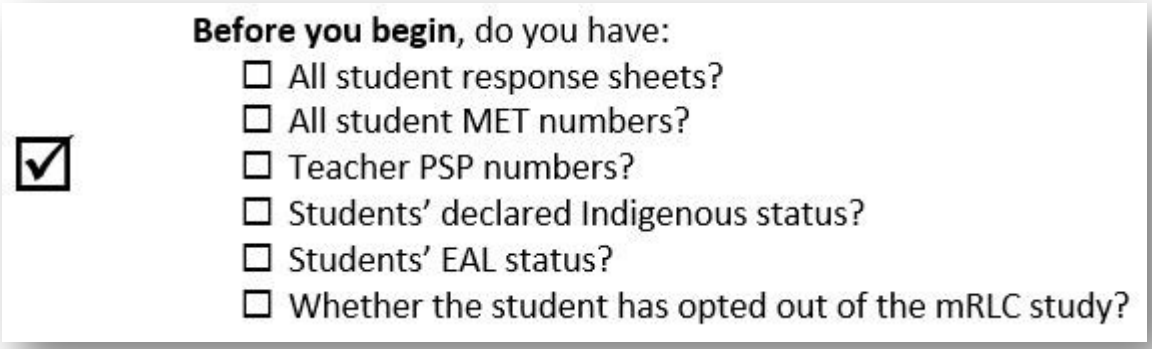
Data Collection and Reporting Tool

User Guide & Implementation Manual

Numeracy Achievement Project

v. 2.3b
June 18, 2018

1 CONTENTS

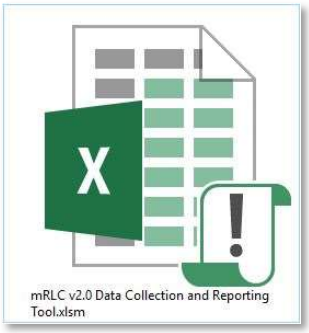


2 GETTING STARTED

The mRLC Data Collection and Reporting tool is designed to score raw data from student test responses and return individual student reports as well as a summary reports for class, school, and division groups.

Use these reports to help students identify learning needs, and to identify outcomes where different teaching and learning strategies may help students.

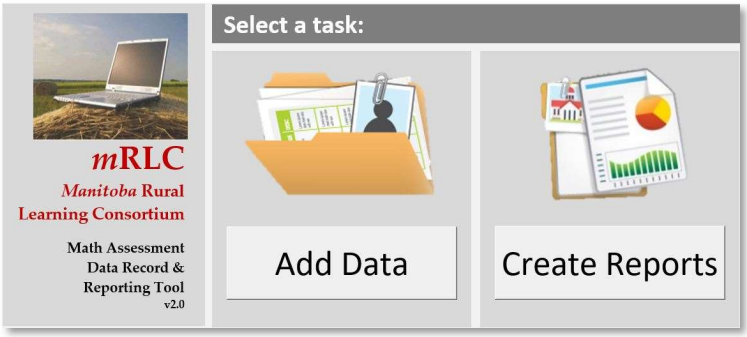
The tool was created on a PC using Excel 2016 and is not likely to function fully on any version older than Excel 2013. Macros must be enabled. Excel for Apple computers has different features than the PC version; Apple computers may not be able to run the data tool. **For best results, use a PC with the newest version of Excel.**



Find and double-click the data tool file. Note that the version 2.x data tool is no longer grade specific and is designed to accommodate all participating grades. The file will need updating each year as new test events are administered.

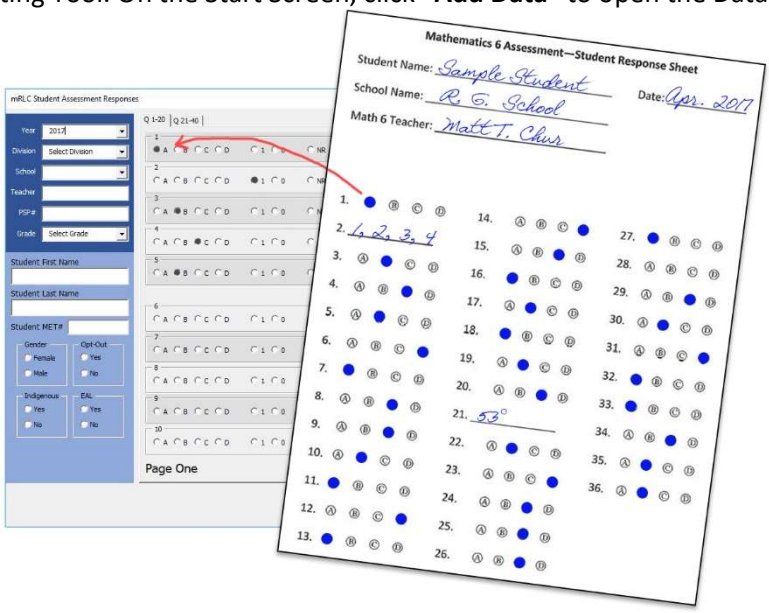
Depending on your computer's security settings, you may see a Security Warning when the file is opened.

Click "**Enable Content**". This gives the tool permission to run scripts required to function. The start screen will appear giving you options to add data or to generate reports.



3 DATA ENTRY WINDOW

Once students have completed the assessment, collect their response sheets and open the mRLC Reporting Tool. On the Start Screen, click "**Add Data**" to open the Data Entry Window.



The first set of fields in the dark blue area will be the same for all students in a class. The contents of these fields will remain in place for the entire data-entry session. If data entry is not completed in one session, the first block of fields will need to be entered again when data entry is resumed.

- Enter the test year
- Select the student's division from the drop-down menu
- Select the student's school from the drop-down menu
- Enter the name of the student's **teacher*** and his/her PSP number
- Select the student's grade from the drop-down menu

  Once the year and grade are selected, the number of question fields will adjust to match the number of questions in the selected test event.

* If data entry takes more than one session, it is important that the **teacher name is identical** to the previous session (the computer sees "John Smith" and "J Smith" as different people.)

The following fields are unique for each student

- Enter the student's first name, last name, and MET number
- Identify the student's gender
- Identify whether the student has **opted out** ** of participating in the mRLC study.
- Identify whether the student has positively declared Indigenous identity
- Identify whether the student is recognized as an English as an Additional Language learner.
- Enter the student's response for each question as it appears on their bubble sheet. If the student made no response, select NR.

**** Student full-name and MET number is critical.** As data is collected across schools and divisions, the MET number is used to differentiate students with the same name from different locations.

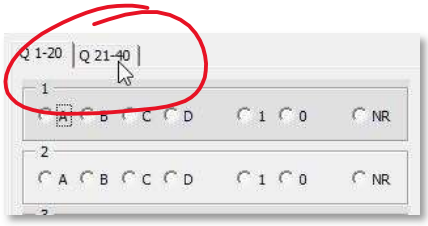
Users have found it helpful to enter data with a colleague. One reads the student responses while the other enters responses into the program.

4 VALIDATING AND ADDING STUDENT DATA

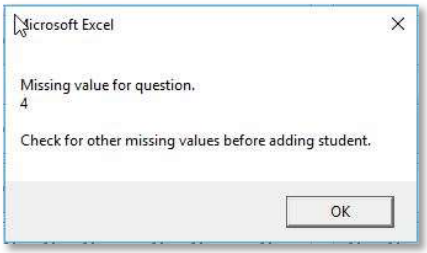
There is a response field for each question. Select the button that matches the student's response on the bubble sheet: ABCD for multiple choice questions, 1 or 0 for written responses, or NR if the student did not respond to the question.

Questions 1-20 are on the first page of response fields. Access questions 21 to other pages by clicking the page tab.

When all of student's responses are entered click the green "**Add student data"** button. Before adding the data to the record, it will check for missing values.



Address any errors that are indicated. If no errors are indicated, the student's responses will be added to the record.



A confirmation message will appear indicating that the student data was successfully added to the data set.

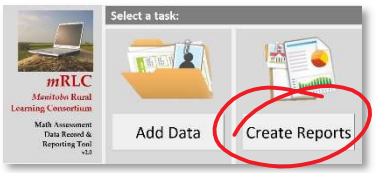
Click "**YES**" to return to the data entry window and enter the next student's responses. Notice that the year, division, school, teacher, and grade have retained the information from the previous entry.

Click "**NO**" to exit the data entry window. A script will run to ensure all newly added data is connected to the reports. This may take a few minutes. Please be patient.

At any time, click the 'X' in the top right corner of the data entry screen to exit WITHOUT adding the entered data to the tool.

Save and back-up your data file. Really.

SAVE and back-up your work.



5 VIEWING RESULTS

From the Start Screen, click "**Create Reports**". Select data using the filters on this screen.

5.1 SELECTING ALL AVAILABLE DATA

Clear category filters by clicking the large button in the left margin, or clearing each filter separately using the filter icon.

Only one grade should be included in a report.

5.2 SELECTING A DATA SAMPLE

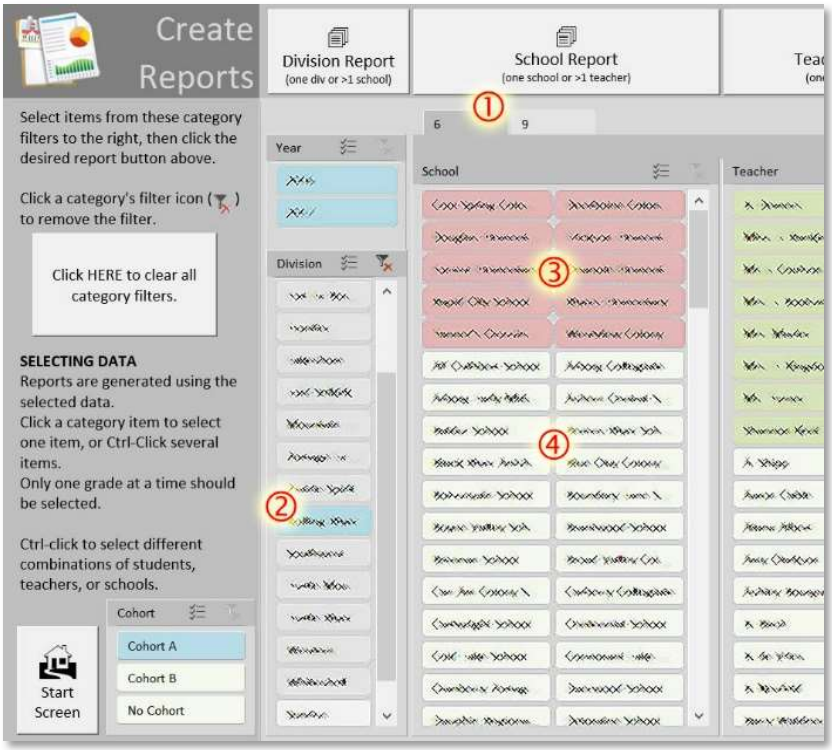
There are seven filter categories:

Grade ⇨ Year ⇨ Division ⇨ School ⇨ Teacher ⇨ Student

Generated reports will include ONLY those items highlighted in the filter categories. Control-Click to select more than one item. Use the filter buttons or the Clear All button to remove filters and work with ALL available data.

Making a selection in one category will automatically filter data in the other categories. For example, if Autumn Leaf School Division (ALSD) is selected, the school filters will adjust to show only schools in the ALSD; the teacher filter will show only ALSD teachers, and the student field will show only ALSD students.

Likewise, if a single teacher is selected, the corresponding division, school, and students will also be selected. The buttons for values that are filtered out will be dimmed. **Clear filters to include all data from a category**.



① Grade selection tabs.
*Select only **ONE grade** at a time.*

② A selected division
*The division filter icon is active because the division was **selected by a click**. The selected division button is a bright colour. The excluded division buttons are grey.*

③ Schools in the selected division
*The school filter icon is not active because these schools were **selected by another filter**, namely the division filter. Selected items are a bright colour.*

④ Schools not in the selected division.
*These schools were **excluded by another filter**, namely the division filter. The excluded items are yellow*

The Cohort and Study Designation items are used for division reports, or mRLC reports where participants entered the study in different years. Generally few people will need these buttons – keep this filter cleared.

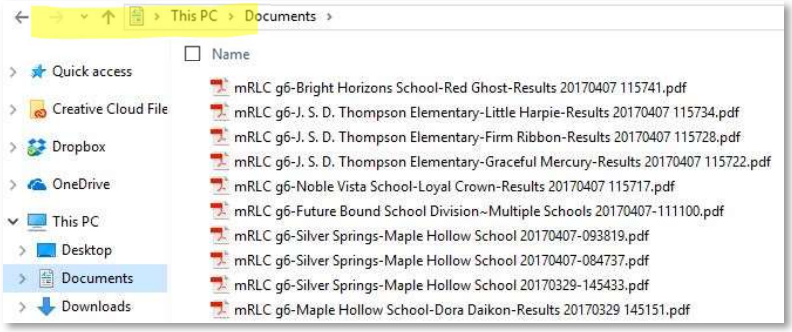
5.3 SELECTING A REPORT

After selecting the desired data set, click one of the report buttons at the top of the Reports screen to generate a PDF report. The chart below describes the type of data visualizations in each report.

	Student Report *(for 1 student)*	**Teacher/Class Report** *(for 1 class, or >1 student)*	**School Report** *(for 1 school, or >1 teacher)*	**Division Report** *(for 1 division, or >1 school)*
Title page with a **description of selected data** included in the report		X	X	X
Graph of **combined strand averages**		X	X	X
Full-text of **curricular outcome statements** addressed in the selected test		X	X	X
Graphs of **combined outcome averages** for each strand alongside the outcome statements		X	X	X
Graphs showing **strand averages by demographic** for all students (gender, declared Indigenous status, and English as Additional Language status)		X	X	X
Table showing **individual student strand averages**		X	X	
Table showing **individual student outcome results**		X	X	
Table showing **teacher strand averages**			X	X
Graphs of **strand averages by school** Table showing school strand averages				X
Frequency distribution table and graph (histogram) and Graph of **achievement level groupings**			X	X
Table showing **overall average by treatment group**				X
Graph of **strand averages by treatment group**				X
Graph of **individual student strand averages**	X			
Table of student's **individual question results** alongside the corresponding outcome statement	X			

The Student Report is designed to give each students prompt and detailed feedback on the test. Consider generating these reports immediately after the data was entered and having students use their report for portfolio reflection and goal-setting.

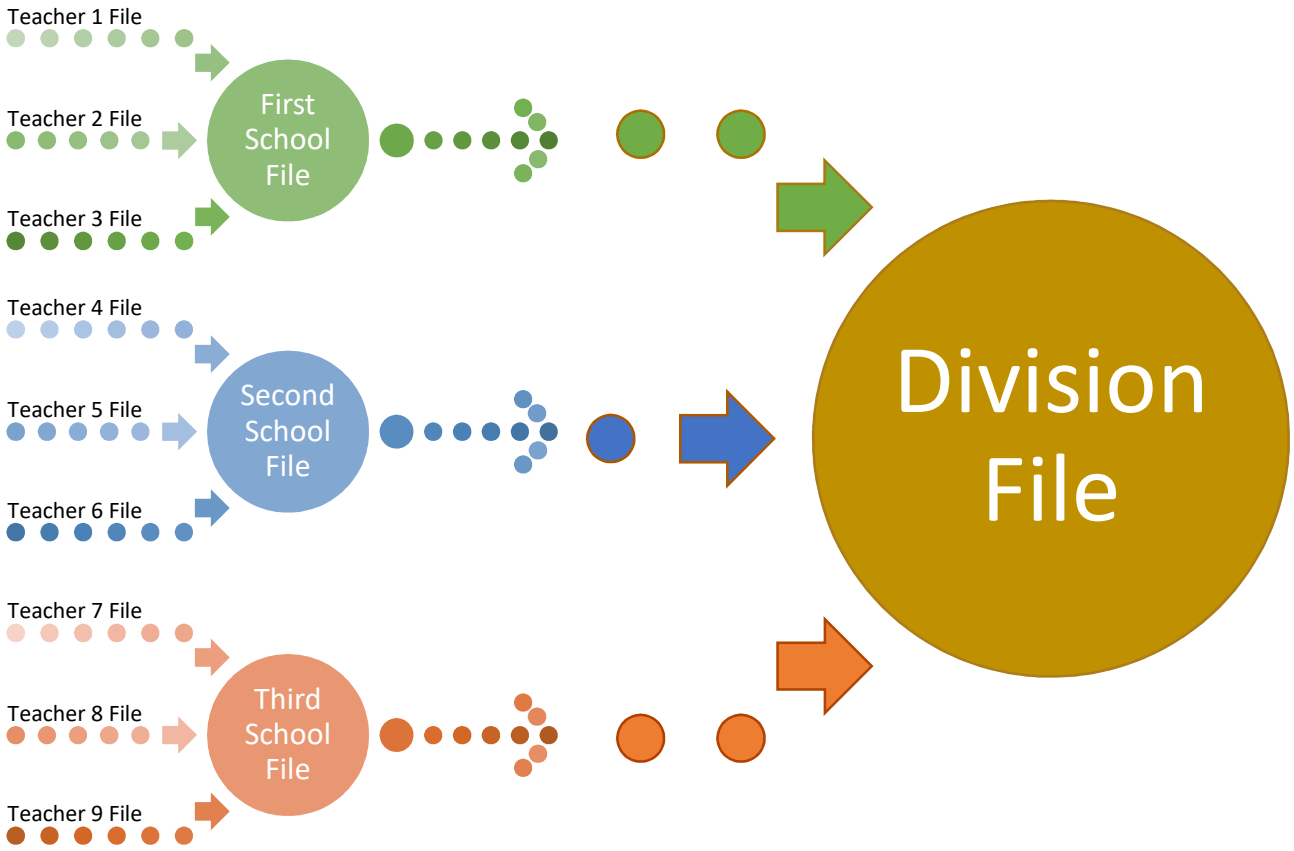
Results are not shown on screen, rather they are exported to PDF files that are automatically named and saved in your Documents folder.



6 SUBMITTING RESULTS

When classroom data entry is complete, save the file. Your school administrator will advise you on how they would like to receive the file. It may be attached in an e-mail or submitted on a removable storage device. Keep a copy for your own use.

7 VISUALIZING WORKFLOW FROM CLASSROOM TO DIVISION



8 Workflow Direction and Privacy

Data privacy is a function of the data collection work-flow.

Teachers start with a blank file and enter their own students into their own classroom file. Each teacher will then have only his/her own data.

Teacher files are forwarded to the school administrator and combined into one school file. Each administrator will then have only his/her own school's data.

School files are forwarded to the division administrator and combined into one division file. Division staff will then have only their own division's data.

Division files are forwarded to the mRLC.

9 Teacher's File

1. Each teacher will download a **blank data file** from this Dropbox link

   goo.gl/IWbhvQ

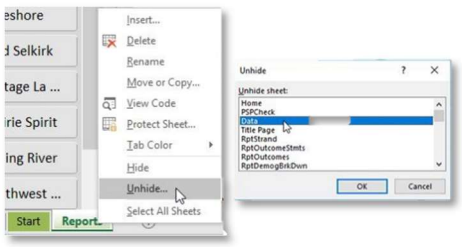
2. Enter the student data from the bubble sheets into the data tool.
3. Generate desired reports.
4. Rename the file to include the teacher's name.
5. Keep a copy and **forward the class data file to the school administrator**.
6. *Each teacher's files will contain only data from their own students.*

10 School's File

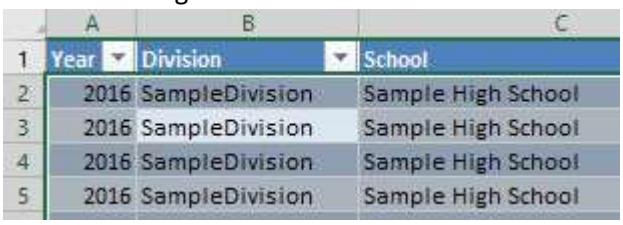
1. All data from each of the teacher's files must be copied and pasted into one single file.
2. Select one of the **teacher's files (data source)** to become **the new school file (target destination)**. Rename the file to the school's name.

10.1 Copying Source Data

3. Open a teacher's file (data source) as well as the new school file (target destination)
4. Select the red DATA tab in the source teacher's file.
   a. If the red DATA tab is not visible, right click on one of the tabs at the bottom of the screen and select "UNHIDE" then select DATA from the list and click OK.
5. Click anywhere in the table of values to select a cell.
6. Press **CTRL-A** on the keyboard to **select all** the student's data.

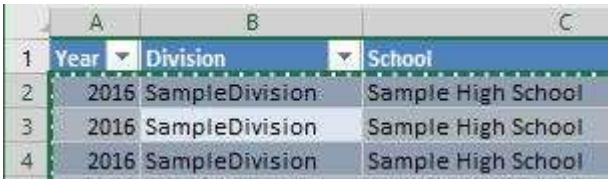


The sheet will get darker to show that cells are selected.



	A	B	C
1	Year	Division	School
2	2016	SampleDivision	Sample High School
3	2016	SampleDivision	Sample High School
4	2016	SampleDivision	Sample High School
5	2016	SampleDivision	Sample High School

7. Press **CTRL-C** on the keyboard to **copy** all the selected data.
   An animated border will appear showing that cells within the border have been copied.

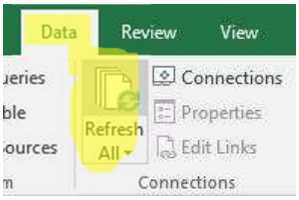


	A	B	C
1	Year	Division	School
2	2016	SampleDivision	Sample High School
3	2016	SampleDivision	Sample High School
4	2016	SampleDivision	Sample High School

10.2 Pasting Source Data Into Target

8. Switch to the new target school file.
9. Select the red DATA tab in the target file.
10. Press CTRL- Down Arrow to navigate down to the first blank row
11. Click inside the leftmost empty cell in that first blank row.
12. Press **CTRL-V** on the keyboard to **paste** all the selected data

13. When all data is entered into the file, click on the DATA menu and click the REFRESH ALL button. This may take a few minutes to process, please be patient.



14. Keep a copy and **forward the school data file to the Division Office**.
15. *Each school's files will contain only data from its own school.*

NOTE!

The previous version of the Data Collection and Reporting tool required users to paste values. This is no longer necessary. All grades can simply copied and pasted into the same file.

11 Division's File

1. All school's data must be copied and pasted into one single file.
2. Select one of the school's files (source) to become the new school file (target). Rename the file to the Division's name.
3. Follow the steps in section 10 above.
4. *Each division's file will contain only data from its own division.*
5. Keep a copy and **forward the school data file to the mRLC**.

12 TROUBLESHOOTING

Q. The data pasted into the target file isn't appearing in the charts or graphs.

A. Click on the START menu and click the REFRESH ALL button. This forces the spreadsheet to establish connections with the newly added data. The Refresh may take several minutes to complete depending on how much data is there, and how many files are open. If the problem persists, download a fresh copy of the data tool and copy/paste the data into the new file. (See instructions in this guide on "Copying Source Data".)

Q. We are having one individual do all our data entry? How do we get a teacher's data to them without also giving them everyone else's data?

A. In the reports page, select a teacher's name and generate a teacher/class report. This gives the teacher access to a print copy of their classroom data. Individual student reports can also be generated from a combined file.

Q. How can we see the year-over-year data comparisons?

A. Ensure that all desired years are selected on the reports page by Ctrl-Clicking on each year, or clearing the year filters.

Q. Students from past years are appearing in reports. How do I prevent that?

A. Ensure that only the desired year is selected on the reports page.

Q. Some of the graphs in the report are simply showing the same thing over and over again.

A. Ensure you have selected the report that best describes your selected data. If a single teacher is selected for a division report, the divisional averages, school averages, and classroom averages will all be the same because the data includes only one class.

Q. Some student responses were entered incorrectly – how can I correct the errors?

A. You can get in behind the scenes and fix data... it depends how comfortable you are with spreadsheets. If you're not comfortable with it, send a copy of the file with the student name, the question, and the student's response sheet to mrlcsupport@macfarlane.ws with a description of the incorrect data and it can be done for you.

If you want to give it a go here's how:

1. first - **MAKE A BACKUP OF YOUR FILE**
2. right click on one of the tabs at the bottom and select UNHIDE
3. select DATA and click OK
4. There is one row for each student response. Find the desired student.

5. In column O (Response) correct the student's response.
6. Then, in column P (Result (1/0) indicate whether the newly recorded response was correct (1) or incorrect(0)
7. right click on the DATA tab at the bottom and select HIDE
8. Go to the Student Dashboard and click the REFRESH CHARTS AND TABLES button

All your charts and data should be updated with the correction.

Q. Some "alien" student are appearing in my files. How can I get rid of the Zzyzzx data?

A. Zzyzzx is placeholder data and should have been deleted automatically after the first student was entered. However, if they are still there, here are the steps to delete those entries. If you're not comfortable with doing this, send a copy of the file to mrlcsupport@macfarlane.ws and it can be done for you.

1. first - **MAKE A BACKUP OF YOUR FILE**
2. right click on one of the tabs at the bottom and select UNHIDE
3. select DATA and click OK
4. There is one row for each student response. You'll see the first bunch will be xyzzy.
5. Right click on each of the xyzzy row numbers and select DELETE ROW. (You can click and drag on the row numbers to select more than one)
6. right click on the DATA tab at the bottom and select HIDE
7. Go to the Student Dashboard and click the REFRESH CHARTS AND TABLES button

Q. I'm getting errors about macros or scripts or VBA and trust issues.

A. The tool makes heavy use of coded commands to automate processes. The user's trust settings must allow access to VBA and Macros.

1. first - **MAKE A BACKUP OF YOUR FILE**
2. Click the yellow "Enable Editing" box if it appears.
3. Click the yellow "Enable Content" box if it appears
4. Click on FILE ⇨ Options ⇨ Trust Center
5. Click the TRUST CENTER SETTINGS button Trust Center Settings -> Macro Settings
6. Select "Enable all macros", and
7. Check "Trust access to the VBA project object model
8. Click OK
9. Click OK again

If desired, reverse steps 4 and 5 to return to your previous security settings.

13 PROJECT VOCABULARY

Numeracy Achievement Project, the official name of the mRLC mathematics network, with Ted and Laura.

Cohort A, The original, 2016/2017 mRLC Network *teachers* now continuing in year two of Professional Learning in 2017-2018.

Action Group A, The *students* of Cohort A teachers, over any number of years.

Cohort B, The second group of mRLC Network *teachers* now entering year one of Professional Learning in 2017-2018.

Action Group B, The *students* of Cohort B teachers.

Baseline Data Group, *all* students who wrote the June 2016 Assessment.

Baseline Assessments, The common mathematics assessments given in grades 6 and 9

Baseline Year, for Cohort A and Action Group A is 2016

Control Group, The students of all *schools*, in subsequent years, who wrote the June 2016 Assessment, who are NOT students of Cohort A or B.

2016 - 2018
Data Collection and Reporting Tool created for the
Manitoba Rural Learning Consortium
Numeracy Achievement Project
http://www.mrlc.ca

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