Aspen's Hidden Gems

T O P S E C R E T

Using the Hidden Gems

These hidden gems are designed to save you clicks, save you page refreshes, and, ultimately, save you time. Although it may be tempting, don't try to learn them all at once! If you do then it's likely you'll end up *wasting* time as you try to think of the "right" thing to do in a given situation. Instead, pick a few tips and practice until you've mastered them. Then choose some more and practice those. Eventually you'll learn them all (and probably have some of your own to add to the list).

Making Use of My Job Queue

My Job Queue lets you start a report now and get its results later. There are two great uses for this feature:

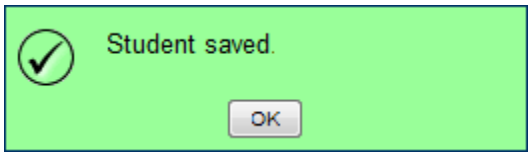
1. Kick-off multiple jobs at once rather than running them sequentially
2. Access the results of a previously run job without having to re-run the report

EXAMPLE

In addition to your normal workload, today you must also run the "Report Cards," "Monthly Register," and "Grade Point Averages" reports for the high school. You quickly run each report without waiting for any of the jobs to finish. Then you continue with you other work. Later you open My Job Queue and print the three PDFs. Twenty minutes later the principal asks you for a copy of the report card PDF. Rather than running the report again you simply download the PDF from My Job Queue and send it via email.

Don't Confirm the Confirmation

Aspen displays confirmation messages when you save a record or an operation completes. Although it's important to know the action was successful it's not important to click the "OK" button – it does nothing except close the message window. You'll save yourself time by leaving the message window alone, it will disappear after the next page refresh.



Simplified Date & Time Entry

Aspen automatically formats dates so you don't have to. That means fewer keystrokes and faster data entry. There are also shortcuts that save you from typing any date at all (and from reaching for a calendar).

Date Format	Results
MMDDYY	Date formatted as M/D/YYYY (123110 → 12/31/2010) (010199 → 1/1/1999)
M/D/YY	Date formatted as M/D/YYYY – year converted to 4 digits (12/31/10 → 12/31/2010)
t	Today's date
+*N* where *N* is some digit between 0 and 99	*N* days **after** today's date
-*N* where *N* is some digit between 0 and 99	*N* days **before** today's date

Aspen converts a two-digit year to a four-digit year via the following rule:

- If the year is between 0 and 28 then the century is assumed to be 2000
- If the year is greater than 28 then the century is assumed to be 1900

Just like with dates, Aspen automatically formats times so you don't have to. Again, that means fewer keystrokes and faster data entry.

Time Format	Results
HMM	Time formatted as H:MM AM/PM (344 → 3:44 PM) (1100 → 11:00 AM)
HMMA	Time formatted as H:MM AM (344A → 3:44 AM)
HMMP	Time formatted as H:MM PM (1100p → 11:00 PM)

If not specified, Aspen will determine AM versus PM via the following rule:

- If the hour is between 6 and 11 then AM is used
- If the hour is 12 or less than 6 then PM is used

"Dummy" Field Sets

Often times you'll find yourself needing to view one or more fields on a list of records but none of the existing field sets contain those fields. In order to view those extra fields you must choose one of two options:

1. Edit an existing field set and add the fields
2. Create a new field set that contains the fields

Sometimes these options may be appropriate, especially if the fields you're adding are fairly common and useful to a broad group of users. However, if you're interested in some obscure fields, particularly for just a short period of time, then neither option really suits your needs.

Editing an existing field set isn't a good idea because it's likely to be shared by multiple users and you don't want to change the columns they see – even if you "clean up" and remove the fields when you're done (which is extra work). Creating a new field set isn't a good idea either because over time you'll wind up with a list of dozens of entries on your Field set menu that make it difficult to find the one you need.

Instead, create a personal "dummy" field set based on a copy of the default field set and add the necessary fields. Next time you're on that list and need to view other fields just edit your dummy field set. It's a good idea to use a standard naming convention for your dummy field sets so you can quickly recognize them on the menu. Some examples are "Dummy Fields," "My Fields," or "Quick Fields."

Ad Hoc Filters with CTRL+F

Queries and snapshots are great ways to filter a list but sometimes it's more appropriate to make an ad hoc selection by using CTRL+F multiple times to select a bunch of records followed by either Show Selected or Omit Selected. This gem is very useful when combined with the **Filter Your List to Focus Your Efforts** gem.

Remember that CTRL+F finds records based on the list's primary sort field. You must change the list's sort order to find records based on values in another field.

EXAMPLE

You submitted a data extract to the state DOE. In return you received a list of ten SASIDs that correspond to students with errors in the submission. You go to the District view, Student tab and change the sort order to SASID. You press CTRL+F, type an ID number, and press enter for each of the ten values (no mouse needed!). You then choose Show Selected from the Options menu to show just those ten students. Now it's time to start making corrections!

The Benefits of Omit Selected

Show Selected is always followed by Omit Selected on the Options menu but most users have probably never used that second option. There are two use cases for Omit Selected. The first, more obvious case is when it's quicker to select the records you *don't* want on the list rather than the ones you do want. The second, more subtle case is when you plan to add records to the list after making the ad hoc filter. When you add a record to a list after using Show Selected, the new record won't appear in the results because it's not in your original selection. On the other hand, when you add a record to a list after using Omit Selected, the new record *will* appear in the results because it hasn't been excluded.

EXAMPLE

You're on the Student > Attendance side-tab and are looking at a list of 20 records. Since you only need the 15 most recent, you select the last 5 and choose Omit Selected from the Options menu. Then you create an absence for today. Your list includes that new record and now shows 11 records.

Filter Your List to Focus Your Efforts

Filtering a list to just the records you need to work with has numerous benefits:

- Your attention is focused on just the necessary records
- Your filter is maintained even when you leave the list and come back later preventing the need for finding the records again (useful in combinations with the **Changing Views for Faster Navigation** gem)
- Moving from one record's detail page to another is easy with the record navigation buttons
- 9 times out of 10 the list will load quicker when there are fewer records

Adding Prompt Queries to the Filter Menu

Prompt queries are one of the best ways to save time – a single prompt query can give you the results of many hard-coded queries. Although it does take a few extra steps to create a prompt query, the long term savings more than compensate. Add these prompt queries to your Filter menu for quick access (it's best to order your filters so that the ones you use most often are near the top).

When saving a prompt query remember to use the question mark character (?) in the name. This character acts as a token and ensures that the value you selected when running the query will be displayed on the list page.

EXAMPLE

One of the most common queries run in Aspen is to find the students in a particular grade level. You can find these students with just a couple of clicks by following these steps:

- Setup
  - Create an advanced query that prompts for grade level
  - Save the query and call it "Grade ?"
  - Add it to your Filter menu
- Usage
  - Select "Grade ?" from your Filter menu
  - Select the desired grade level and click Submit

Select "All Records" on the Query, Not the List

Don't select "All Records" from your Filter menu if your next step will be to run a query. Instead, select "All Records" in the **Search based on** list on the Query window. Not only does this save a page refresh, it also prevents a potentially large list of records from being loaded unnecessarily.

EXAMPLE

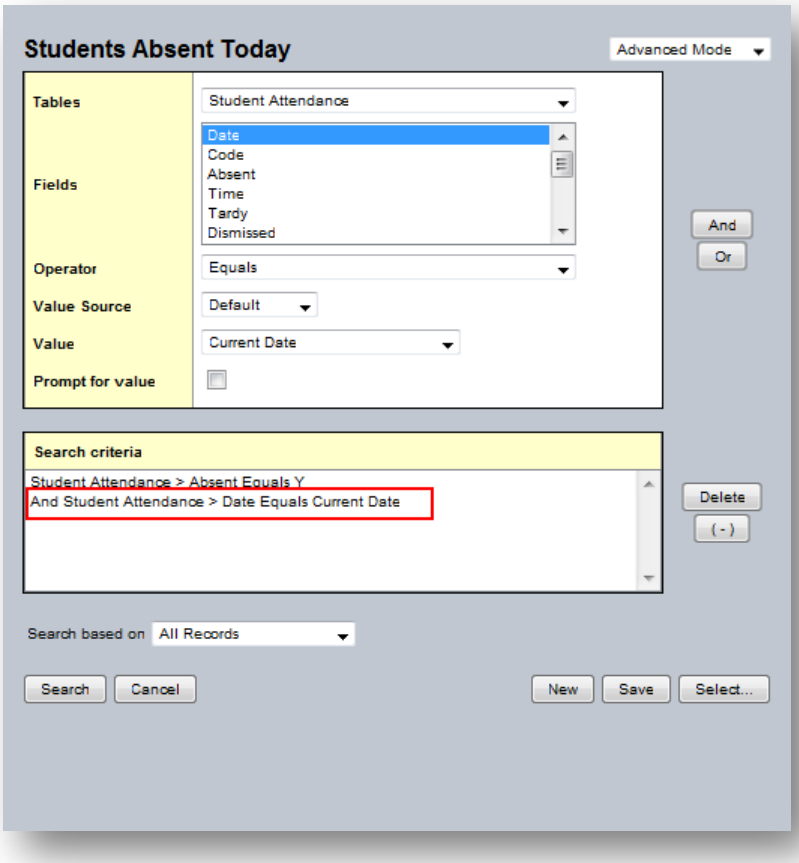
Imagine you're on the Student tab in the District view and have filtered the list to students whose last name begins with C. Now you want to view students whose last name begins with M. Don't select "All Records" from the Filter menu – it's unnecessary and it loads the entire list of students in the database. Instead, select Query from the Options menu, enter your criteria, and choose "All Records" from the **Search based on** list at the bottom of the window.

Date Variables in Advanced Queries

Advanced queries allow you to use variables in your criteria rather than constant (a.k.a., hard-coded) values. There is a rich set of variables available for date fields such as today, yesterday, first of month, last of month, etc. Creating a single saved query that uses one of these variables will save you from having to create the same old hard-coded query again and again.

EXAMPLE

Every morning your secretaries want to see the list of students absent that day. The Attendance > Daily Office side-tab and reports like "Attendance Bulletin" aren't sufficient because the secretaries like to view all related information for those students like contacts, conduct, prior attendance, etc. They need a query that can be run from the Student tab. Rather than running a simple query every morning with today's date, you save the following advanced query and add it to the secretaries' Filter menu:



Fast Loading Global Lists

Global Lists are a great tool for accessing all the records in a table but the list itself can take some time to load for large tables like Student Transcript and Student Attendance. This can be annoying if you all you need to do is perform a query that will return a much smaller subset of records. You can make Global Lists load much quicker by making the default filter a query or snapshot with very few records.

EXAMPLE

You access the Global List for Student Attendance once a week to export attendance records for students across the district. Since that table contains several million records the page takes quite some time to load. Once the page is loaded you simply query for records created since last Monday's date (which results in less than 1,000 records). In order to avoid that initial load time for a list of records you never use, you save a simple query called "Default Filter" that has a single criteria for "Date equals 1/1/2000" and set it as the first item in your Filter menu. Next time you visit Global List for Student Attendance you load 0 records (school's not in session on New Year's Day) – much, much faster than several million.

Selecting 397 Records in a Single Click

The easiest way to select a strange number of records in a list (like 397 in the title of this gem) is to set your **Records per page** preference to that value and then click the top checkbox in the list to select all records on that page.

Click 'N Go

"Click 'N Go" is a way to save a page refresh when accessing side-tab information for the selected record in a list. You use Click 'N Go by selecting the checkbox next to a record in the list and then clicking the desired side-tab rather than clicking the link for the record (which causes a page refresh as the first side-tab is opened) and then clicking the desired side-tab.

EXAMPLE

Imagine you want to view the list of contacts for a particular student. You find the student and either:

A. Click the student's name (which opens the Details side-tab) and then click the Contacts side-tab
B. Select the checkbox next to the student's name and click the Contact side-tab.

Option B is the Click-N-Go option and saves the intermediate page refresh for the detail page.

Remember: The Last Selected Record is Remembered!

Aspen remembers the last record you selected on a list. That means the next time you visit a list and want to view details about that record all you need to do is click the desired side-tab – there's no need to find the record first.

EXAMPLE

Go to the Student tab, find John Smith, and view his record by clicking the Details side-tab. Now go to the Staff tab, find his homeroom teacher Anne Brown, and view her record by clicking the Details side-tab. If you want to later view the contacts for John Smith all you have to do is click the Student tab and Contacts side-tab – there's no need to find John Smith's record on the list.

Sorting a List to Find Missing Relationships

Getting a list of records missing a particular relationship requires a direct SQL query – a task that is beyond the technical skills of most users. An alternative way to get the same results is to sort the list by a field on the related table – records missing that relationship will appear at the top of the list and can easily be selected (see the **Selecting 397 Records in a Single Click** gem for help with the selection).

EXAMPLE

To find students who don't have a value set for Next School requires this direct SQL* query:

```
SELECT * FROM STUDENT WHERE STD_SKL_OID_NEXT IS NULL
```

Formulating this query is a daunting if not impossible task for most users. A much simpler alternative is to sort the student list by Next School > Name. Students without a Next School will appear at the top of the list.

** User will often attempt to find such students with a simple query that has a single criteria for "Next School > Name is not empty." However, because of the way Aspen builds the underlying query the results will almost always be empty (and never be correct). With the simple query, Aspen first looks for students who do, in fact, have a next school but that related school record happens to have an empty name.*

Changing Views for Faster Navigation

The Change View menu is a great way to save page refreshes. Aspen remembers the last tab and side-tab you visited in each view. We can use this to our advantage and with a single page refresh navigate between two side-tabs under different top-tabs (an operation which normally takes at least two page refreshes, sometimes more).

EXAMPLE

Imagine you want to customize the default template for the Student > Details page. You make your changes in the District view on the Tools > Templates > Design page. Then to test your changes you do the following:

- Click the Student tab (page refresh)
- Click the Details side-tab (page refresh)
- Determine more changes are necessary
- Click the Tools tab (page refresh)
- Click the Templates side-tab (page refresh)
- Click Design on the side-tab (page refresh)
- Make some edits, repeat steps to view your changes

Bottom line – lots of page refreshes! Instead, start in the School view on Student > Details. Then switch to the District view, Tools > Templates > Design. Now with a single page refresh via the Change View menu you can toggle between the student detail page in the School view and the template editor in the District view.

Choosing the Right View for the Right Job

With the previous tip we learned how to save page refreshes with the Change View menu. That tip combined with a list of complimentary views will help you streamline numerous tasks. Choose two views such that the primary view is where you'll be doing the work – changing a template, customizing a report, running an export, etc. – and the secondary view is where you'll be viewing the results.

EXAMPLES

Task	Primary View	Secondary View
Editing a template	District (Tools > Templates > Design)	School (wherever template is displayed)
Editing a report	District (Tools > Reports > Details)	School (wherever report is run)
Running/validating EPIMS	District (Tools > Exports > Details)	Personnel (Staff > Details)

Never Leave The Keyboard

Constantly reaching for the mouse slows data entry. Many "mouse operations" have keyboard equivalents that will save you time.

WEB PAGE / FORM KEYSTROKES

Keystroke	Action
TAB	Moves to the next field/link on the page
SHIFT+TAB	Moves to the previous field/link on the page
ENTER on a selected link or button	Equivalent to clicking the link or button with the mouse (for example, TAB to a  icon and press ENTER to open the pick list)

ASPEN PICK LIST KEYSTROKES

Keystroke	Action
UP arrow	Selects the next record in the list (will move to next page)
DOWN arrow	Selects the previous record in the list (will move to previous page)
CTRL+F	Selects the record most closely matching the search value
ENTER	Equivalent to clicking the "OK" button with the mouse

GENERAL WINDOWS KEYSTROKES

Keystroke	Action
CTRL+A	Select all
CTRL+C	Copy
CTRL+X	Cut
CTRL+P	Paste
CTRL+S	Save (in almost every Windows application except Aspen!)
ALT+TAB	Switch between open Windows

Customizing Reports Like a Pro

Whenever you customize a report you'll need to (A) test it and (B) debug it when/if it throws an exception. After making your changes to a report you can run it directly from the detail page by choosing Run… from the Options menu (you must compile and save you changes first). If your report throws an exception then you can view the details of the error simply by clicking Logs on the side-tab and reviewing the first record in the list.

Note: Some reports do not support the Run… option. Such reports must be run from whatever page they appear in the system. Use the **Choosing the Right View for the Right Job** gem to minimize page refreshes.

Gender-Specific Report Formatting

Form letters like the "Absence Letter" and "Suspension Letter" typically contain phrases such as "Your son/daughter has violated code…" and "…as a result he/she must…" You can make these reports more professional by using simple Java syntax to select the correct word (son vs. daughter, he vs. she) based on the student's gender code. That syntax looks like this:

```
"M".equals($F{student.person.genderCode}) ? "son" : "daughter"
```

Note that you may have to change the field name (the portion highlighted in red) based on the particular report you're using.

This Java syntax is referred to as a ternary statement and follows the pattern:

```
CONDITION_TO_CHECK ? TRUE_RESULT : FALSE_RESULT
```

The first portion, from the beginning of the line to the question mark, is a condition – something that evaluates to either true or false. The second portion, from the question mark to the colon, is what to do if the condition is true. The third portion, from the colon to the end of the line, is what to do if the condition is false.

The above example is checking to see if the student's gender code is equal to the letter "M". If so then "son" is displayed, if not then "daughter" is displayed. A complete sentence embedding that syntax would look like:

```
"Your " + ("M".equals($F{student.person.genderCode}) ? "son" : "daughter") + " has
violated school code..."
```

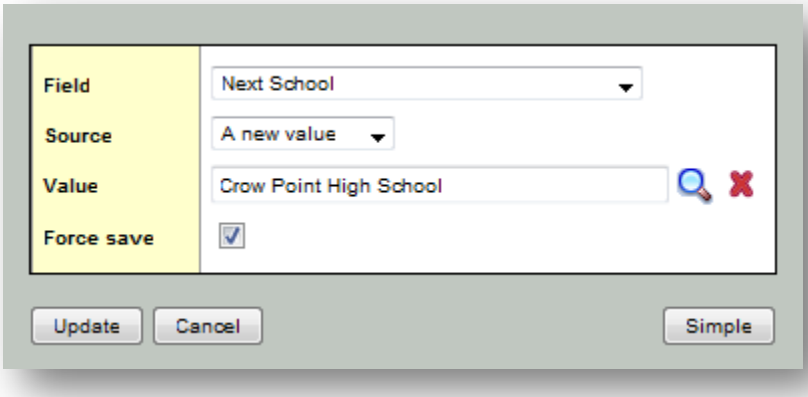
Not-So-Mass Update

Before performing a mass update on an entire list of records, try it first on just one or two records. This is particularly useful when mass updating with another field or an expression – what you think will happen may not actually be what *does* happen. Undoing a mistake for one or two records is much easier than fixing hundreds or thousands of records.

It's also a good idea to test other "large scale" operations on small selections (read: one or two records). Such operations include preparing grade input, posting grades, merging drop/adds, calculating averages, calculating credits, creating user accounts, populating homerooms… You get the idea.

Force That Mass Update to Go Faster

Selecting the **Force save** checkbox on a mass update (only available when using advanced mode) can significantly reduce the amount of time to complete the operation because the updated records won't be validated.



Of course, you may want or need to validate your mass update so use this option when appropriate.

Poor Man's Export

Have you ever wanted to get data from Aspen into Microsoft Excel but don't want to go through the hassle of creating an export? Or perhaps you don't have access to create or run exports in the first place? Remember that Quick Report has an option to format output as a CSV file. That CSV file can be saved locally and opened in Excel or other spreadsheet applications. Combine Quick Report's CSV option with Global Lists and you can virtually export the entire database without writing a single line of code!

Pain-Free Backup and Restore

There's always the ability to retrieve data from a backup if necessary.* However, the most recent backup may be several hours old and restoring data from it may require significant resources in terms of time and/or money. You can use one of the following simple strategies to backup and restore (if necessary) data without involving your database administrator or X2 Technical Services.

Strategy 1: Saving Values in a Temporary Field

- Steps to backup:
  - Define temporary field in Data Dictionary
  - Mass update temporary field with values from original field
- Steps to restore (if necessary):
  - Mass update original field with values from temporary field
- Clean up:
  - Reset temporary field when done

Strategy 2: Saving Values via Quick Report

- Steps to backup:
  - Run a Quick Report in CSV format with identifying field(s) and fields to backup
  - Save CSV file locally
- Steps to restore (if necessary):
  - Define import that matches on identifying field(s) and updates other fields
  - Run import with saved CSV file
- Clean up:
  - None

Strategy 1 is quicker to implement but gets cumbersome if you need to backup multiple fields.

EXAMPLE

You are about to recalculate GPAs for all students at the high school. You think you have everything configured properly but you're not 100% sure. You make a quick backup of the existing GPA values by defining a field called "Temp GPA" on the Student table and mass updating it with the field that contains the actual value. If you find the recalculation has gone awry you can easily restore the original values by performing a mass update in the reverse order (temporary field to actual field).

** X2 manages backups for all districts hosted at our data center. Districts hosting Aspen in house are responsible for their own backups. At an absolute minimum, X2 recommends a full database backup once a day.*

Scheduled Jobs as Regular Backups

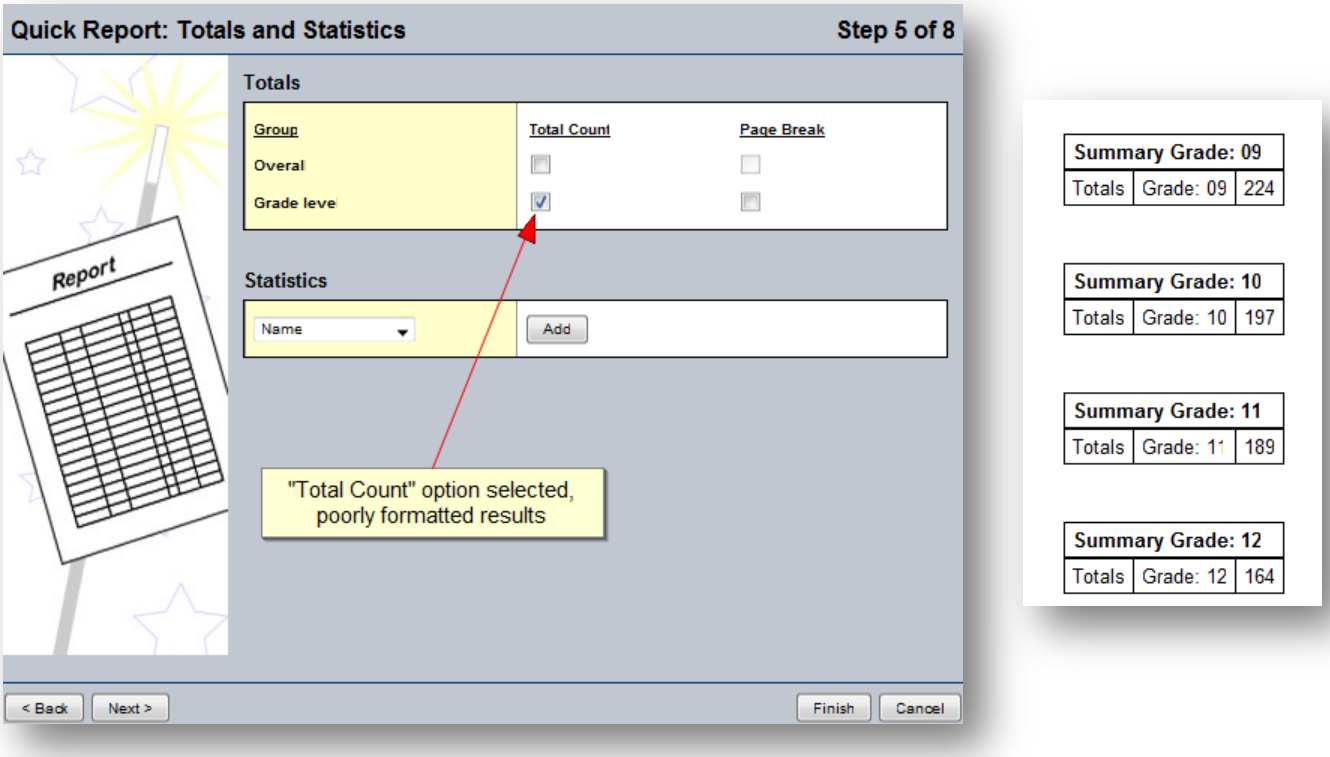
Reports like "Enrollment Breakdown" and "District Enrollment" give a snapshot of student demographic data at a single point in time. Running these reports for dates in the past may be impossible (the report may not have such an option) or give inaccurate results (student enrollment information is incomplete). A quick solution to this problem (besides customizing the report or manually correcting enrollment data) is to create a scheduled job for the report that saves multiple results and runs daily, weekly, monthly, etc. The next time your superintendent asks for enrollment totals from last December you can easily download the appropriate file from the job's results.

Quick Report Summaries

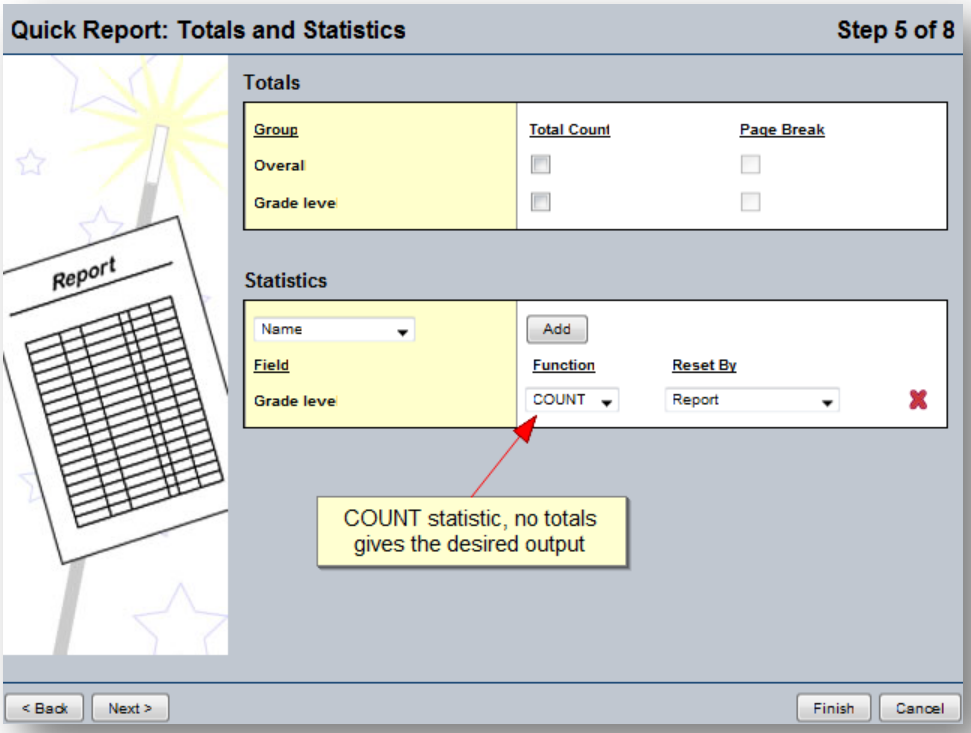
Quick Report's "Summary" report type is intended to display the number of records within the selected group. However, the output isn't formatted in the nicest of ways. A much better format can be achieved by setting a COUNT statistic on the group field rather than using group totals.

EXAMPLE

You want a Quick Report to show the total number of students in each grade level at your school. You set the report type to "Summary" and select the Grade level field. When you get to **Step 5 – Totals and Statistics** you choose the options below but the results aren't what you want:



If instead on **Step 5 – Totals and Statistics** you choose the options below you get the results you want:



Report Summary		
Totals	Grade: 09	224
	Grade: 10	197
	Grade: 11	189
	Grade: 12	164

Reference Code Cleanup

Aspen has powerful tools for managing reference data – from building a list of codes to renaming codes to merging multiple codes into a single value. These tools are fully documented in the online help but are often overlooked and have therefore been included as "forgotten" if not "hidden" gems.

- **Build Reference** (Options menu item; District view, Admin > Data Dictionary > Tables > Fields > Details) – builds reference codes for each of the unique values currently in the selected field, creates a reference table for the field is one does not already exist
- **Merge Codes** (Options menu item; District view, Admin > Data Dictionary > Reference > Codes) – combines two or more codes into a single code, optionally updates existing records
- **Renaming a code** (triggered upon save; District view, Admin > Data Dictionary > Reference > Codes > Details) – optionally updates existing records to use the new version of the code

Multiple Browsers the Safe Way

Occasionally you may have the need to view two separate pages in Aspen on your screen at the same time. You might be tempted to simply open another browser window, login to Aspen again, and navigate to the other page. However, you may notice strange behavior as you navigate the system – changes in one browser window affect the other. That's because many modern web browsers (such as Mozilla Firefox) share a single session across multiple instances.

The safe way to access Aspen multiple times from a single computer is to use different browser applications. For example, login to Aspen once with Mozilla Firefox and then again with Microsoft Internet Explorer (rather than attempting to login twice with just Firefox).

For the extremely hard-core (or bored) Aspen users, you can run five or more concurrent sessions of Aspen on a single computer by using different browser applications like Mozilla Firefox, Microsoft Internet Explorer, Apple Safari, Google Chrome, and Opera.

A Picture Is Worth a Thousand Words

No matter how well you describe something with plain text, a picture often does the job better and quicker. Next time you find yourself typing a novel to describe something in Aspen, take a screenshot instead. Screenshots can be used for documenting a process or creating a "poor man's backup" of how a page once appeared.

There are many products on the market to capture screenshots and there's always the old "print screen" option but the preferred tool of choice within X2's Technical Services group is the FireShot add-on for Mozilla Firefox or Microsoft Internet Explorer (http://screenshot-program.com/fireshot/). FireShot comes in two versions: Basic (which is free) and Pro (which costs approximately $35). The great news is that the Basic version has everything you need to take great screenshots of Aspen. It has features for:

- Cropping
- Drawing shapes and lines
- Annotating with arrows and text boxes
- Copy/pasting images into other applications like Microsoft Outlook or Microsoft Word
- Saving images as PNG, GIF, JPG, or BMP files

In fact, FireShot Basic was used to capture and annotate all the screenshots found in this document.

EXAMPLE

Rather than describing at length the options needed to run the Update Post Columns wizards, you can simply take a screenshot of each step and save them in a Word document.

Notes