

NEO LEARNING SYSTEMS

ASSESSMENT TEMPLATE REQUIREMENTS

JULY 2017

VERSION 1.2

CONFIDENTIAL

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1 OVERVIEW

The Assessment Template functionality will be primarily housed within the Teacher App. It is intended to provide teachers with the ability to setup assessments (that is select any number of questions) without the need to specify a date or target; this will be called a “template”. These templates can then be used repeatedly in the future for any class or target.

1.1 PROJECT OBJECTIVES

The project must meet the following general objectives (specific objectives and project deliverables will be covered in other sections of this document).

- A new screen will need to be added to the Teacher App. This new tab will be called “Templates”.
- The current Assessment screen will need to be modified to accommodate this new functionality. That is, the ability to select from a pre-defined template.
- Database collection additions will be required to accommodate this new templates functionality.
- Extend the Administration App functionality to include a template tab where an admin user can create Public templates.

2 DATABASE

This section will only show any new collections created for the app or changes made to existing collections.

2.1 TEMPLATE COLLECTION

Field Name	Notes
templateID	Seven digit number prefixed with “TMP”. Unique ID number used to identify the template. A counter will likely be needed to keep track of the number.

course	Restricted to one of the valid courses associated with the currently logged in user
grade	Restricted to one of the valid grades associated with the currently logged in user
owner	The user ID of the currently logged in user
ingrade	True or False depending on the grade of questions used to build the template. This should function exactly the same as in the Assessment screen.
outgrade	This is the grade number of the questions used to build the template assuming that it is different than the value in the grade field.
Type	Public or Private. By default any templates created using the Teacher App are of the Private type. Public templates can only be created using the Administration App.

2.2 TEMPLATE QUESTION COLLECTION

Field Name	Notes
templateID	Seven digit number prefixed with "TMP". Unique ID number used to identify the template.
questions	List of question IDs that were selected by the user when building the template

3 TEMPLATES SCREEN

The new Template tab in the Teacher App is where users (whose login role is “teacher”) will be able to create, edit or delete Private templates that they are the owner of. Users will also be able to review the Public assessment templates as well (Public vs Private templates are explained below).

The main difference between Templates and Assessments is that templates can be created without the need to specify a date or a target. Templates can also be reused repeatedly (via the Assessment screen) at any time, even from year to year.

There will also be two types of template: Public and Private. The Private templates are created and owned by the user. As such, **Private templates can be edited and deleted** by the user that owns them. Public templates are system created and are available to all users. However, **public templates cannot be modified or deleted**. Public templates can be used as the basis for users to create their own templates (using a “Save As” process).

3.1 CREATING NEW TEMPLATES

Creating new templates from scratch is very much like creating new assessments. The screens used are in fact the same with fewer options for the user to choose from. For example, templates do not require any dates or a target (see Figure 1 below).

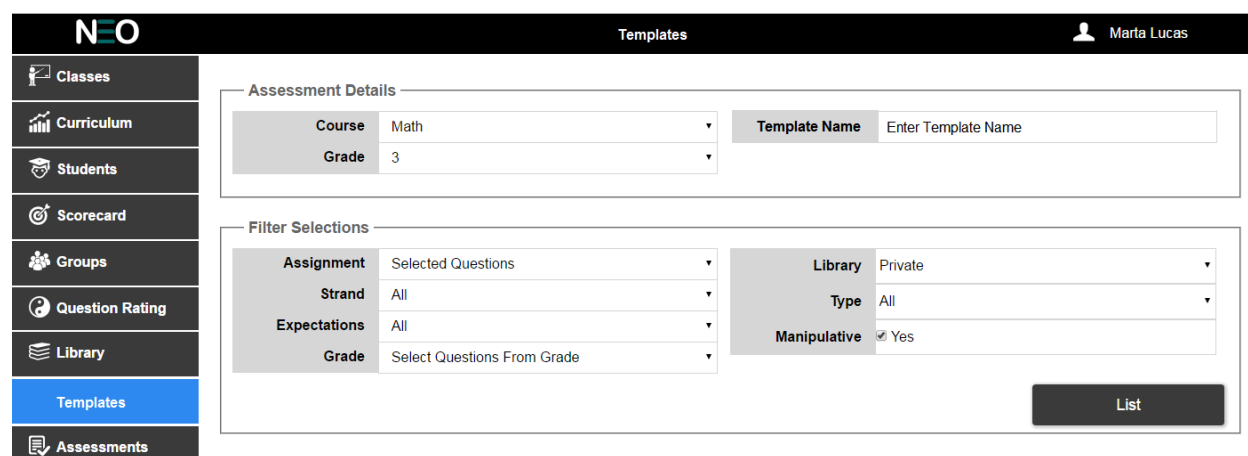


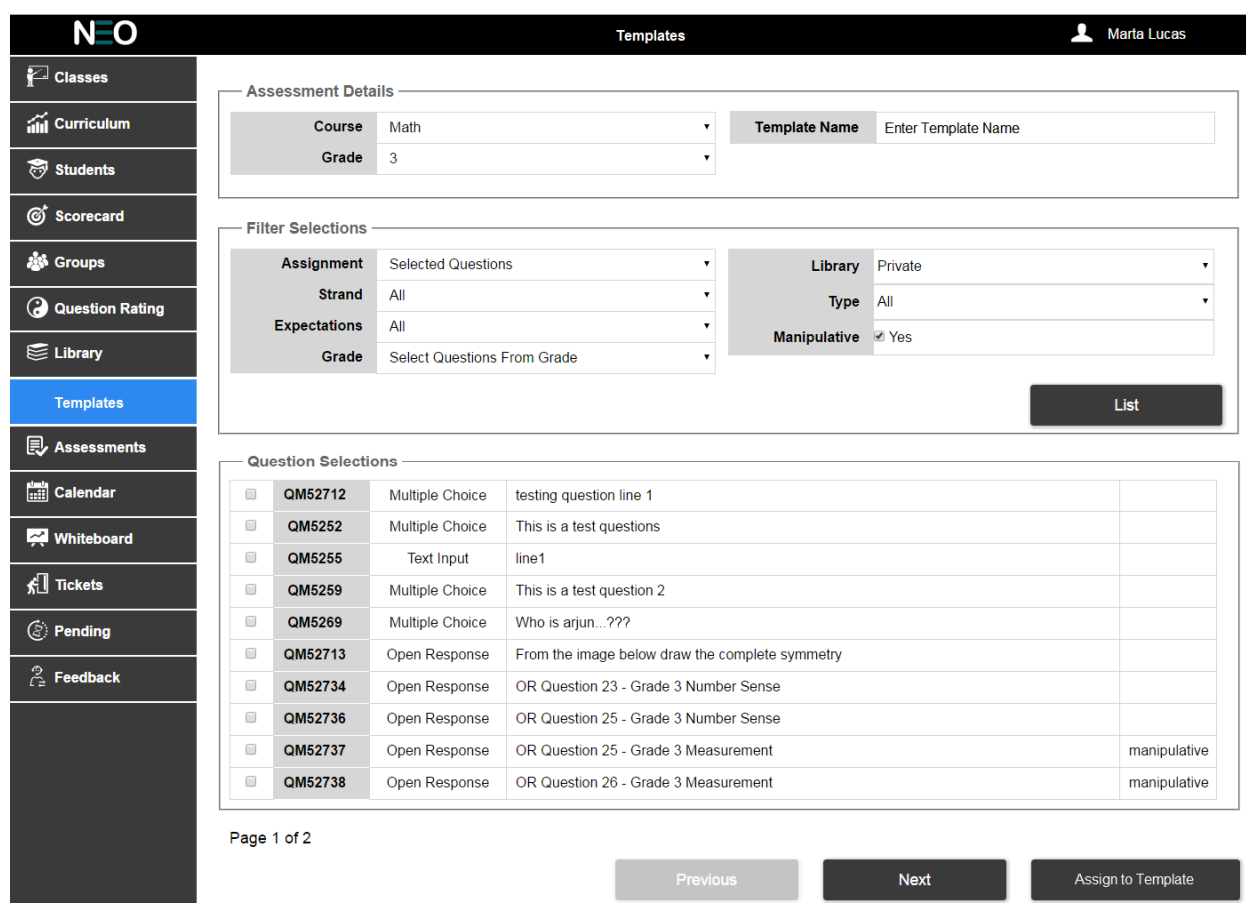
Figure 1: Initial Template Screen

The Assessment Details field set will only have three fields: Course, Grade and Template Name. A template name is required and, in the case of new templates, must be manually entered by the user. If the user does not enter a template name, an **error message should be displayed before** they can save their new template back to the database.

The Course and Grade filter drop lists are populated the same way as in the Assessment screen, and should also default to the first valid values for the currently logged in user.

The Filter Selections field set will function just as it does in the Assessment screen. However, the Assignment drop list filter will have a third option called “Use Template” which will be detailed later in this document.

For “Selected Questions” and “Random Questions” all the other filters are applied as in the Assessment screen. Clicking on the “List” button will query the database accordingly and then reveal the “Question Selections” field set and its related buttons (see Figure 2 below). **Note: this is different than on the Assessment screen where the bottom field set and buttons are always visible.**



The screenshot shows the NEO Learning Systems interface. The top navigation bar includes the NEO logo, the word 'Templates', and a user profile for 'Marla Lucas'. A left sidebar contains various navigation options: Classes, Curriculum, Students, Scorecard, Groups, Question Rating, Library, Templates (highlighted), Assessments, Calendar, Whiteboard, Tickets, Pending, and Feedback.

The main content area is divided into three sections:

- Assessment Details:** Contains dropdowns for 'Course' (Math) and 'Grade' (3), a 'Template Name' input field, and a 'List' button.
- Filter Selections:** Contains dropdowns for 'Assignment' (Selected Questions), 'Strand' (All), 'Expectations' (All), 'Grade' (Select Questions From Grade), 'Library' (Private), 'Type' (All), and a checked 'Manipulative' checkbox.
- Question Selections:** A table listing selected questions with checkboxes, IDs, types, descriptions, and manipulative status.

At the bottom, there is a 'Page 1 of 2' indicator and three buttons: 'Previous', 'Next', and 'Assign to Template'.

	ID	Type	Description	Manipulative
<input type="checkbox"/>	QM52712	Multiple Choice	testing question line 1	
<input type="checkbox"/>	QM5252	Multiple Choice	This is a test questions	
<input type="checkbox"/>	QM5255	Text Input	line1	
<input type="checkbox"/>	QM5259	Multiple Choice	This is a test question 2	
<input type="checkbox"/>	QM5269	Multiple Choice	Who is arjun...???	
<input type="checkbox"/>	QM52713	Open Response	From the image below draw the complete symmetry	
<input type="checkbox"/>	QM52734	Open Response	OR Question 23 - Grade 3 Number Sense	
<input type="checkbox"/>	QM52736	Open Response	OR Question 25 - Grade 3 Number Sense	
<input type="checkbox"/>	QM52737	Open Response	OR Question 25 - Grade 3 Measurement	manipulative
<input type="checkbox"/>	QM52738	Open Response	OR Question 26 - Grade 3 Measurement	manipulative

Figure 2: Question Selections Field Set Visible

The Question Selection field set behaves just as on the Assessment screen, where questions can be selected and previewed. Also, the Previous and Next buttons will page back and forth between blocks of ten questions.

Clicking on the “Assign to Template” button will take the user to another screen, where they can review the template details and the selected questions (see Figure 3 below).

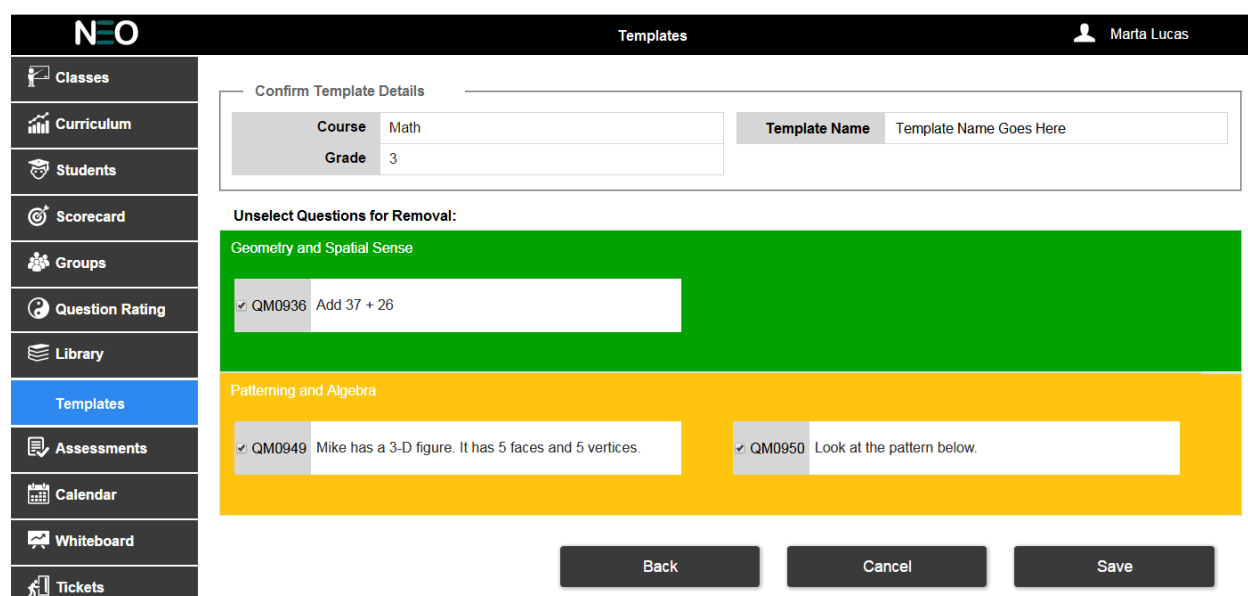


Figure 3: Template Review Screen

The Template Review screen functions similarly as it does in the Assessment process, with a few important differences. While the Course and Grade are read only on this screen, the Template Name field should be writable so the user can change the name without having to go back to the prior screen.

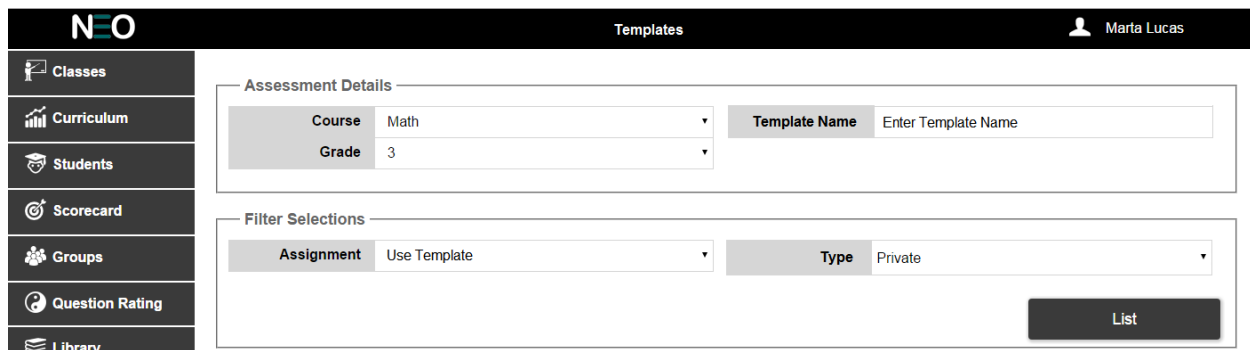
Users should uncheck the question selections boxes to remove a question from the list. **Please note, this is different than how the software currently works.**

Clicking the Save button will write the users selections and template data back to the database, using the Template and TemplateQuestion collections. After the save completes successfully, the user should see a brief confirmation message and then be taken back to the initial template screen (see Figure 1).

Please Note: All user created templates should always save the template type as “Private”. Public templates can only be created using the Administration App which the “Teacher” Role does not have access to. Also, **users can never modify or save any template of type “Public”.**

3.2 CREATING TEMPLATES BASED ON ANOTHER TEMPLATE

The user should also be able to create new templates based on existing templates (either Public or Private). This process is somewhat different in that it requires to be able to select from a valid list of existing templates, and once selected, load those related question into the browser for modification.



NEO Learning Systems

Templates Marta Lucas

Classes Curriculum Students Scorecard Groups Question Rating Library

Assessment Details

Course Math Grade 3

Template Name Enter Template Name

Filter Selections

Assignment Use Template Type Private

List

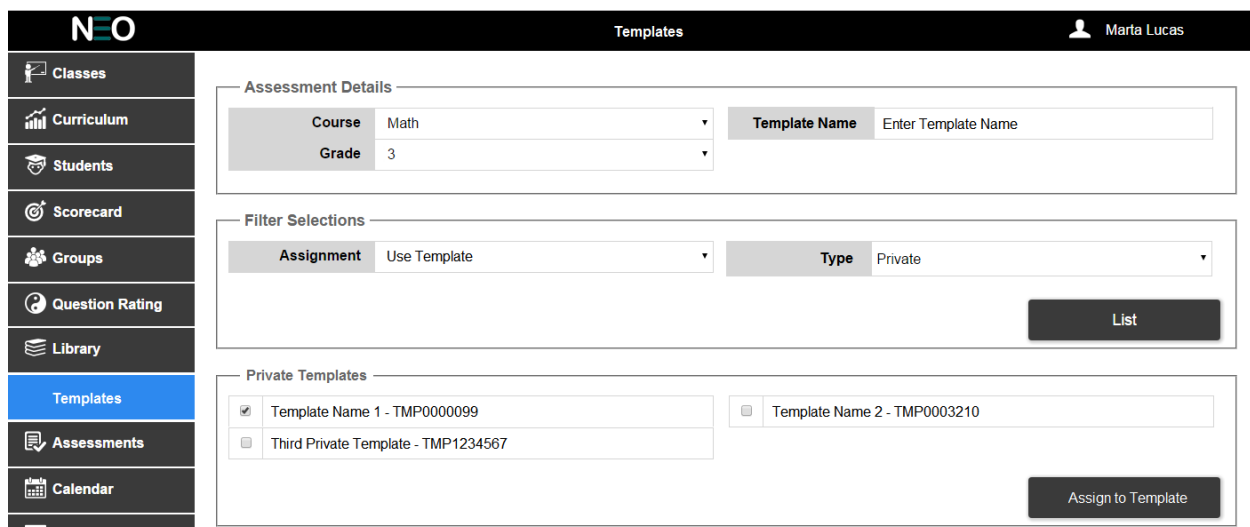
Figure 4: Filter Selections Showing the Use Template Option

To accomplish this, we will need to introduce a new option under the Assignment filter in the Filters Selection field set (see Figure 4 above).

When the user invokes the “Use Template” option, several things will happen. First, all other options within the field set become invisible. Second, the “Type” now refers to template type and not question type. **Please note:** at this time, no other field sets or buttons below the Filter Selections field set should be visible.

Clicking on the “List” button will execute a query against the Templates collection. If the type is set to “Private”, then this query will use the following values as its criteria: Course, Grade, Owner and Type. Where Course and Grade have been user selected, Type is “Private”, and Owner is the ID of the currently logged in user.

The query result is displayed in another field set that is now visible (see Figure 5 below).



NEO Learning Systems

Templates Marta Lucas

Classes Curriculum Students Scorecard Groups Question Rating Library

Assessment Details

Course Math Grade 3

Template Name Enter Template Name

Filter Selections

Assignment Use Template Type Private

List

Private Templates

☒ Template Name 1 - TMP0000099 ☐ Template Name 2 - TMP0003210

☐ Third Private Template - TMP1234567

Assign to Template

Figure 5: List of Templates Field Set Visible

If the type is set to “Public” when the user clicks on the “List” button, then the query will use the following values as its criteria: Course, Grade and Type. Where Course and Grade have been user selected, and Type is “Public”.

The displayed list of templates should follow a left to right, and top to bottom z-pattern. Every listed template should show its name as well as its unique template ID number. Also, all templates on the list should be preceded by a check box for selection purposes; only one template can be selected at any given time.

From here, after selecting a specific template from the list, the process should continue as normal. Clicking on the “Assign to Template” button will take the user to another screen, where they can review the template details and the selected questions (see Figure 8 below).

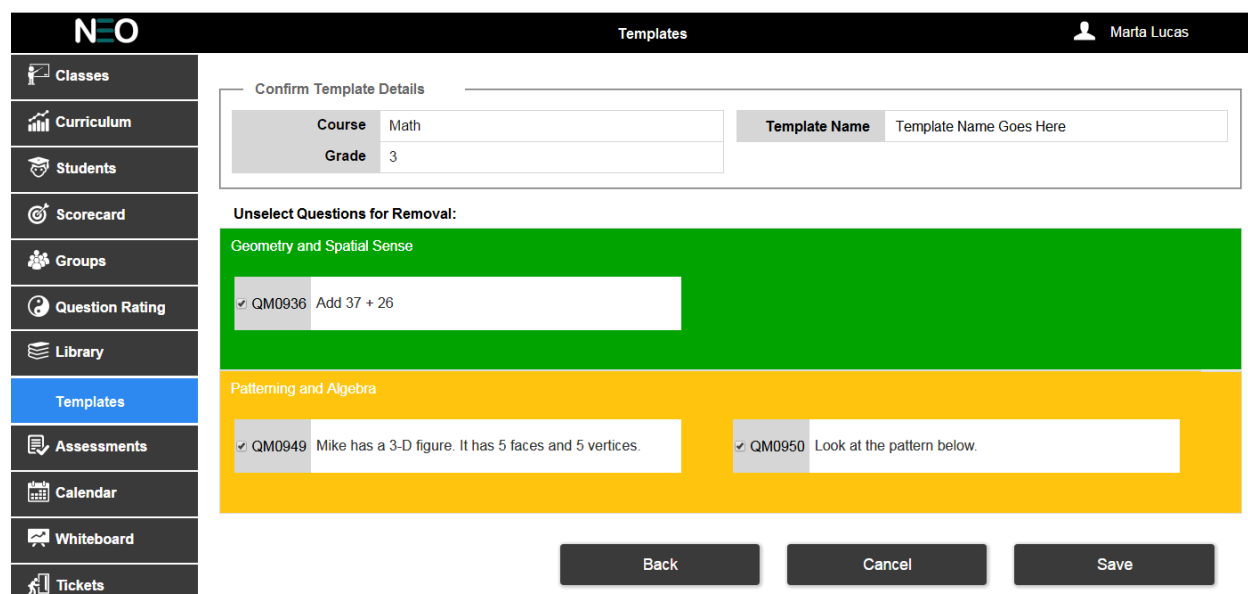


Figure 6: Template Review Screen

The Template Review screen functions similarly as it does in the Assessment process, with a few important differences. While the Course and Grade are read only on this screen, the Template Name field should be writable so the user can change the name without having to go back to the prior screen.

Users should uncheck the question selections boxes to remove a question from the list. **Please note, this is different than how the software currently works.**

Clicking the Save button will write the users selections and template data back to the database, using the Template and TemplateQuestion collections. After the save completes successfully, the user should see a brief confirmation message and then be taken back to the initial template screen (see Figure 9 below).

Please Note: All user created templates should always save the template type as “Private”. Public templates can only be created using the Administration App which the “Teacher” Role does not have access to. Also, **users can never modify or save any template of type “Public”.**

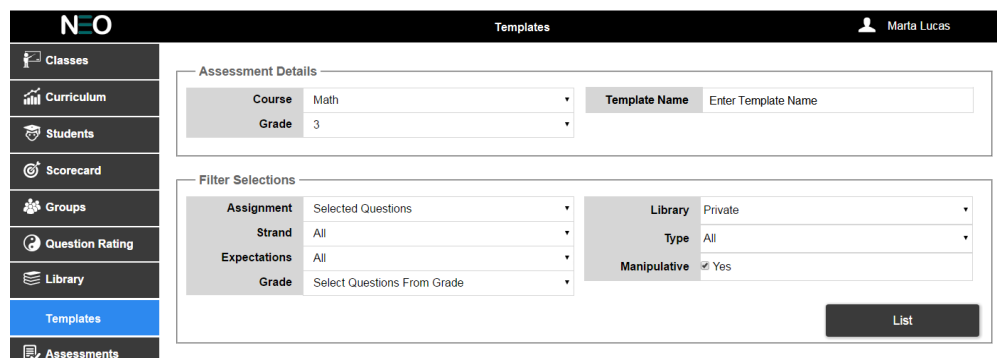
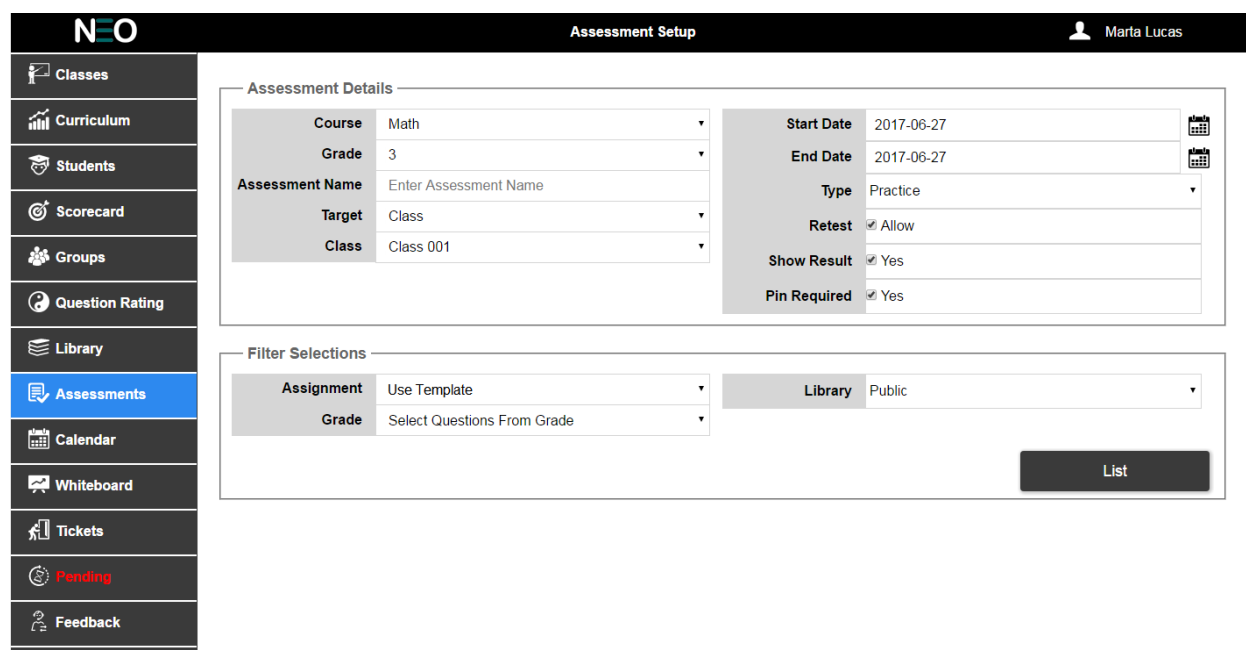


Figure 7: Return to Initial Template Building Screen

4 ASSESSMENT SCREEN

Additional functionality will need to be added to the Assessment setup process to allow for the use of Templates. Specifically, a new drop list option, “Use Template”, will need to be added to the Assignment filter in the Filter Selections Field set (see Figure 10 below).



The screenshot shows the NEO Assessment Setup interface. On the left is a sidebar with navigation options: Classes, Curriculum, Students, Scorecard, Groups, Question Rating, Library, Assessments (highlighted), Calendar, Whiteboard, Tickets, Pending, and Feedback. The main area is titled 'Assessment Setup' and includes a user profile for Marta Lucas. It is divided into two main sections: 'Assessment Details' and 'Filter Selections'.

Assessment Details:

Course	Math	Start Date	2017-06-27
Grade	3	End Date	2017-06-27
Assessment Name	Enter Assessment Name		
Target	Class	Type	Practice
Class	Class 001	Retest	<input checked="" type="checkbox"/> Allow
		Show Result	<input checked="" type="checkbox"/> Yes
		Pin Required	<input checked="" type="checkbox"/> Yes

Filter Selections:

Assignment	Use Template	Library	Public
Grade	Select Questions From Grade		

A 'List' button is located at the bottom right of the Filter Selections section.

Figure 8: “Use Template” Filter Selected

Selecting “Use Template” causes the options for Strand, Expectations, Type and Manipulative to become invisible. The Question Selections field set, and the Previous, Next and Assign Assessment buttons are also made invisible as well.

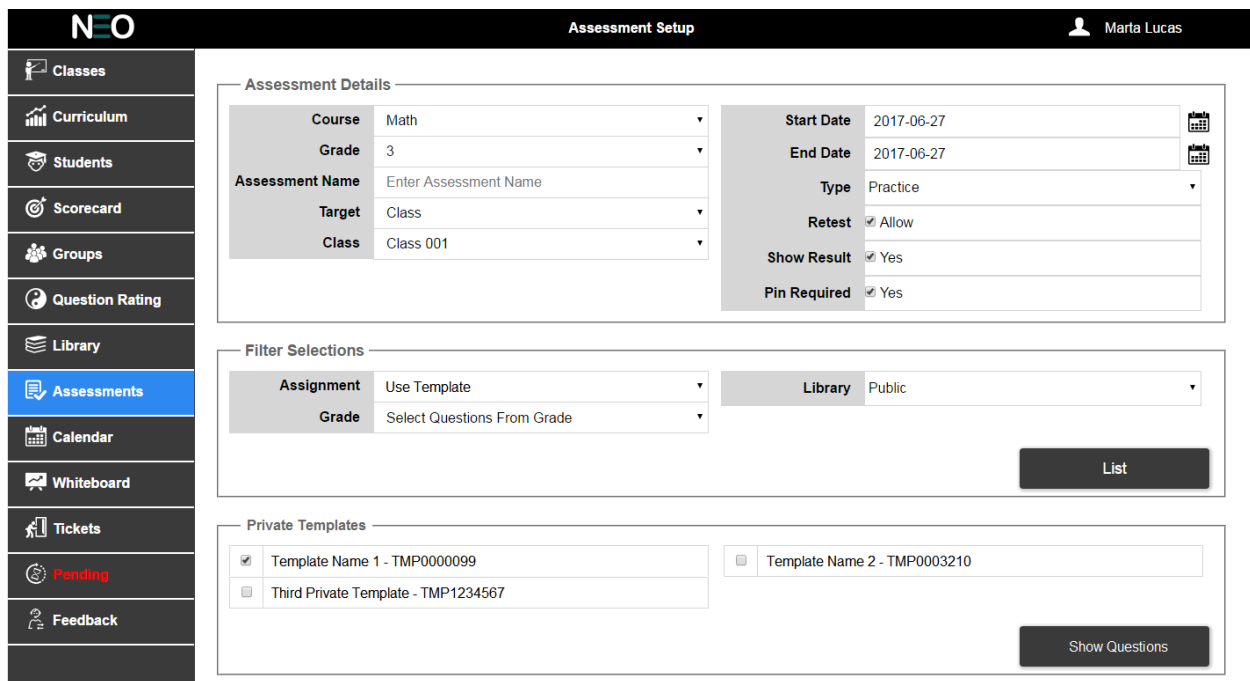
The Library filter now refers to the Template type instead of the type of question (Public or Private). The Out-of-Grade filter is retained as well for template selection purposes.

Clicking the “List” button will reveal a new field set called “Template Selections”. The database Template collection will be queried for a list of valid templates that fit the combination of user selected criteria of: Type (Library), Grade (or Out-of-Grade), Course and Owner. The chart below shows the variations on the query depending on the users’ selections.

Filters Selections for Template Query					
Assignment	Type/Library	Grade	Out-of-Grade	Course	Owner
Use Template	Public	User Selected	<i>Not Applicable</i>	User Selected	<i>Not Applicable</i>
Use Template	Public	<i>Not Applicable</i>	User Selected	User Selected	<i>Not Applicable</i>
Use Template	Private	User Selected	<i>Not Applicable</i>	User Selected	User ID
Use Template	Private	<i>Not Applicable</i>	User Selected	User Selected	User ID

Table 1: Template Query Filter Combinations

The resulting list of valid templates will then be displayed, ordered from left to right and top to bottom (see Figure 11 below).

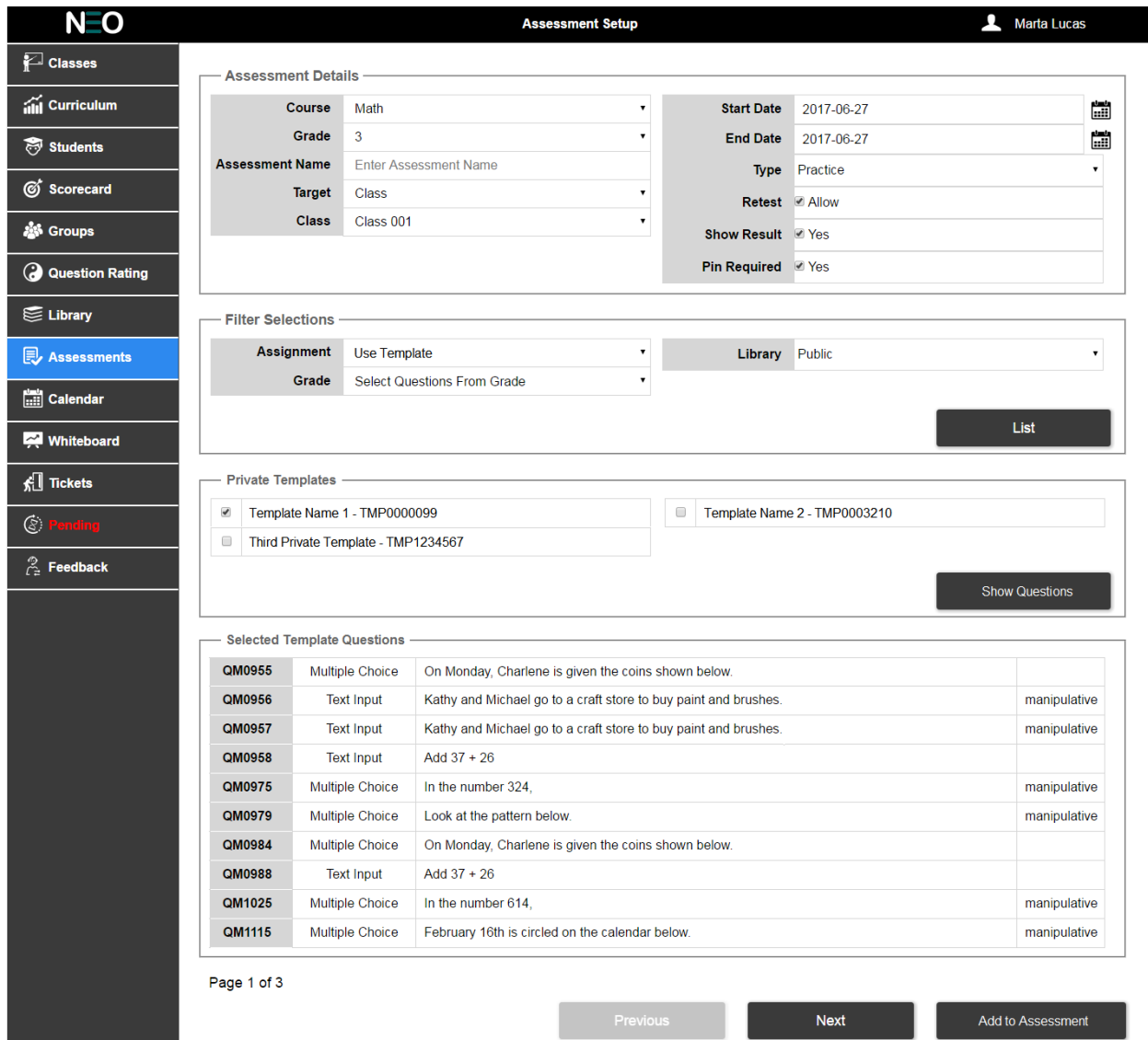


The screenshot shows the NEO Assessment Setup interface. On the left is a sidebar with navigation options: Classes, Curriculum, Students, Scorecard, Groups, Question Rating, Library, Assessments (highlighted), Calendar, Whiteboard, Tickets, Pending, and Feedback. The main area is titled 'Assessment Setup' and includes a user profile for 'Marta Lucas'. Below the title, there are sections for 'Assessment Details' and 'Filter Selections'. The 'Assessment Details' section contains fields for Course (Math), Grade (3), Assessment Name (Enter Assessment Name), Target (Class), and Class (Class 001). The 'Filter Selections' section has dropdowns for Assignment (Use Template) and Grade (Select Questions From Grade), and a Library dropdown (Public). A 'List' button is located below the filter selections. At the bottom, there is a 'Private Templates' section with a list of templates: 'Template Name 1 - TMP0000099' (checked), 'Template Name 2 - TMP0003210' (unchecked), and 'Third Private Template - TMP1234567' (unchecked). A 'Show Questions' button is at the bottom right of this section.

Figure 9: List of Valid Templates Visible

Each item on the list of templates is preceded by a check box for selection purposes. Only one check box may be selected at any given time. Clicking on the “Show Questions” button will make another field

set visible called “Selected Template Questions”. This field set will contain a list of all of the pre-selected questions associated with the given template the user has currently selected.



NEO Assessment Setup Marta Lucas

Classes
Curriculum
Students
Scorecard
Groups
Question Rating
Library
Assessments
Calendar
Whiteboard
Tickets
Pending
Feedback

Assessment Details

Course	Math	Start Date	2017-06-27
Grade	3	End Date	2017-06-27
Assessment Name	Enter Assessment Name		
Target	Class	Type	Practice
Class	Class 001	Retest	<input checked="" type="checkbox"/> Allow
		Show Result	<input checked="" type="checkbox"/> Yes
		Pin Required	<input checked="" type="checkbox"/> Yes

Filter Selections

Assignment: Use Template Library: Public
Grade: Select Questions From Grade

List

Private Templates

☒ Template Name 1 - TMP0000099 ☐ Template Name 2 - TMP0003210
☐ Third Private Template - TMP1234567

Show Questions

Selected Template Questions

Question ID	Question Type	Question Text	Manipulative
QM0955	Multiple Choice	On Monday, Charlene is given the coins shown below.	
QM0956	Text Input	Kathy and Michael go to a craft store to buy paint and brushes.	manipulative
QM0957	Text Input	Kathy and Michael go to a craft store to buy paint and brushes.	manipulative
QM0958	Text Input	Add 37 + 26	
QM0975	Multiple Choice	In the number 324,	manipulative
QM0979	Multiple Choice	Look at the pattern below.	manipulative
QM0984	Multiple Choice	On Monday, Charlene is given the coins shown below.	
QM0988	Text Input	Add 37 + 26	
QM1025	Multiple Choice	In the number 614,	manipulative
QM1115	Multiple Choice	February 16th is circled on the calendar below.	manipulative

Page 1 of 3

Previous **Next** **Add to Assessment**

Figure 10: Selected Template Questions Field Set Visible

The user should be able to preview questions from here by clicking on the Question ID (the usual pop up window should appear). If the template contains more than ten questions, the “Previous” and “Next” buttons can be used to move back and forth between blocks of ten questions.

Clicking on the “Add to Assessment” button will add all of the template questions to the assessment currently being built by the user. It will move the user the next screen in the Assessment process, the confirmation screen pictured below in Figure 13.

NEO

Assessment Setup - Assignment Confirmation

Marta Lucas

Classes

Curriculum

Students

Scorecard

Groups

Question Rating

Library

Assessments

Calendar

Pending

Whiteboard

Tickets

Feedback

Confirm Assessment Details

Course	Math	Start Date	2017-06-27
Grade	3	End Date	2017-06-27
Assessment Name	Assessment Name Goes Hi	PIN	3266
Class	Class 001		

Unselect Questions for Removal:

Number Sense and Numeration

☒ QM0902 Look at the two pattern rules below.

☒ QM0903 Which of the following shows counting forward

Measurement

☒ QM0924 Look at the two pattern rules below.

☒ QM0923 A store has 7 tricycles.

Back

Cancel

Save

Figure 11: Assessment Confirmation Screen Showing New Unselect Process

From this final screen the user may unselect questions to be removed from the assessment. **Please note: this is different than how the software currently works.**

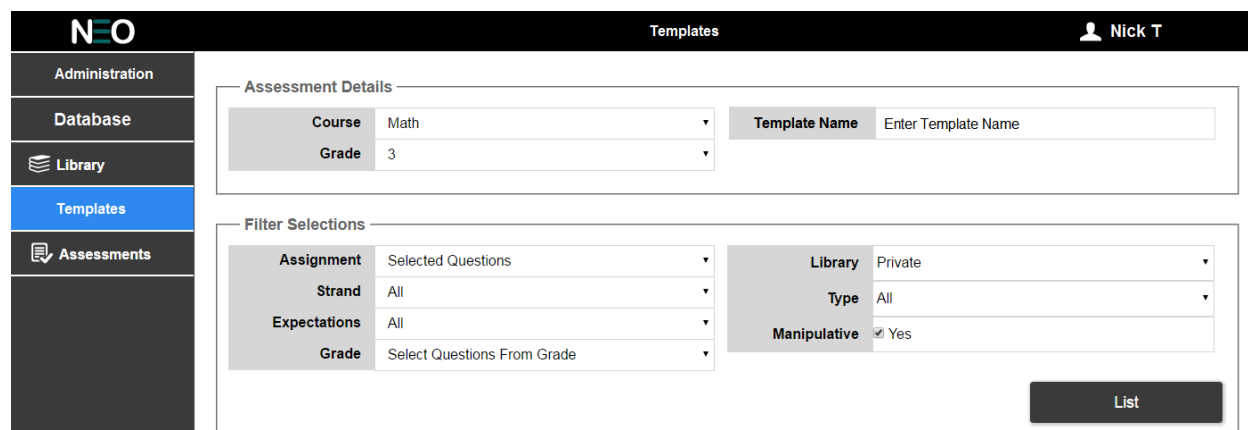
The Back, Cancel and Save buttons will function as they currently do.

5 ADMINISTRATION APP

The ability to create “Public” type templates, for any grade or course, should be incorporated into the Administration App. The process is nearly identical to that in the Teacher App, with a few small differences: **the type of template should default to “Public”** (they still have the ability to make Private templates by changing the filter), and the **Admin user has the ability to modify and delete Public templates.**

5.1 CREATING PUBLIC TEMPLATES

The new Templates tab should be located between the Library and Assessments tabs in the Administration App (Figure 14 below).



The screenshot shows the 'NEO' logo in the top left corner. The top navigation bar is dark blue with the word 'Templates' in the center and a user profile icon labeled 'Nick T' on the right. A sidebar on the left contains navigation links: 'Administration', 'Database', 'Library', 'Templates' (highlighted in blue), and 'Assessments'. The main content area is divided into two sections. The 'Assessment Details' section contains a 'Course' dropdown menu with 'Math' selected, a 'Grade' dropdown menu with '3' selected, and a 'Template Name' text input field with the placeholder 'Enter Template Name'. The 'Filter Selections' section contains four dropdown menus: 'Assignment' (Selected Questions), 'Strand' (All), 'Expectations' (All), and 'Grade' (Select Questions From Grade). To the right of these are three more dropdown menus: 'Library' (Private), 'Type' (All), and a 'Manipulative' checkbox labeled 'Yes' which is checked. A 'List' button is located at the bottom right of the filter section.

Figure 12: Initial Templates Screen in the Administration App

The Assessment Details field set will only have three fields: Course, Grade and Template Name. A template name is required and, in the case of new templates, must be manually entered by the user. If the user does not enter a template name, an **error message should be displayed before** they can save their new template back to the database.

The Filter Selections field set will function just as it does in the Assessment screen. **Please Note: unlike the Teacher App, there is no option in the Assignment filter called “Use Template”.** Instead, there is a third option called: **Modify/Delete Template**. The use of the modify/delete option is discussed in Section 5.2 of this document.

For “Selected Questions” and “Random Questions” all the other filters are applied as in the Assessment screen. Clicking on the “List” button will query the database accordingly and then reveal the “Question Selections” field set and its related buttons (see Figure 15 below). **Note: this is different than on the Assessment screen where the bottom field set and buttons are always visible.**

NEO

Administration

Database

Library

Templates

Assessments

Templates

Nick T

Assessment Details

Course

Math

Grade

3

Template Name

Enter Template Name

Filter Selections

Assignment

Selected Questions

Strand

All

Expectations

All

Grade

Select Questions From Grade

Library

Private

Type

All

Manipulative

☒ Yes

List

Question Selections

<input type="checkbox"/>	QM52712	Multiple Choice	testing question line 1	
<input type="checkbox"/>	QM5252	Multiple Choice	This is a test questions	
<input type="checkbox"/>	QM5255	Text Input	line1	
<input type="checkbox"/>	QM5259	Multiple Choice	This is a test question 2	
<input type="checkbox"/>	QM5269	Multiple Choice	Who is arjun...???	
<input type="checkbox"/>	QM52713	Open Response	From the image below draw the complete symmetry	
<input type="checkbox"/>	QM52734	Open Response	OR Question 23 - Grade 3 Number Sense	
<input type="checkbox"/>	QM52736	Open Response	OR Question 25 - Grade 3 Number Sense	
<input type="checkbox"/>	QM52737	Open Response	OR Question 25 - Grade 3 Measurement	manipulative
<input type="checkbox"/>	QM52738	Open Response	OR Question 26 - Grade 3 Measurement	manipulative

Page 1 of 2

Previous

Next

Assign to Template

Figure 13: Question Selections Field Set Visible

Clicking on the “Assign to Template” button will take the user to another screen, where they can review the template details and the selected questions (see Figure 16 below).

NEO

Administration

Database

Library

Templates

Assessments

Templates

Nick T

Confirm Template Details

Course

Math

Grade

3

Template Name

Template Name Goes Here

Unselect Questions for Removal:

Geometry and Spatial Sense

☒ QM0936 Add 37 + 26

Patterning and Algebra

☒ QM0949 Mike has a 3-D figure. It has 5 faces and 5 vertices.
☒ QM0950 Look at the pattern below.

Back

Cancel

Save

Figure 14: Template Review Screen

The Template Review screen functions similarly as it does in the Assessment process, with a few important differences. While the Course and Grade are read only on this screen, the Template Name field should be writable so the user can change the name without having to go back to the prior screen.

Users should uncheck the question selections boxes to remove a question from the list. **Please note, this is different than how the software currently works.**

Clicking the Save button will write new template data back to the database, using the Template and TemplateQuestion collections. After the save completes successfully, the user should see a brief confirmation message and then be taken back to the initial template screen (see Figure 14).

5.2 MODIFYING AND DELETING PUBLIC TEMPLATES