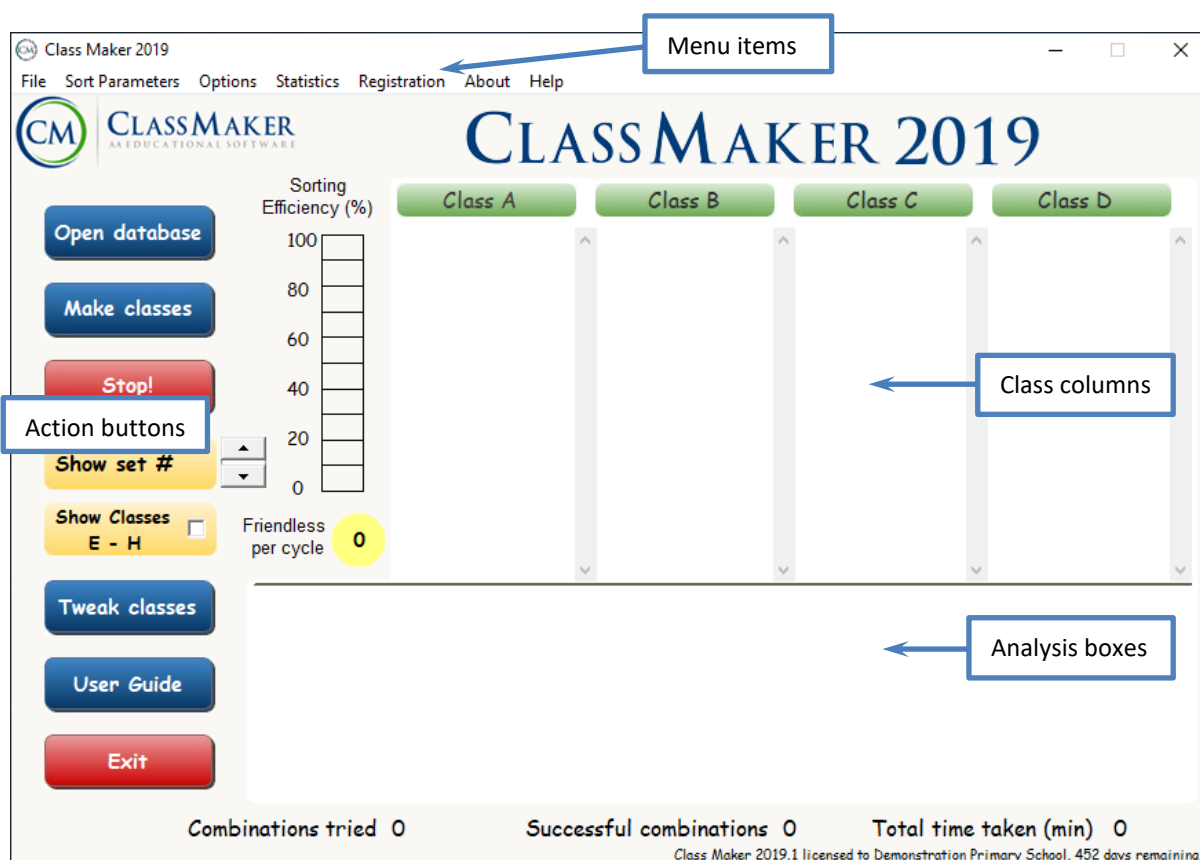
- Enter the student's name (eg Andrew Aardvark) in the teacher's "Essential" cell (Column J)
- If you have another student who needs to be placed with the same teacher, enter their name into Andrew Aardvark's "Essential" cell
- Continue to "daisy chain" the students together in this way until you have finished with all the students in Mr. A's class
- If you have students who need to go in another teacher's class (eg. Mrs. B), continue with the same pattern as above.

It is important you follow this pattern, as this will allow Class Maker to assign students correctly.

In order to separate a student from a particular teacher, simply place the teacher's name in either of the particular student's "Incompatible" columns (Column "P" or "Q").

Running Class Maker 2019

Once you have created your class database file, start the program. The first time you start the program you may need to run in Administrator mode. Right click the program and select “Run as Administrator”. The program will check for a valid licence file (ClassMaker-Licence.txt) which needs to be in the same folder as the program (usually “C:\Class Maker”). If there is a problem with the licence, an error message will appear and the program will default to the “demo” version. Contact the developers if you believe you have a valid licence file and the program is not recognising it properly. If a valid licence is found, the licence holder will appear in the bottom right corner of the main window.



Registration

The only way to register your copy of Class Maker is to save the licence file which has been sent to you by email onto your computer. The licence file is named “ClassMaker-Licence.txt”, and all you need to do is save this file to the “C:\Class Maker” directory (or the directory in which you installed Class Maker). If you have saved the registration file to your computer and Class Maker still starts in “Demo mode”, please contact us with details of any messages you receive and we will help you fix the problem.

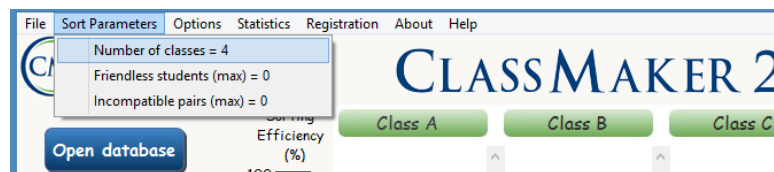
Open database file

To open your class database, click on the “Open database” button. A dialog box will open, showing valid Excel database files. Navigate to the directory containing your database file and either double click the file, or single click on the file and press “Open”. The program will then check the database file for errors. Class Maker check to see if all the student names in Columns K to O match exactly the list of names in Column A (which is assumed to be the correct spelling of the students names). If a student’s name is “misspelt” or is not present, a dialog box will appear providing information as to which student has errors in the Student database file. You will then need to edit the database file to make sure the spelling in the file is correct.

If the Excel database is correctly formatted, the program will perform a quick analysis of the data, giving the number of students read and the average gender balance of the group. This will help you ensure the database is complete and set limits for the gender balance of the final class sets.

Sort Parameters menu

Clicking on the “Sort Parameters” menu item brings up the box shown below.



Set number of classes

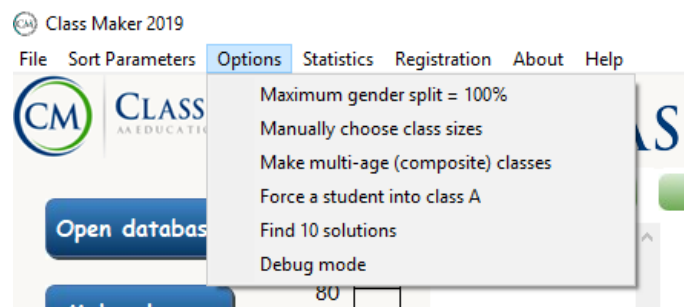
This area lets you choose the number of classes you want to place the students into. The “Standard” version of the program allows up to four classes, the “Extended” version allows up to nine. Click on the “Number of classes” area and a dialog box will appear, asking you to enter a number. The value you enter will now appear in the menu item, and the number of Class columns will change.

Set number of Friendless students or Incompatible pairs

It is also possible to allow the program to produce class sets with students which do not have a friend (Friendless students) or allow some incompatible student pairings (Incompatible pairs). Entering a number other than zero into these fields will produce these solutions. If Class Maker is having difficulty finding any solutions, this option is very useful to show you which student(s) Class Maker is having difficulty with finding friends for. Adding friends or removing names from the Essentials or Incompatibles areas of the database can usually fix these problems.

Options menu

Clicking on the “Options” menu button brings up the box shown below.



Here you can set the class gender ratio, change the number of solutions the program finds, manually choose the class size, force a particular student into Class A or make multi-age (composite) classes.

Set gender ratio limits

By default, the program will sort students into friendship groups, regardless of gender. This may lead to classes containing all boys or girls (ie 100% gender split). By clicking on the option button, it is possible to force the program to only accept a maximum gender split (say 75% of any one gender) in every class. However, setting a value too low may mean it is impossible to find a solution (for instance, if the gender ratio of the entire cohort is 75% girls, setting a value less than this would make it impossible to find a solution). Best practice is to set a value 5% greater than the cohort.

Manually choose class sizes

The “Manually Choose Class Sizes” option allows you to, well, manually choose the class size. First tell the program how many classes you require using the “Sort parameters” menu item. Next, press the “Manually Choose Class Sizes” button to bring up a series of input boxes into which you enter the class sizes. The class size numbers will then appear in the Class column headings.

Multi-age (Composite) class creation

If you need to make multi-age (composite) classes, the program will use the values in column C of the student information file spreadsheet. You can make classes with 2 or 3 different year levels using Class Maker. After you press the “Make Composite classes” button, follow the prompts to set up your classes. If you are making classes with two age levels, Class Maker will ask you to choose between entering the student numbers for each class manually, or setting the maximum age ratio in each class. If you want to set the numbers manually, Class Maker will go through the classes one by one until all the students numbers are assigned to a particular class. If you would prefer to set the maximum age ratio, you can enter a value of (say) 70% of a particular year level in each class.

For composites containing three age levels, you need to set the age split manually for each class. For example, let’s say class A contains 10 year 3’s and 6 year 4’s, while class B contains 6 year 3’s, 6 year 4’s and 6 year 5’s, and so on. If you make a mistake entering the class numbers (for multi-age composites containing two or three year levels) or the year level ratio (for multi-age classes containing two year levels), just hit the “Cancel” button and start again. If you want to try a different class ratio or number, simply click on the “Composites” button (which turns the option off), then click on it again to restart the process.

If instead you would like to make (say) three 3 straight Year 3 classes, three straight Year 4 classes and a single 3/4 composite, it will be far quicker to make these classes in two separate sorts using the “Manually Choose Class Size” option. Set Class A in each year level to have (say) 10 students, and Classes B to D to contain 20 students each. After running Class Maker to generate the lists, you can then manually combine both smaller Class A sets to give you the multi-age composite you require.

Force student into Class “A”

If a particular student (or group of students) needs to be placed in a particular class, then use “Force student into Class A” option. This may be used if a particular student needs to be placed in a small class size for instance. This option will significantly increase the time taken to find a solution.

Number of solutions required

The program will continue searching for solutions until it reaches the value shown in the “Find XX solutions” area. You can choose a value from 1 to 30 solutions until the program stops, by clicking on this menu item button.

Debug mode

The Debug mode shows some more information if Class Maker 2019 is finding it hard to find a solution. You shouldn't need to use this feature unless requested by the developers.

Make your classes

Once you are happy with the database and all the options, press the “Make Classes” button. The program will start rearranging the student list and place the students into classes. After each combination is created, the “Combinations tried” value will increase, each successful combination will increase the number next to the “Successful combinations” box. After each successful combination, the student lists will appear in the Class columns.

If you believe you have enough combinations, or you don't believe the program is working properly, pressing the “Stop” button will stop the program searching. You can then change some of the parameters and start again, or view the solutions the program has found. If you have specified a large number of requirements, the program could take some time to come up with a solution. Particularly difficult class sets with a number of essential groups, student placements and incompatible students can take a long time to find a single solution. If it still can't find a solution, re-check your student database file to make sure you haven't accidentally got a student which you are forcing to both be with and without another student. Increasing the “Number of friendless students” or “Incompatible students” can help here.

Once the program has found the required number of solutions, the screen will look something like the figure below.

Class Maker 2019 - Year 1 2019 classlist demo

File Sort Parameters Options Statistics Registration About Help

CLASSMAKER 2019

Sorting Efficiency 99%

Class A (21) Class B (21) Class C (21) Class D (21)

Open database
Make classes
Stop!
Show set # 10
Show Classes E - H
Tweak classes
User Guide
Exit

Friendless per cycle 0

Sean Alligator	Sophie Buffalo	Houben Ant	Daisy Aardvark
Sophie Butterfly	Campbell Camel	Duck Buffalo	Alina Antelope
Emily Cat	Zara Cheetah	Kingston Crab	Ben Bat
Cleo Dinosaur	Deshitha Dog	Archer Emu	Kate Cat
Sai Dolphin	Andreas Elephant	Alexandra Falcon	Eva Duck
Genevieve Giraffe	Oscar Fowl	Joseph Hamster	Chloe Eagle
Jules Hippo	Laura Frog	Alexia Ibis	Jack Echidna
Giorgia Horse	Mia Gnu	Crystal Koala	Juliet Fox
Charlotte Iguana	Jock Goat	Ruby Monkey	Maeve Gorilla
Maria Kiwi	Samantha Hedgehog	Billie Newt	Leroy Impala
Evan Moth	Alissa Horse	Ahana Octopus	Arrhav Jellyfish
Liam Owl	Simon Jackal	Alfie Otter	Quinten Lemur
Isabella Possum	Seamus Jaguar	Max Peacock	Charlie Leopard
Ashwin Quokka	Penny Kangaroo	Eliza Quail	Benjamin Llama
Maddison Rabbit	Dominic Lion	Amelia Quoll	Andrew Mongoose
Xavier Raccoon	Mia Ostrich	Ross Snail	Vihaan Mouse
Jessie Snake	River Reindeer	Lachlan Tang	Leia Numbat
James Turtle	Kelly Seal	Akshaya Tiger	Christina Penguin

Female %	52.4 %	47.6 %	52.4 %	52.4 %
Numeracy	3.71 - (1 3 3 8 6)	3.19 - (5 1 7 1 7)	3.04 - (5 3 4 4 5)	2.61 - (8 2 3 6 2)
Literacy	2.80 - (3 6 7 2 3)	3.28 - (2 5 5 3 6)	3.33 - (3 2 6 5 5)	3.14 - (5 2 5 3 6)
Behaviour	3.00 - (3 2 9 6 1)	2.52 - (3 8 6 4 0)	3.19 - (5 1 4 7 4)	3.57 - (1 2 8 4 6)
Participation	3.61 - (1 5 2 6 7)	2.57 - (6 6 4 1 4)	3.09 - (5 5 2 1 8)	2.80 - (3 6 6 4 2)
# friendless	0	0	0	0
# incompatible	0	0	0	0
Previous classes	A3 B5 D7 RA6	A4 B8 D4 RA5	A7 B3 D4 RA7	A7 B5 D6 RA3

Combinations tried 11695 Successful combinations 10 Total time taken (sec) 2.32

Class Maker 2019.1 licensed to Demonstration Primary School, 452 days remaining.

The sorted classes are shown in the Class Columns areas. Note the Class Column titles show the number of students in each column. The names are sorted alphabetically according to surname. The values in the Analysis Boxes at the bottom show the gender ratio, the average numeracy, literacy, behaviour and participation scores, as well as the number of friendless students and incompatible matches. The average scores are calculated from the data in columns D to G in the student data file, and the numbers (in brackets) after the averages are the number of the actual student scores from lowest to highest (ie 1 to 5, L to H, or E to A). A score of 3 represents a good mixture of student abilities. Of course, the averages will be affected by the overall ability scores of the entire group. To find out what the overall averages are, you can press the "Statistics" menu item button. For this data set, the statistics are shown below.

Class Maker

Database is 51.2 % female.

Average Numeracy score is 3.14.

Average Literacy score is 3.14.

Average Behaviour score is 3.07.

Average Participation score is 3.02.

OK

The class set shown when the program finished sorting is the last successful combination found, in this case combination 10. You can look at other class sets by pressing the up and down arrows next to “Show class set #” button. The Class Columns and Analysis Boxes will update accordingly.

For this sort, the multi-age option was set to “Off”, so instead Class Maker shows the previous class makeup for the students. The students from this data set came from 4 classes (labelled 1A to 1RA) in column 3 of the student database file. This row now shows how many students came from each previous class, so you can see the student dispersion easily. In the case above, the new year 2A class consists of three students from 1A, five students from 1B, seven students from 1D and six students from 1RA. Similarly, the new year 2B class has four from 1A, eight from 1B, four from 1D and five from 1RA.

If the multi-age option is switched on to make multi-age composites with two age groups and a maximum age level of (say) 75%, Class Maker will re-sort the classes and display new classes with the lowest year level ratio shown as a percentage of the class. For multi-age classes containing two or three age levels where you sorted the student numbers manually, the row displays the actual class numbers (eg 10/11, or 6/8/7).

If you purchased the “Extended” version of Class Maker, you will also see the “Show Class E – H” button on the screen. Unsurprisingly, pressing this button will show classes 5 to 8 (if you requested them). They will display on the same screen with updated labels and statistics.

Sorting Efficiency

Class Maker 2019 has a “Sorting Efficiency” graph and a circle showing the number of “Friendless (students) per cycle” value. This gives you some real time feedback on how the sorting process is going. The value shown in the graph is related to the number of Essential and Incompatible students present in the data file. The higher the levels of both types, the lower the sorting efficiency will be and the longer Class Maker will take to find the required number of solutions. You should try to keep the number of Essential and Incompatible students below around 10% and 20% of the total student numbers respectively, especially if your student numbers are above 100. If you have inadvertently linked a student as “Essential” to one student, who is incompatible with a second, who happens to be also essential to the first, the sorting efficiency will show as 0% and after a time Class Maker will alert you to this fact and ask you to check your data file.

The sorting efficiency value can also drop if you have manually set the Gender Ratio to be too low. It is good practice to set a value about 5% above the population value, for example if the cohort has a gender ratio of 55% females, then setting a value of 60% for the maximum gender ratio per class is a sensible level. Setting a level of 56% for the maximum ratio will be extremely unlikely to be met.

Friendless per cycle

If the sorting efficiency is high and Class Maker is still not finding any solutions, it may indicate that there are a large number of students who do not have 4 or 5 friends specified. If this is the case, then a high number will show up on the “Friendless per cycle” area. Some tips for using the number in the “Friendless per cycle” area are:

- If the value in the number of “Friendless per cycle” is over 10, it indicates that you do not have enough friends per student. You should try to add more friends (the more the better),

especially for those students who only have 1 or 2 friends identified. You should also reduce the number of “Essential” and “Incompatible” students you have specified.

- If the value is around 3 to 8 consistently, you should still try to add more friends to the database if possible, however you could also try setting a low value for the “Number of Friendless” or “Incompatible pairs” under the “Sort Parameter” menu. Start with a value of 2 or 3 students initially, and see if Class Maker can find some solutions that you can tweak manually later.
- If the value shown is consistently 1 or 2, it may indicate that there is a situation where you are trying to force one student both **with** a particular group and forcing them **away** from the same group. Again, try allowing 1 friendless student or 1 incompatible pairing (in the Sort Parameters menu) and see if one particular student comes up consistently friendless or incompatible.

You should try to give every student a choice of 5 friends if possible. You could also try increasing the number of “Friendless” students in the Sort Parameters menu and tweak manually.

Tweaking Class Sets

Class Maker is designed to give you class sets which match your specific criteria, however it also allows you to alter the solutions it finds so you can fine tune your classes. If you find a solution using the up and down arrows which is almost what you want, but you think there may be a better solution, pressing the “Tweak Classes” button will bring up the current class set in a new window shown below. Note that all the students’ names are shown in black (this is a valid class set), the file name and sorting parameters are shown in the window title and that the statistics are all shown under the class lists for the list shown earlier.

Year 1 2019 classlist demo, gender ratio = 55%, friendless = 0, incompatibles = 0



Save Classes

Re-start

Print

Cancel

Friendless student

Incompatible in class

Friendless+incompatible

No essential match

Accelerated

ESL

Show Friends

School leavers

	Class A (21)	Class B (21)	Class C (21)	Class D (21)
Sean Alligator	Sophie Buffalo	Houben Ant	Daisy Aardvark	
Sophie Butterfly	Campbell Camel	Duck Buffalo	Alina Antelope	
Emily Cat	Zara Cheetah	Kingston Crab	Ben Bat	
Cleo Dinosaur	Deshitha Dog	Archer Emu	Kate Cat	
Sai Dolphin	Andreas Elephant	Alexandra Falcon	Eva Duck	
Genevieve Giraffe	Oscar Fowl	Joseph Hamster	Chloe Eagle	
Jules Hippo	Laura Frog	Alexia Ibis	Jack Echidna	
Giorgia Horse	Mia Gnu	Crystal Koala	Juliet Fox	
Charlotte Iguana	Jock Goat	Ruby Monkey	Maeve Gorilla	
Maria Kiwi	Samantha Hedgehog	Billie Newt	Leroy Impala	
Evan Moth	Alissa Horse	Ahana Octopus	Arrhav Jellyfish	
Liam Owl	Simon Jackal	Alfie Otter	Quinten Lemur	
Isabella Possum	Seamus Jaguar	Max Peacock	Charlie Leopard	
Ashwin Quokka	Penny Kangaroo	Eliza Quail	Benjamin Llama	
Maddison Rabbit	Dominic Lion	Amelia Quoll	Andrew Mongoose	
Xavier Raccoon	Mia Ostrich	Ross Snail	Vihaan Mouse	
Jessie Snake	River Reindeer	Lachlan Tang	Leia Numbat	
James Turtle	Kelly Seal	Akshaya Tiger	Christina Penguin	
Zoe Velociraptor	Michael Vulture	Sarina Tortoise	Siddhi Puma	
Perry Wallaby	Austin Walrus	Matilda Wildebeast	James Sheep	
Frank Yak	Tom Wombat	Zoe Zebra	Imogen Unicorn	

	Class A (21)	Class B (21)	Class C (21)	Class D (21)
Female %	52.4 %	47.6 %	52.4 %	52.4 %
Numeracy	3.71 - (1 3 3 8 6)	3.19 - (5 1 7 1 7)	3.04 - (5 3 4 4 5)	2.61 - (8 2 3 6 2)
Literacy	2.80 - (3 6 7 2 3)	3.28 - (2 5 5 3 6)	3.33 - (3 2 6 5 5)	3.14 - (5 2 5 3 6)
Behaviour	3.00 - (3 2 9 6 1)	2.52 - (3 8 6 4 0)	3.19 - (5 1 4 7 4)	3.57 - (1 2 8 4 6)
Participation	3.61 - (15 2 6 7)	2.57 - (6 6 4 1 4)	3.09 - (5 5 2 1 8)	2.80 - (3 6 6 4 2)
# friendless	0	0	0	0
# incompatible	0	0	0	0
Previous classes	A3 B5 D7 RA6	A4 B8 D4 RA5	A7 B3 D4 RA7	A7 B5 D6 RA3

The class lists can be changed using a familiar “Drag and Drop” technique. Simply click on the student you wish to move, drag them across the page, and drop them onto the class you would like to place them in. The class statistics will instantly update, as will the colours of the students’ names. If you placed the student in a class where they no longer have a friend, their name will turn red (friendless student). If you put them in a class where they have an incompatible student pairing, that name will turn blue. If they have both their name will turn pink, and if any student had an “Essential” pairing which is no longer met, their name will turn orange. An example of this is shown below.

Year 1 2019 classlist demo, gender ratio = 55%, friendless = 0, incompatibles = 0

Class A (20)	Class B (21)	Class C (21)	Class D (21)
Sean Alligator Sophie Butterfly Cleo Dinosaur Sai Dolphin Genevieve Giraffe Jules Hippo Giorgia Horse Charlotte Iguana Maria Kiwi Evan Moth Liam Owl Isabella Possum Ashwin Quokka Maddison Rabbit Xavier Raccoon Jessie Snake James Turtle Imogen Unicorn Zoe Velociraptor Perry Wallaby	Sophie Buffalo Campbell Camel Zara Cheetah Deshitha Dog Andreas Elephant Oscar Fowl Laura Frog Mia Gnu Jock Goat Samantha Hedgehog Alissa Horse Simon Jackal Seamus Jaguar Penny Kangaroo Dominic Lion Mia Ostrich River Reindeer Kelly Seal Michael Vulture Austin Walrus Frank Yak	Houben Ant Duck Buffalo Kingston Crab Archer Emu Alexandra Falcon Joseph Hamster Alexia Ibis Crystal Koala Ruby Monkey Billie Newt Ahana Octopus Alfie Otter Max Peacock Eliza Quail Amelia Quoll Ross Snail Lachlan Tang Akshaya Tiger Sarina Tortoise Matilda Wildebeast Zoe Zebra	Daisy Aardvark Alina Antelope Ben Bat Emily Cat Kate Cat Eva Duck Chloe Eagle Jack Echidna Juliet Fox Maeve Gorilla Leroy Impala Arrhav Jellyfish Quinten Lemur Charlie Leopard Benjamin Llama Andrew Mongoose Vihaan Mouse Leia Numbat Christina Penguin Siddhi Puma James Sheep

Save Classes
 Re-start
 Print
 Cancel
 Friendless student
 Incompatible in class
 Friendless+incompatible
 No essential match
 Accelerated
 ESL
 Show Friends
 School leavers
 Tom Wombat

Under the Action buttons there is a box marked “School leavers”, where you can place student(s) who will not be continuing at the school next year, but who were originally sorted with the class list. Dragging the student(s) name to this box will update the class lists, showing anyone who is now without a friend due to the student leaving and updating the gender ratio and average ability levels for the class.

Above the “School leavers” box are some additional check boxes, where you can show the students who belong to particular groups identified in Columns H and I of the Excel template file. Checking either of these boxes highlights the student in **bold** (see below for an example). This feature can help ensure that members of either group are equally spread across the class lists or not.

Year 1 2019 classlist demo, gender ratio = 55%, friendless = 0, incompatibles = 0

Class A (20)	Class B (21)	Class C (21)	Class D (21)
Sean Alligator Sophie Butterfly Cleo Dinosaur Sai Dolphin Genevieve Giraffe Jules Hippo Giorgia Horse Charlotte Iguana Maria Kiwi Evan Moth Liam Owl Isabella Possum Ashwin Quokka Maddison Rabbit Xavier Raccoon Jessie Snake James Turtle Imogen Unicorn Zoe Velociraptor Perry Wallaby	Sophie Buffalo Campbell Camel Zara Cheetah Deshitha Dog Andreas Elephant Oscar Fowl Laura Frog Mia Gnu Jock Goat Samantha Hedgehog Alissa Horse Simon Jackal Seamus Jaguar Penny Kangaroo Dominic Lion Mia Ostrich River Reindeer Kelly Seal Michael Vulture Austin Walrus Frank Yak	Houben Ant Duck Buffalo Kingston Crab Archer Emu Alexandra Falcon Joseph Hamster Alexia Ibis Crystal Koala Ruby Monkey Billie Newt Ahana Octopus Alfie Otter Max Peacock Eliza Quail Amelia Quoll Ross Snail Lachlan Tang Akshaya Tiger Sarina Tortoise Matilda Wildebeast Zoe Zebra	Daisy Aardvark Alina Antelope Ben Bat Emily Cat Kate Cat Eva Duck Chloe Eagle Jack Echidna Juliet Fox Maeve Gorilla Leroy Impala Arrhav Jellyfish Quinten Lemur Charlie Leopard Benjamin Llama Andrew Mongoose Vihaan Mouse Leia Numbat Christina Penguin Siddhi Puma James Sheep

Save Classes
 Re-start
 Print
 Cancel
 Friendless student
 Incompatible in class
 Friendless+incompatible
 No essential match
 Accelerated
 ESL
 Show Friends

The last box is the “Show Friends” check box. This will show the friends of the students to assist placing them into a new class without having to go back to the student database file every time. Ticking this box and then hovering the mouse over a student’s name shows the friends of that particular student in a small yellow box, and highlights the friends in bold in the main window (see below). Right clicking the mouse while hovering over the student name shows any Essential or Incompatible students of that student in the yellow box, although you may to right-click 2 or 3 times.

Year 1 2019 classlist demo, gender ratio = 55%, friendless = 0, incompatibles = 0

	Class A (20)	Class B (21)	Class C (21)	Class D (21)
	Sean Alligator	Sophie Buffalo	Houben Ant	Daisy Aardvark
	Sophie Butterfly	Campbell Camel	Duck Buffalo	Alina Antelope
	Cleo Dinosaur	Zara Cheetah	Kingston Crab	Ben Bat
	Sai Dolphin	Deshitha Dog	Archer Emu	Emily Cat
	Genevieve Giraffe	Andreas Elephant	Alexandra Falcon	Kate Cat
	Jules Hippo	Oscar Fowl	Joseph Hamster	Eva Duck
	Giorgia Horse	Laura Frog	Alexia Ibis	Chloe Eagle
	Charlotte Iguana	Mia Gnu	Crystal Koala	Jack Echidna
	Maria Kiwi	Jock Goat	Ruby Monkey	Juliet Fox
	Evan Moth	Samantha Hedgehog	Billie Newt	Maeve Gorilla
	Liam Owl	Alissa Horse	Ahana Octopus	Leroy Impala
	Isabella Possum	Simon Jackal	Alfie Otter	Arrhav Jellyfish
	Ashwin Quokka	Seamus Jaguar	Max Peacock	Quinten Lemur
	Maddison Rabbit	Penny Kangaroo	Eliza Quail	Charlie Leopard
	Xavier Raccoon	Dominic Lion	Amelia Quoll	Benjamin Llama
	Jessie Snake	Mia Ostrich	Ross Snail	Andrew Mongoose
	James Turtle	River Reindeer	Lachlan Tang	Vihaan Mouse
	Imogen Unicorn	Kelly Seal	Akshaya Tiger	Leia Numbat
	Zoe Velociraptor	Michael Vulture	Sarina Tortoise	Christina Penguin
	Perry Wallaby	Austin Walrus	Matilda Wildebeast	Siddhi Puma
		Frank Yak	Zoe Zebra	James Sheep

Austin Walrus's friends are Alina Antelope, Kelly Seal, Giorgia Horse, Lachlan Tang,

If you decide you would like to save the new “tweaked” class list, simply press the “Save Classes” button to save the data to file. The next section has a description of the two save formats. Alternatively, you might like to print the data out so pressing the “Print” button will print out a low resolution copy of the page for later use. If you decide you’ve made too many changes and it’s too hard to go back manually, the “Re-start” button will let you start again. Pressing “Cancel” will bring you back to main page. **Note that any changes you make here will not change the class lists stored in the main page, so you must remember to save or print any of your tweaked data sets.**

Manually Sorting Classes

Class Maker also gives you the option to create your classes manually, bypassing the automatic sort processes completely but still allowing you to monitor friend requests, Incompatible student pairs and Essential student pairs. You can manually sort the classes by pressing the “Tweak Classes” button after opening your student database file.

Class Maker will then create a single class set and display the student names in the “Tweak Classes” window, which will allow you move the students between classes while the program tracks the number of friendless students, incompatible and essential pairs for you.

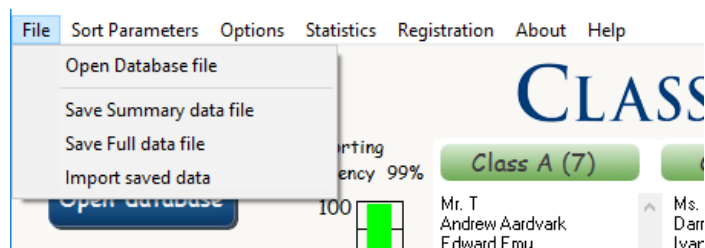
Saving Class Sets

While it might be nice to view the class sets in the program, in order to be useful you need to be able to save the data to file. You can save the class sets generated by Class Maker in 2 ways:

- “Summary” Data format, containing just the student names in the sorted class lists. This format is useful for the final Class Set.
- “Full” Data format, containing all the student data in the sorted class lists. This format is useful for sharing amongst other school staff and later editing or fine tuning prior to final approval.

Both file formats can be imported back into Class Maker for further fine tuning, however data saved in “Full” Data format is easier to import later.

Class Maker outputs the class sets in .csv (comma separated variable) format which can be opened in Excel. Use the “File” menu button to bring up the menu items shown below.



Pressing the button for the data type you require (Summary or Full) brings up a box where you can type in the filename and directory for your sorted class sets. After the file is saved, double clicking the file in Explorer will open Excel and the data file.

The Summary data file looks like the figure below, where the widths of columns A, B and C have been increased to view the entire student names. This format should be used for the final Class Set.

	A	B	C	D	E	F	G	H	I
1	Summary file for Year 1 2019 classlist demo, 10 class sets, 4 classes, no teachers.								
2	Class Set 1, 0 students with no friends, 0 incompatible student pairs.								
3	Class A, 47.6 % female, average Numeracy = 3.28 - (4 1 7 3 6), average Literacy = 2.95 - (5 2 6 5 3), average Behaviour = 2.80 - (6 2 6 4 3), average Participation = 2.95 - (3 7 4 2 5)								
4	Class B, 52.4 % female, average Numeracy = 3.14 - (5 3 2 6 5), average Literacy = 3.71 - (2 3 4 2 10), average Behaviour = 3.14 - (4 3 4 6 4), average Participation = 2.95 - (5 4 3 7 1)								
5	Class C, 52.4 % female, average Numeracy = 2.85 - (5 4 4 5 3), average Literacy = 3.33 - (1 4 7 5 4), average Behaviour = 2.95 - (2 6 5 7 1), average Participation = 2.85 - (6 5 2 4 3)								
6	Class D, 52.4 % female, average Numeracy = 3.28 - (5 1 4 5 6), average Literacy = 2.57 - (5 6 6 1 3), average Behaviour = 3.38 - (0 2 12 4 3), average Participation = 3.33 - (1 6 5 2 4)								
7	Class A (21)	Class B (21)	Class C (21)	Class D (21)					
8	Daisy Aardvark	Duck Buffalo	Sophie Buffalo	Sean Alligator					
9	Campbell Camel	Sophie Butterfly	Kate Cat	Houben Ant					
10	Andreas Elephant	Emily Cat	Kingston Crab	Alina Antelope					
11	Laura Frog	Zara Cheetah	Cleo Dinosaur	Ben Bat					
12	Genevieve Giraffe	Eva Duck	Deshitha Dog	Alexandra Falcon					
13	Jules Hippo	Jack Echidna	Sai Dolphin	Maeve Gorilla					
14	Alissa Horse	Oscar Fowl	Chloe Eagle	Giorgia Horse					
15	Charlotte Iguana	Mia Gnu	Archer Emu	Arrhav Jellyfish					
16	Seamus Jaguar	Samantha Hedgehog	Juliet Fox	Maria Kiwi					
17	Andrew Mongoose	Leroy Impala	Jock Goat	Crystal Koala					
18	Ruby Monkey	Evan Moth	Joseph Hamster	Quinten Lemur					
19	Mia Ostrich	Billie Newt	Alexia Ibis	Charlie Leopard					
20	Alfie Otter	Ahana Octopus	Simon Jackal	Dominic Lion					
21	Ashwin Quokka	Eliza Quail	Penny Kangaroo	Benjamin Llama					
22	Maddison Rabbit	Amelia Quoll	Vihaan Mouse	Max Peacock					
23	River Reindeer	Xavier Raccoon	Leia Numbat	Christina Penguin					
24	Jessie Snake	James Sheep	Liam Owl	Isabella Possum					
25	James Turtle	Lachlan Tang	Siddhi Puma	Kelly Seal					
26	Michael Vulture	Akshaya Tiger	Ross Snail	Zoe Velociraptor					
27	Matilda Wildebeast	Imogen Unicorn	Sarina Tortoise	Austin Walrus					
28	Tom Wombat	Frank Yak	Perry Wallaby	Zoe Zebra					
29									

- Line 1 gives description of the type of data and the filename used (“Year 1 2019 classlist demo”), the number of solutions found (10) and the number of classes in each (4).
- Line 2 shows the class set number (1), and a summary of friendless student numbers.
- Lines 3 to 6 show the averages for each class, which you can use to choose the best set from the options available.
- Lines 7 to 28 show the class lists. You can copy and paste these cells to any other program you like, eg into a table in Word, or keep the data in Excel format.
- Line 29 is a line space used to separate different class sets from each other.
- Line 30 is the same as line 2, only for class set 2. The cycle then repeats for all class sets.

The “Full” Data format looks like the figure below, and shows all the data entered into the student database file for each student sorted into the class sets. Use this data format for sharing classes with colleagues for later editing and fine tuning of the class lists.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Full data file for Year 1 2019 classlist demo, 10 class sets, 4 classes, no teachers.															
2	Student Name	Gender	Year Level	Numeracy	Literacy	Behaviour	Participat	Accelerate	ESL	Essential Friend	Friend 1	Friend 2	Friend 3	Friend 4	Friend 5	Incompati
3	Class Set 1, 0 students with no friends, 0 incompatible student pairs.															
4	Class A (21), 47.6 % female, average Numeracy = 3.28 - (4 1 7 3 6), average Literacy = 2.95 - (5 2 6 5 3), average Behaviour = 2.80 - (6 2 6 4 3), average Participation = 2.95 - (3 7 4 2 5), Missing Friends = 0 (),															
5	Daisy Aardvark	F	1RA	E	C	3	3	Yes			Maeve Gorilla	Penny Kangaroo	Leia Numbat	Charlotte Iguana		
6	Campbell Camel	M	1B	A	E	2	1				River Reindeer	Andrew Mongoose	Quinten Lemur	Isabella Possum		
7	Andreas Elephant	M	1B	C	B	3	1				Charlie Leopard	Dominic Lion	Frank Yak	Seamus Jaguar		
8	Laura Frog	F	1B	C	B	3	2				Imogen Unicorn	Mia Ostrich	Daisy Aardvark	Penny Kangaroo		
9	Genevieve Giraffe	F	1RA	C	B	1	5				Zoe Velociraptor	Imogen Unicorn	Laura Frog	Charlotte Iguana		
10	Jules Hippo	M	1D	B	D	3	4				Andrew Mongoose	Quinten Lemur	Campbell Camel	James Turtle		
11	Alissa Horse	F	1A	C	A	1	3				Matilda Wildebeast	Sophie Buffalo	Ruby Monkey	Maeve Gorilla		Giorgia Horse
12	Charlotte Iguana	F	1A	D	B	2	5			James Turtle	Ashwin Quokka	Penny Kangaroo	James Turtle	Sophie Butterfly		
13	Seamus Jaguar	M	1B	A	A	3	2				Oscar Fowl	Tom Wombat	Cleo Dinosaur	Billie Newt		Max Peacock
14	Andrew Mongoose	M	1A	A	E	3	2	Yes			James Turtle	Campbell Camel	Quinten Lemur	Jules Hippo		
15	Ruby Monkey	F	1A	E	C	5	2				Matilda Wildebeast	Mia Gnu	Alexandra Falcon	Isabella Possum		Sophie Buffalo
16	Mia Ostrich	F	1RA	C	A	4	2				Penny Kangaroo	Imogen Unicorn	Laura Frog	Charlotte Iguana		
17	Alfie Otter	M	1D	A	B	5	5		Yes		Tom Wombat	Evan Moth	Alexandra Falcon	Jock Goat		
18	Ashwin Quokka	M	1A	B	D	5	2				Mia Ostrich	Charlotte Iguana	Campbell Camel	Quinten Lemur		
19	Maddison Rabbit	F	1B	E	C	1	5		Yes		Mia Ostrich	Charlotte Iguana	Imogen Unicorn	Genevieve Giraffe		
20	River Reindeer	M	1D	C	E	4	3				Jock Goat	Campbell Camel	Ben Bat	Perry Wallaby		
21	Jessie Snake	F	1RA	B	C	4	4				Penny Kangaroo	Daisy Aardvark	James Turtle	Mia Ostrich		
22	James Turtle	M	1D	A	E	4	2				Perry Wallaby	Campbell Camel	Andrew Mongoose	Jules Hippo		
23	Michael Vulture	M	1A	E	C	1	3				Jock Goat	River Reindeer	Ben Bat	Sean Alligator		
24	Matilda Wildebeast	F	1RA	C	E	1	5				Ruby Monkey	Eliza Quail	Cleo Dinosaur	Billie Newt		Emily Cat
25	Tom Wombat	M	1RA	A	C	1	1				Oscar Fowl	Seamus Jaguar	James Turtle	Jules Hippo		
26																
27	Class B (21), 52.4 % female, average Numeracy = 3.14 - (5 3 2 6 5), average Literacy = 3.71 - (2 3 4 2 10), average Behaviour = 3.14 - (4 3 4 6 4), average Participation = 2.95 - (5 4 3 7 1), Missing friends = 0 (),															
28	Duck Buffalo	M	1RA	E	C	1	5				Oscar Fowl	Mia Gnu	Billie Newt	Max Peacock		
29	Sophie Butterfly	F	1D	B	C	4	5			Frank Yak	Charlotte Iguana	Archer Emu	Imogen Unicorn	Mia Ostrich		Campbell Cam

Importing Class Sets

To import previously saved “Full” and “Summary” Data files so you can view the class lists or tweak them a little more, perform the following steps:

For files saved in “Full” Data format

1. Press “Import Saved Data” from the “File” menu
2. Click and open the saved class data file, this must be in csv format, not an Excel file

For files saved in “Summary” Data format

1. Open the student database file (the Excel file, not the saved class set file) as if you were going to make a new class set
2. Press “Import Saved Data” from the “File” menu
3. Click and open the saved class data file, this must be in csv format, not an Excel file

As you can see, importing the data in the “Full” Data format is easier than for the data saved in “Summary” Data format. You should now be able to tweak the saved class lists as before.

IMPORTANT:

In order to be able to import these data files for re-tweaking, it is important that the files are not changed in any way. Class Maker requires the files be in exactly the format it wrote them in, and if they are edited it may not be able to read them back again. If you do want to save a copy of the Summary or Tweaked data files, please make a copy and save them using a different file name and/or format.

Final thoughts

Hopefully this guide has helped you create your own sorted class lists. If not, or if you have any suggestions, bug fixes or improvements you would like to see, please contact the developers of the program and we’ll see if we can help solve your problems. The schools who used the program previously suggested many of the options available in Class Maker, if there is a specific feature you would like to see incorporated into future versions, please let us know.

When there are a large number of students in a class set, Class Maker can take a long time to find a valid solution. To understand why, consider that the total number of unique class sets that can be made by placing 100 students into 4 classes is $\frac{100!}{25!25!25!25!4!}$, which in numerical terms is 6.71753 x 10⁵⁵ (or 67,175,312,842,324,100,000,000,000,000,000,000,000,000,000,000,000,000,000,000) possible different combinations! (Sorting 150 students into 6 classes gives 5.6975 x 10¹⁰⁸ possible combinations). It therefore may be helpful to start the program allowing a few Friendless students and Incompatible pairings to help Class Maker reduce this total number to manageable levels.

If you have found the program useful, please tell your friends and colleagues about your experience!

Thanks.

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