# Growth and Enhancement of Montana Students

Montana Office of Public Instruction

**GEMS Web Portal**

End User Manual

Putting Montana Students First

# CONTENTS

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# TECHNICAL REQUIREMENTS

GEMS operates on all of the most commonly used computers and browsers, yet is optimized for Internet Explorer, Firefox, and Safari.  Currently mobile and tablet devices are not supported.  To get the most of GEMS, please make sure your screen resolution is set to 1280 X 1024.

# OVERVIEW

## PURPOSE AND OBJECTIVES

Welcome to the Montana Office of Public Instruction's GEMS User Manual.

The purpose of this document is to enable you to effectively use the tools and functions in the Growth and Enhancement of Montana Students (GEMS) site.

At the end of this training, you should be able to:
- Describe the purpose of the GEMS site
- Briefly describe the kinds of information that can be found in GEMS
- Efficiently navigate within GEMS
- Perform a keyword search
- Locate and compare Montana schools
- Locate and download documents
- Generate and download reports
- Describe the purpose of Data Analysis Dashboards
- Download data from the Data Analysis Dashboards

## WHAT IS GEMS?

The Growth and Enhancement of Montana Students (GEMS) Data Warehouse provides schools, policymakers, parents, and the public with unprecedented access to data and reports regarding Montana's public education system while protecting the educational privacy rights of students and families.  GEMS allows the Office of Public Instruction to efficiently and accurately manage, analyze and use education data, including individual student records.  The data contained within GEMS allows educators to focus on accountability, effectiveness, and achievement.  GEMS includes user-friendly tools that will enhance the ability to provide a quality public education.

There are four main menu items to help you make the most of the GEMS Data Warehouse:

- "Data" for links to the reports and dashboards of the nine data domains.
- "Find Schools" (for locating and comparing schools)
- "How to use GEMS" for just-in-time support documentation to help you learn more about GEMS

- *"Contact Us"* for information on how to contact the OPI GEMS Help Desk or the Data Stewards. Contains an important link on how to request data if you can't find the data elements on GEMS.

GEMS provides two separate web sites targeted at different audiences.

## P U B L I C  S I T E:
The public website masks or hides data for groups with fewer than 10 students to protect confidential information about individual students as required by federal law.  The masked data analysis is at the state, district, and school level.  This site does not require a login to run reports or download documentation and is located at:  https://gems.opi.mt.gov.

## SECURED SITE:
The secured website displays unmasked school district data that is available only to authorized individuals, primarily Montana's school and district officials.  This site requires a secured login and is located at: https://securegems.opi.mt.gov. To gain access to GEMS you have to be a school district employee of a district whose authorized representative has agreed to grant access to the employee.

# WHAT ARE THE AREAS WITHIN THE GEMS HOMEPAGE?

Most users of the GEMS web portal tend to navigate to one of three areas on the homepage: the data menu (which brings up a menu of the nine data domains), Login to Secure Site link (which allows authorized users access to their district's data), and the data and information request link (which allows

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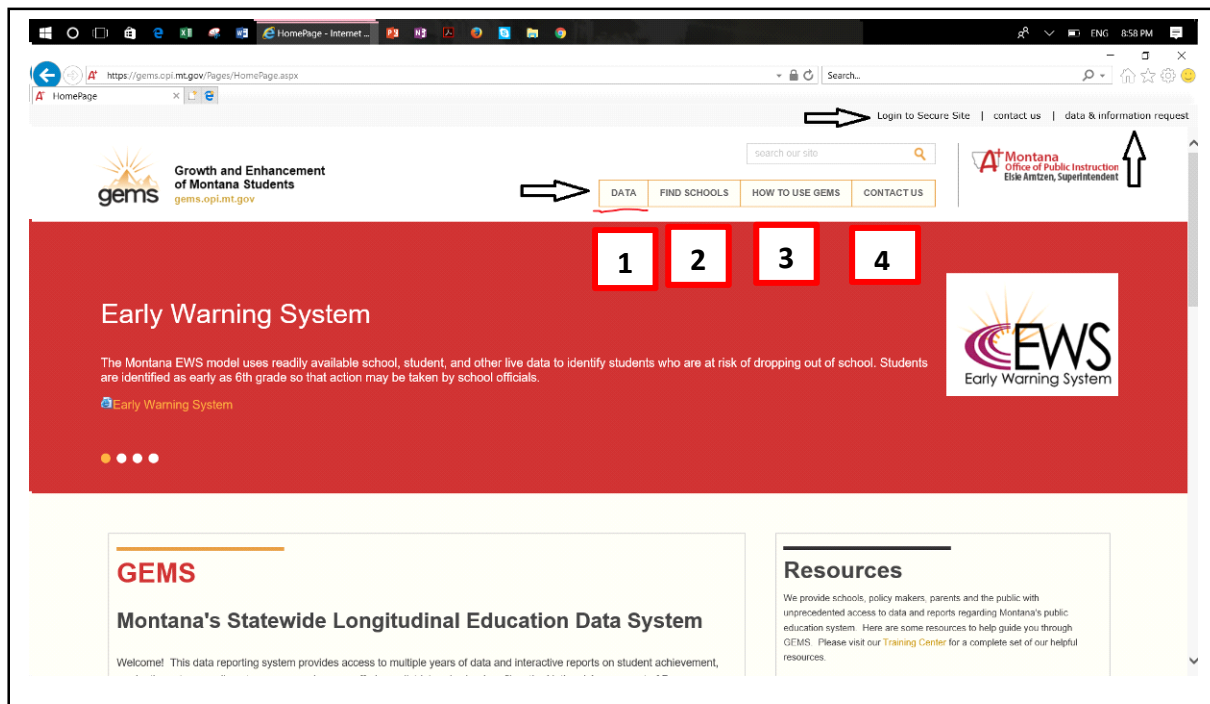
individuals interested in data that is not available on GEMS to fill out a web form submitted to the OPI GEMS Help Desk). There are many other functions on the homepage that merit attention as highlighted in the picture below by 1-4.

## 1. Data
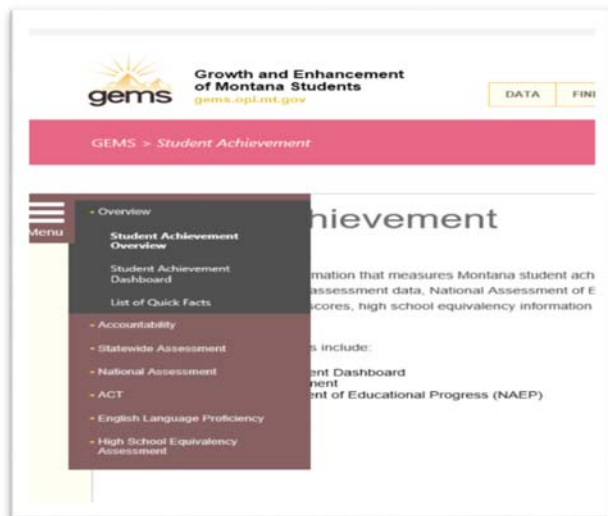


Here you will find a menu of quick links to information categorized under the nine GEMS data domains. By clicking on the domain name, you arrive at an overview page. Off to the left a data menu will populate providing you access to the parameter reports and dashboards. Parameter based reports can generate information that is more specific or granular than the information found elsewhere. The Data Analysis Dashboards' submenu offers users data flexibility such as being able to look at the data in various ways. Data can be drilled into for customized results. The charts and graphs can be printed and/or exported for further data analysis.

## 2. Find Schools

The Find Schools main menu item contains six submenus:

- The **Side-by-Side Comparison** submenu allows a user to compare schools or districts.  The comparison tool works similarly to online shopping sites.
- The **School Directory** submenu is an alphabetical listing of Montana schools and districts.
- The **School Profiles** submenu is a quick way to view a particular school's profile.  While school profiles can be found in several places, this is the most direct way to view a school's profile.
- The **District Profiles** submenu is a quick and direct way to view a school district's profile.
- The **Map of Montana Schools** on the homepage offers another way of visualizing GEMS data.
- The **Non-Public Schools** submenu provides a list of Montana College Preparatory Curriculum program reports for accredited non-public schools.

The Training Center main menu item contains five submenus:

- The **Data Definitions and Explanations** submenu is an online data dictionary for the GEMS website.
- The **User Manual** is a written document about the GEMS website and can be viewed, printed, or saved.
- The **Frequently Asked Questions** submenu is a great place to look for answers to any questions you may have about the GEMS website.
- Training Documents offers a repository of GEMS training materials

**4. Contact Us**

The Contact Us submenu offers access to a contact information page, data and information request, and research proposal application and confidentiality. The **Data and Information** link opens a web form that is used to request data from OPI. **The Research Proposal and Confidentiality** link opens a pdf that is used with research partners to request student level data without PII – Personally Identifiable Information.

The contact information link provides contact information for the GEMS Project Team and the data stewards of each topical area in our data warehouse. The OPI GEMS Help Desk (opigemshelpdesk@mt.gov,  406-444-5222) provides support in coordinating access requests, data requests, and troubleshooting and difficulty that people may have when accessing the web portal. For typical 'Forgot Password' requests please go to https://reset.opi.mt.gov/accounts/Reset to reset your password.

# WHAT INFORMATION CAN I FIND IN GEMS?

Information contained in GEMS is organized into nine data domains and are located under the "Data" submenu in the main menu.  They are:

1. **General District and School Information**
   Look here for demographic and facilities information about public school districts.  This area includes contact information, district profiles, statewide reports, and accreditation.

2. **Program and Course Offerings**
   Look here for data about a wide variety of programs and services that support Montana's students, families, educators, and community members. View data on program areas such as Career and Technical education, General education, and Traffic education.

3. **Student Achievement**
   Look here for resources and information regarding standards, standardized test scores, and progress towards state and federal accountability goals.

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4. **Student Services**
   Look here for data on after school programs, Student Transportation, Child Nutrition, Driver's Education.

5. **School Finance**
   Look here for demographic and financial information about public school districts.  View county fiscal data and grant information.

6. **School Staffing**
   Look here for demographic, financial, and qualification information about Montana educators.  View data on school staff, and highly qualified teachers.

7. **Student Characteristics**
   Look here for data on enrollment, Migrant students, Limited English Proficient students, Special education, Indian education and Homeless students.

8. **Student Engagement**
   Look here for data on extracurricular activities.

9. **College Readiness**
   Look here for data on Montana Campus Feeder Reports, Montana High School Follow up Reports, and National Student Clearinghouse reports,

# HOW DO I NAVIGATE WITHIN GEMS?

Each time you access GEMS, you will be taken to the GEMS home page.  From here you can quickly locate links to GEMS information.

**1.    Logo Section**

You can return to the GEMS home page at any time by clicking the GEMS logo in the page header.  The OPI logo in the page header takes you to the OPI website.

**2.    Main Menu Bar**

A main menu bar is located near the top of the page.  The main menu bar is always accessible from any page in GEMS.  Place your mouse over an item on the main menu bar to open a submenu.  Items in the submenu are clickable.

**3.    Data Menu Bar**

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After you click on 'Data' in the main menu, a submenu with the names of the nine data domains is populated. Once you click on a data domain, you go to a landing page for that domain. The data menu is populated after you choose a domain. It is the main vehicle to get to parameter based report and data dashboards.

<div style="background-color:red;color:white;">

**4.   Search**

</div>

A search tool is located in the upper right corner of each page within GEMS.  To perform a simple search, type a word or phrase into the search field.  Click the magnifying glass icon to initiate the search.

<div style="background-color:red;color:white;">

**5.   Login**

</div>

Directly above the search tool on the public site, is the "Login" hyperlink.  When Login is clicked, enter your username and password to access the secure website. If you do not remember your password, please go to https://reset.opi.mt.gov/accounts/Reset.
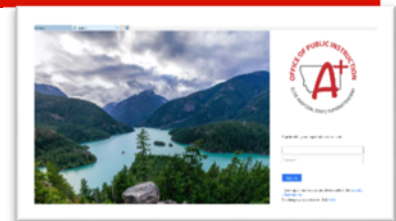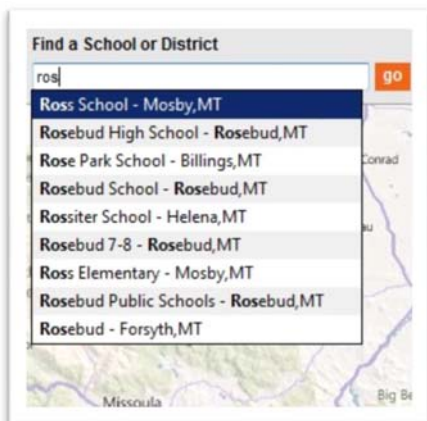
# FIND SCHOOLS MENU ITEM

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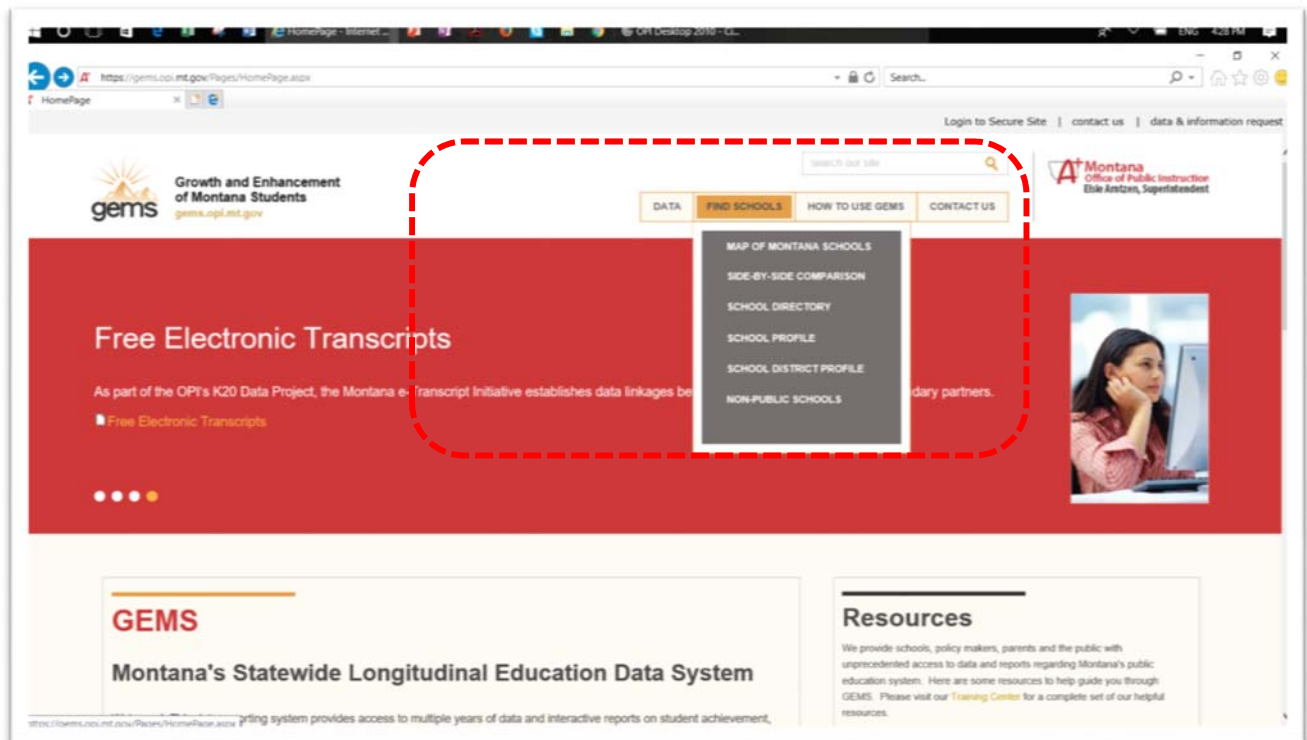
The map on the homepage can be used in three different ways.

First, you can use the fillable search fields to locate a specific school or system. The search criteria sections are located above the map.
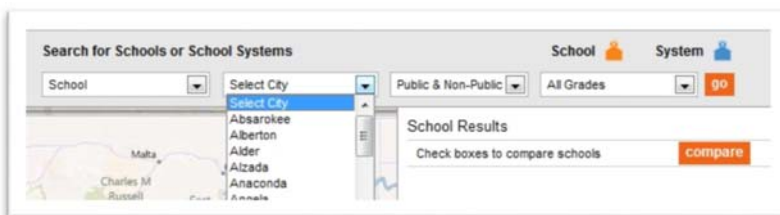
1. **Find a School or School System Search Criteria**



**If you know the name of a specific school or system, you can begin typing it in the "Find a School or School System" section. A list of matching schools and systems begins to populate under the search field.**

**Click the appropriate choice and then click the orange GO button located directly right of the search criteria field.**

2. **Search for Schools or School Systems Search Criteria**



**If you do not know the name of a particular school or system, the second search criteria section has pull-down menus for search parameters.**

**After the parameters have been selected, click on the orange GO button located on the far right side.**

When a school or system has been located, the map will populate the appropriate icon on the map along with a list of search results to the right of the map.

Once an icon is displayed, the map's second use is to view profile information. Click an icon and a mini menu will appear. Hyperlinks will appear depending on what type of information is available. One hyperlink that will always be available will be a profile. Click on the profile hyperlink to get more in-depth information.

Finally, you can perform side-by-side comparisons of up to six schools from the School Results list. Simply click the check box next to the schools you want to compare and then click the "Compare" button

## HOW DO I USE THE SIDE-BY-SIDE COMPARISON SUBMENU?

To perform a side-by-side comparison of schools or districts, place your mouse over the "Find Schools" in the main menu bar.  In the submenu, click the "Side-by-Side Comparison" link.

The first step is to select either the "Districts" or "Schools" radio button.  In the text field type either the name of the district or school, or just type the first few letters of the name to select from an alphabetical list.  Click the appropriate name and then click the "Add School/District" button to add it to the comparison table.  Two more districts or schools can be added to the comparison table by repeating the previous steps.

To remove a school or district from the table, click the "Remove" checkbox at the top of the appropriate column.

## HOW DO I USE THE SCHOOL DIRECTORY SUBMENU?

To find an alphabetical listing of Montana schools and districts, place your mouse over the "Find Schools" in the main menu bar.  In the submenu, click the "School Directory" link.  A listing of all accredited school districts appears.  Click the plus sign to the left of the district name to view the schools within that district.  Each school name is a hyperlink and will take you to the school's profile.

## HOW DO I USE THE SCHOOL PROFILES AND DISTRICT PROFILES SUBMENU

Both the "School Profiles" and "School District Profiles" submenu items operate in the same manner.  To view either a school or district's profile, place your mouse over the "Find Schools" in the main menu bar.  In the submenu, click the appropriate link.

Click the "Select School…/Select School District…" dropdown list and scroll through the schools to find the desired school and select it.

Four tabs are visible.  While the Statewide Assessment is the default, School Characteristics, Programs & Course Offerings and Accreditation can be clicked on to view related information.  The Statewide Assessment has three sections: ACT ( high school only), Criterion-Referenced Test - Science and the Smarter Balanced (SBAC) data.  Click "more" in either of the two sections to view the detailed report for that section.

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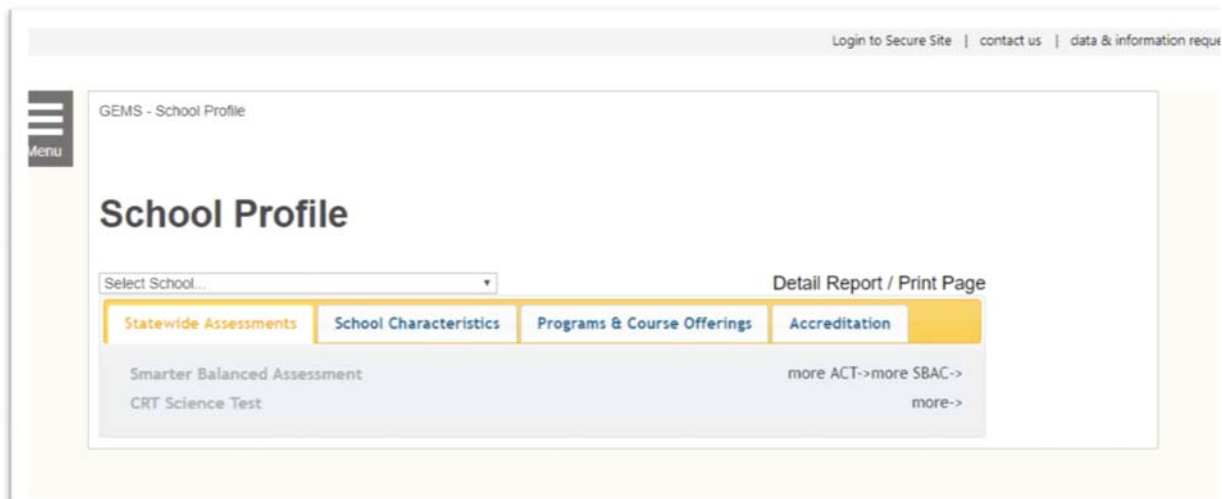
To print the profile, click the "Detail Report / Print Page" hyperlink located on the right side of the screen.

# REPORTS & DASHBOARDS

## PARAMETER BASED REPORTS

### WHAT ARE PARAMETER BASED REPORTS?

The Parameter Based Report submenu contains a set of filtering tools and pre-defined parameters that enable users to run data reports within the nine GEMS data domains. Parameter Based Reports can generate information that is more specific or granular than the information found in the Quick Facts Document libraries and can be printed and/or exported.

### HOW DO I RUN PARAMETER BASED REPORT?

After clicking on a data domain in the Data section of the Main Menu, open the Data Menu (which is populated by data reports and dashboards and is located to the left of the page).

Click a report name in the list of available reports.

Each report will have its own set of parameters to choose from. There will be some fields already filled with default values, however; the default value can be changed by clicking on the down triangle for choices. A mandatory parameter will need to be selected and will display a **<Select a Value>** in its field.

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As soon as a mandatory entry has been selected, a dependent entry will change from being inactive (grayed out) to active.



When you have selected the desired parameters, click the "View Report" button.

For each report, the following features are available in the report toolbar located at the top of the reports' section.
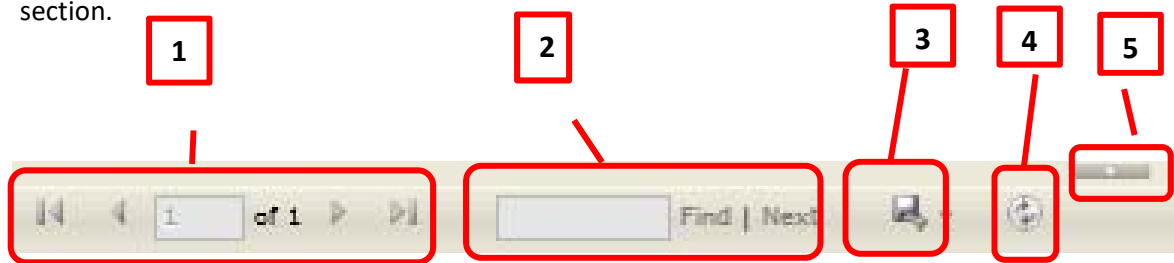


An indicator shows the number of pages in the document. Use the forward and back arrows to navigate between different pages.

2.  You can enter a word or phrase to search for in the document and click "Find". The word or phrase will be highlighted in the document.  To find the next instance of the word or phrase, click "Next".

3.  To export the report to one of several file formats, click the "Export" icon (the icon that looks like a floppy disk) and select the desired format.  Once exported, the report can be saved, printed, and manipulated per the application.

4.  The refresh button may refresh the screen but it does not refresh the data or parameters.

5.  The Expand/Collapse arrow toggles between showing and not showing the report's parameters.

**IMPORTANT:**  If you want to re-generate the report using different parameter selections, change the desired selections, and then click the "View Report" button.

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## HOW DO I DOWNLOAD A PARAMETER BASED REPORT?

After generating a Parameter Based report, you may download the report and save it to your computer. To download the report, you must first export the report to one of the available file formats.  To export the report, click the export icon and select the desired format.

A new window will open.  Click the "Save" option to save a copy to your computer and then click OK.

## DATA ANALYSIS DASHBOARDS

## WHAT ARE DATA ANALYSIS DASHBOARD?

Data Analysis Dashboards allow users to draw from a large amount of data to create customized charts and graphs.  Using state-of-the-art technology, users will immediately see numerous small charts and graphs that can be quickly changed with a simple click of a mouse.  Information can be filtered and drilled into; formats can be changed; and, data can be exported.  Data Analysis Dashboard Reports are found within the Data menu each domain.
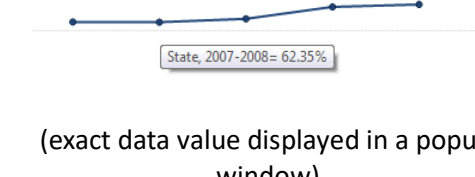
## WHAT ARE THE MAIN AREAS IN A DASHBOARD?

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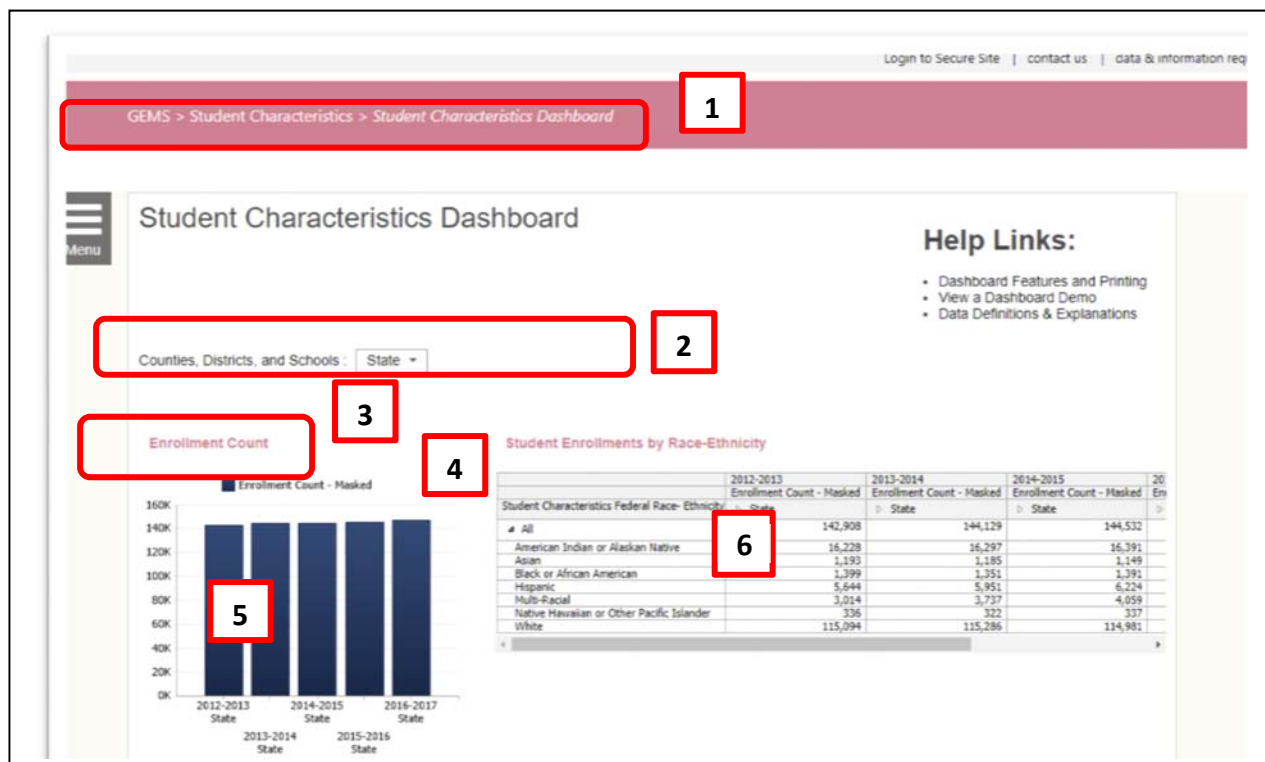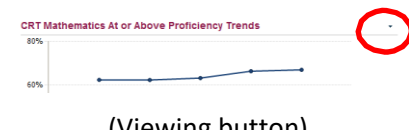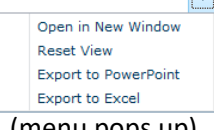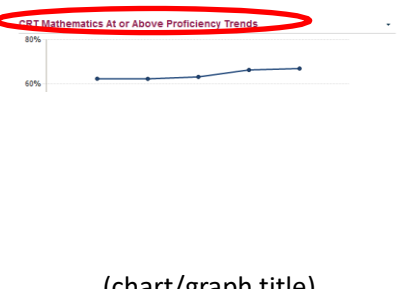
1. **Breadcrumb:** Unlike Hansel and Gretel, these breadcrumbs will tell you exactly where you are and a click can get you back home.
2. **Parameter:** Customizes what information is displayed
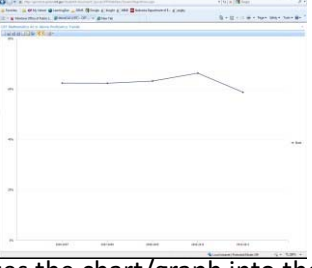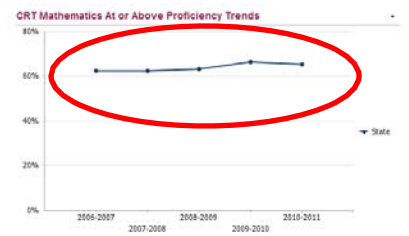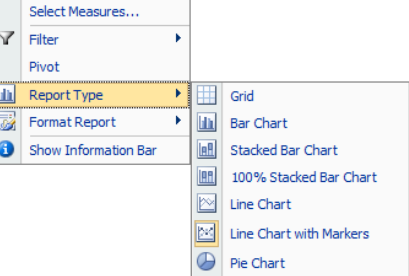3. **Title:** When clicked, it will maximize the chart/graph into the *current* window.
4. **Viewing Button:** The button is visible only when the mouse is in an individual chart/graph section. A powerful mini menu appears containing:
   a. Open in New Window-ease of data manipulation, viewing, and printing while allowing exiting of window without exiting GEMS
   b. Reset View-necessary to get back to original dashboard after experimenting
   c. Export to PowerPoint or Excel-create professional document and ease of printing.

5. **Data Element:** The line in a chart or bar in a graph. Using a mouse with the following actions will give you the following results:
   a. Hovering - will display the exact data value in a popup window
   b. Hover then click if pointer becomes a hand - automatically drills down the information.
   c. Right click (or Control + Click on Mac) - Menu with options (availability of options will vary)
6. **Chart/Graph Area:** The blank area of a chart/graph. While it may not contain data, right- clicking (or Control + Click on Mac) will bring up a report options menu. The report option shown above is 'Grid.'
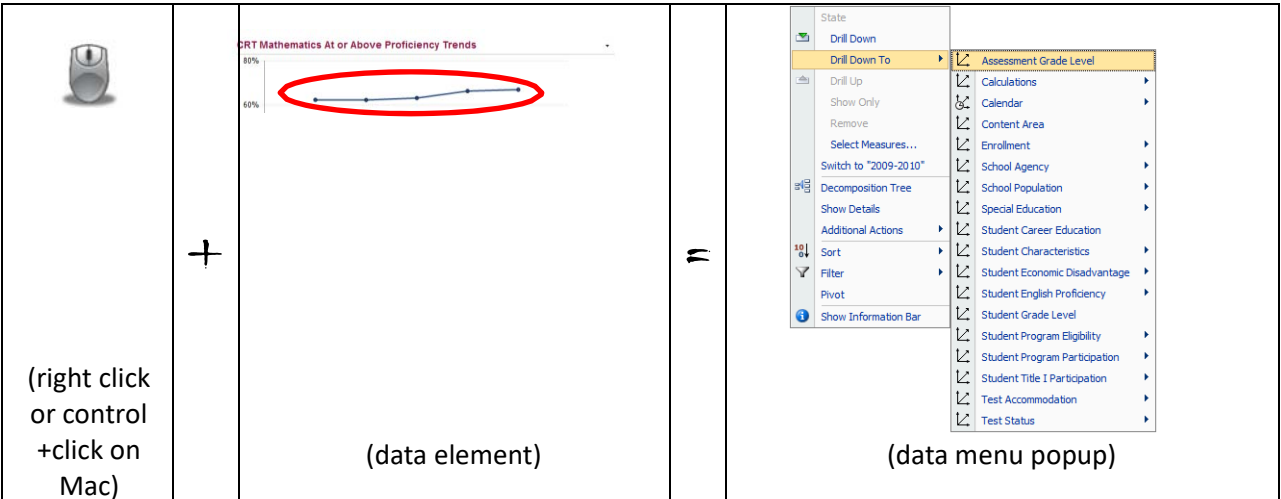
**IMPORTANT:** If you want a data file from a dashboard report, change the report type by right clicking in a white area and select Report Type > Grid. Select Pivot by right clicking again to get another view of the data. To export to Excel click the viewing button in the upper right hand corner of the area.

# NOTES

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# APPENDIX: WHAT CAN A MOUSE CLICK DO ON A DASHBOARD

| Mouse Action | | Screen Element | | Result |
|---|---|---|---|---|
| (hovering) | + | CRT Mathematics At or Above Proficiency Trends (data series) | ⇆ | State, 2007-2008= 62.35% (exact data value displayed in a popup window) |
| (hover + click ) | + | CRT Mathematics At or Above Proficiency Trends (data series) | ⇆ | CRT Mathematics At or Above Proficiency Trends (automatically drills down information) |
| (click) | + | CRT Mathematics At or Above Proficiency Trends (Viewing button) | ⇆ | Open in New Window / Reset View / Export to PowerPoint / Export to Excel (menu pops up) |
| (click) | + | CRT Mathematics At or Above Proficiency Trends (chart/graph title) | ⇆ | (maximizes the chart/graph into the *current* window) |
| (right click or control +click on Mac) | + | CRT Mathematics At or Above Proficiency Trends (empty chart/graph area) | ⇆ | Select Measures... / Filter / Pivot / Report Type / Format Report / Show Information Bar — Grid / Bar Chart / Stacked Bar Chart / 100% Stacked Bar Chart / Line Chart / Line Chart with Markers / Pie Chart (Report menu popup) |

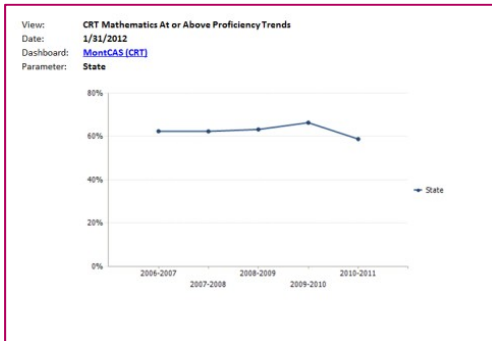| | | | |
|---|---|---|---|
|  (right click or control +click on Mac) | + |  (data element) | ⇌  (data menu popup) |

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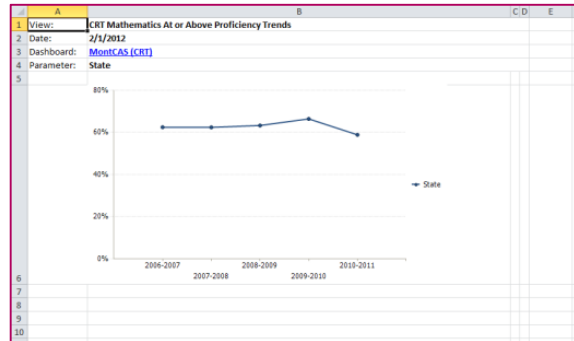## HOW DO I PRINT/DOWNLOAD DATA FROM A DASHBOARD?

Click the Viewing button and choose either the *Export to Excel* or *Export to PowerPoint* from the menu. The individual chart/graph either can be saved or printed using the software program.

If you do not want to use Excel or PowerPoint, you can print by:
- Maximizing the chart/graph *(click on the chart/graph title **or** use the Viewing button and select Open in a New Window)* **then**
- Use the browser's printing function *(this may require changing the page orientation from portrait to landscape)*


**PowerPoint**


**Excel**


**Web Browser**