TEACHER’S PET

Quick Start

Front Edge Software Pty Ltd

https://www.teacherspet.net.au
WHAT IS TEACHER’S PET

Teacher’s Pet (https://www.teacherspet.net.au) has an innovative mathematical algorithm that helps teachers to create class lists which keeps friends together, and meanwhile cater for any number of other requirements.

The need

The development of friendships is important in the lives of school-age children. This is crucial to their mental and social development. Social skills such as communication, problem-solving, and cooperation are enhanced by having friends in their classes. Another benefit of having friends is that school becomes more enjoyable.

Apart from friendship, schools usually have an array of other requirements on their new classes, such as gender balance, academic levels, behavior, faith, sports, secondary languages, special needs, keeping certain students apart or together, etc.

The problem

How to keep friends together, and meanwhile cater for an array of other requirements, when teachers reshuffle classes for the next school year?

It is impossible for the human brain to remember the desired friends of each of the sometimes hundreds of students in the grade, let alone working out the best class combinations. Schools resort to all sorts of primitive measures such as colored paper cards or Excel cells. It is usually one of the most frustrating and time consuming tasks in a year, yet many students are still left friendless in the new class, feeling anxious to go into the next school year. Principals often receive complaints from parents.

Due to the sheer complexities and difficulties, lots of schools around the world don’t even take friends into consideration. Some schools divide students into trios, and when they reshuffle the classes every year, they never break up the trios. But this is not an ideal solution, because often the trio are no longer friends.

The solution

Now, with Teacher’s Pet, a single teacher is able to finish the class allocation of hundreds of students, catering for friend requests and an array of other requirements at the same time, in a few mouse clicks. Each student has at least one and on average three or four friends in the new class. This results in happier students and better learning.

We are not there to compete with or replace your existing school management or timetabling system. Instead it is a supplement. Those can do many things, we can do only one, which none of them can do.

Teacher’s Pet has an intuitive user interface which allows teachers to visualize the class allocation result instantly – for example, see how many friends each student has in the new class.
The sample data files

You can download the sample data files from our Help page, then use it to go through this Quick Start. You can finish the end-to-end process to create your class lists in 30 minutes to 1 hour. After that you will have full confidence in the intelligence of our algorithm and the easy to use Teacher’s Pet.

THE WHOLE CLASS-ALLOCATION PROCESS

The whole class allocation process consists of three simple steps:

Step 1: Pick the requirements
On your class lists

Step 2: Import student data

Step 3: Allocate classes

Step 1: pick the class allocation requirements

Right after you login as a teacher, you are the step-1 page. Check the checkboxes of those requirements that you want to use to affect the created class lists, and leave unchecked those that you think is irrelevant to your school.

Then enter the names of the classes into which you want to allocate your students.

You need to select the requirements and add the classes as the figure below if you want to use the sample data that you downloaded from our Help page:
Teacher's Pet supports any complex class-allocation requirements. Just for an extreme example, a teacher wants to have all students studying French in the same class, and all students studying Japanese evenly spread among all classes, and she doesn't care how students studying Indonesian spread or converge in the classes. Obviously this class-allocation requirement is not currently in the system for selection, but all that teacher needs is to send the above requirement in a support request to us. In two hours’ time we will be able add this criterion into the system, then that teacher can start to do class allocation using this new criterion.
Step 2: import student data

Once you finish step 1, click the step 2 node, the step 2 page is displayed, on which you enter data about the students:

The requirements that you have selected in step 1 determines what data you need to enter for each student. For example, if you have selected the “academic levels mixed” criterion, you need to provide the academic level of each student. If you have selected the “gender balance” criterion, you need to provide the gender of each student.

You can enter each student’s data manually on the user interface. When you do this, the system will only ask you to enter the data that are needed for your selected requirements:
As you can see in the above figure, since you did not select the “behavior” and “faith” requirement on step 1, the system doesn’t ask you to enter data about student behavior or faith. If you go back to step 1 and tick the behavior checkbox, then come back to this step 2 page, you will see here an extra dropdown box called “Behavior”.

What items are in the dropdown boxes for you to select is determined by you, and the engine doesn’t care. Could be anything. For example, year 1 teachers may have “A”, “B”, “C” and “D” in the “academic level” dropdown box, while year 3 teachers may want to use “1”, “2” and “3”. If you intend to manually enter student data, you need to click the “Add or delete items in this drop-down” link (see the figure above) to add or delete the items in each dropdown box. If you intend to import student data by uploading a CSV file, then you don’t need to manually add those items, since they will be picked up from the data in the CSV file.
A much quicker way to enter student data

Compared with entering student data manually, a much quicker way is to import a student data CSV file. When you prepare this CSV file, you don’t need to guess what columns are needed. On the step 2 page, you can click the “UPLOAD DATA” tab page:

![Step 2: Data Input](image)

Then, click the “SHOW ME THE CSV FILE FORMAT” or “DOWNLOAD SAMPLE DATA FILES” buttons. The first button will display on the screen a sample CSV file which contains some sample data, while the second will download that sample CSV file onto your PC. What columns are in the sample CSV file is determined by what requirements you ticked in step 1.
The sample file displayed or downloaded will look like the following:

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Current Class</th>
<th>Email</th>
<th>Student ID</th>
<th>Academic Level</th>
<th>Desired Friends</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARDELLA</td>
<td>ALBERTSON</td>
<td>A</td>
<td><a href="mailto:ardeLLa.a@test.com">ardeLLa.a@test.com</a></td>
<td>1353</td>
<td>1</td>
<td>ELLIOT HELFRICH, CHONG FLOURNOY, ADRIANA MCKITTTRICK, WAITILLISON, DARLINE NICHOLES</td>
<td>M</td>
</tr>
<tr>
<td>BRAIN</td>
<td>BAZEMORE</td>
<td>B</td>
<td><a href="mailto:brain.b@test.com">brain.b@test.com</a></td>
<td>1372</td>
<td>2</td>
<td>JARRETT DEPAOLI, HASSAN BALKE, TAMEKIA TIMMINS, DONELLA LAZARD, OPHELIA LETOURNEAU</td>
<td>F</td>
</tr>
</tbody>
</table>

Again, since you have not selected the “behavior” and “faith” requirement on step 1, the sample CSV file doesn’t contain columns for behavior or faith.

With this sample CSV file, all you need to do is to export the student data from your existing school management system into a CSV file, remove unneeded columns, rename some columns if necessary, then upload it into the system in a few mouse clicks.

You don’t have to have all the needed columns in the CSV file. If your school management system doesn’t contain data for some of the columns – typically it wouldn’t have contained the data in the “desired friends” column, you can still upload this CSV file, then manually enter the missing data on the screen shown in Error! Reference source not found..

The “pick-my-friends” module allows the students to pick their own friends on Teacher’s Pet portal, as long as they have their own emails and have access to the Internet. Just go to the “PICK MY FRIENDS” tab page on the step 2 page:
Click the “SEND EMAILS” button. The system will send invitation emails to all students in your year level. The email contains a secured link. The student clicks this link, it automatically logs him/her into Teacher’s Pet portal without needing to enter student ID or password. No student can impersonate another. There the student can pick his/her own friends. Each student takes two to five minutes. The whole year level finishes picking friends within half an hour.

Once the students are in the system, they don’t need to be re-entered every year when they move up the grade. So, in the following years, the class allocation can be done in a matter of half an hour.
Step 3: allocate classes

Once you have imported all needed data, you can go to step 3 to allocate the classes:

As you can see in the above screen shot, each class-allocation requirement you have selected in step 1 is shown here as a slider bar. You slide the slider bars to assign different weightings to the requirements. After you finish, click the "ALLOCATE CLASSES" button. The engine finishes the allocation following your weightings in a few seconds.
By nature, most of the class allocation requirements conflict with each other. For example, if you want the “friends” criterion to take priority, the secondary language criterion will have to give in. Using the slider bars, you can change the weightings of different requirements to fine-tune the class allocation outcome. You can repeat the “change then reallocate” process as many times as you want. The engine does the heavy lifting, while you have full control of the outcome. It is like you driving your children to school - it is not a machine that sends them to school, it is you, because you have full control over the machine.

The user interface allows you to visualize the effect of the class allocation in an intuitive manner. You first click a criterion, then a student, then all other students that are associated with this clicked student through the clicked criterion will be highlighted in yellow.

For example, if you click the “friends” criterion, then a student, all of his/her friends will be highlighted:
The pink student was the one clicked, the yellow students are his desired friends. If you click the “gender” criterion, then a student, all students of the same gender as the clicked student are highlighted, and the tooltip tells you what gender are these highlighted students:
If you click the “Show class allocation result summary” link at the bottom of the page, pie charts of the result will be shown:
SYMPATHY TOWARD FRIENDLESS STUDENTS

On the step 3 page (Error! Reference source not found.), you may have noticed that the “friends” criterion is different from other requirements in that it has two slider bars. The first slider bar sets the weighing of the “friends” criterion, in the same way as all other requirements, while the second slider bar, which is called “at least one friend”, sets the weighting of the first friend of each student. If you set this second weighting higher than the first, it means you want the engine to go extra length to guarantee that each student has at least one friend.

This feature is called “sympathy toward friendless students”. It is very useful in minimizing or even eliminating friendless students.

Consider the following example:
John, Andrew and Josh all want Peter to be in their own classes. John has no other friend in his class except for Peter, while Andrew and Josh have already some friends. If you set the “at least one friend” weighting to lower than the first slider bar, then the engine will move Peter to class B, because this move gives an extra friend to two students, while only one student loses a friend. This would result in John having no friend in his class. If you believe that a student getting his/her first friend is more important than a student getting his/her second or third friend, then you can assign a weighting to the “at least one friend” slider bar that is higher than the first slider bar. This will prevent the above-mentioned move from happening.

It is also useful when you find that the “friends” criterion suppresses other requirements too much, but, if you lower the “friends” criterion weighting, there are too many friendless students. In this case you can lower the “friends” criterion weighting, and increase the “at least one friend” weighting. The effects of this are:

1. If a student has no friend, the engine suppresses the competition from other requirements, including competition for friends from other students who already have at least one friend.
2. As long as each student has one friend, the engine suppresses the “friends” criterion to not to compete with other requirements.

**WHEN DO YOU NEED TEACHER’S PET?**

If you are a very small school, and you don’t have other class-allocation requirements to consider, such as academic level, behavior, exclusions..., then you probably don’t need Teacher’s Pet. For example, to allocate 40 students into two classes, even if you mix them randomly, in average each student will still have two or three friends, with few or even no students being left friendless.

However, if you have more than two classes, or if you also have other requirements to consider, then you will benefit from using Teacher’s Pet. The bigger your school, the greater the benefit. For example, when you are allocating 200 students into eight classes, to do it randomly, in average each student will have less than one friend, with close to 100 students left friendless. However, if you use Teacher’s Pet, each student can have two to four friends, with no student left friendless. The benefit is tremendous.