

## 4. SPIDER - Content Creation

This session is aimed at staff wishing to create & deliver more advanced content types such as interactive quiz sessions and interactive web media. It covers:

- assessment creation with SING & SWIMS
- importing web content with pageLoader
- creating web pages with pageBuilder

**Target audience:** staff with significant experience of SPIDER; content creators  
**Requirements:** advanced computer user; basic HTML knowledge an advantage

### 4.1. Assessment creation with SING & SWIMS

The SPIDER system has an advanced assessment engine which has tools that allow you to quickly and easily build questions and quizzes using text, HTML and images. The system makes use of the Macromedia Shockwave system, so the shockwave plugin is required on users computers. Question types available include multiple choice (single and multiple answer), drag and drop, labelling and numeric. All types support HTML tags in the question and response options, and images can be loaded into each question. Options in each question can be presented in random or set order.

#### 4.1.1. Creating Questions

To prepare an assessment, you first need to create questions, then build a quiz from those questions.

To make a question:

1. login to SPIDER
2. click on the `quiz build` link under `Self Assessment`
3. a new window will open; click on the `questions` button
4. after a few moments, the SWIMS question generator will load
5. click on the `new` button, and you will be shown a list of question types
6. click on the `MCQ single` button
7. the screen will now show a form allowing you to fill in the details of the single answer MCQ
8. type a question in the `Question` section e.g. "What is the capital city of France?"
9. in each of the `choice n` sections, type in some text answers e.g. "Paris", "Lyon", "Marseilles", "Bordeaux"
10. Click the `correct` radio next to the correct answer (Paris)

At this point you have a complete question, but you can enhance this further using a number of options:

1. you can present the answer options in random sequence if you click the `randomise order?` box
2. you can add feedback for each option by clicking on the `feedback` button next to the option and typing text into the box that appears e.g. for the Paris option, you could type "That is correct, Paris is the capital city of France" or for the Lyon option, you could type "Sorry that is wrong. Lyon is a large French city, but the capital city of France is Paris"
3. you could load an image with into the question. Click the `get image` button and a new window will open. This page works just the same way as the `myFiles` tool so you can create directories, load and delete images. Click the `Browse` button and load `france.gif` from the `U:\staff\SPIDER_training\SINGnSWIMS` directory then click `OK` to load the file. Click the `use` link next to the file name to select the file and return to SWIMS. You will see the image now appears at the bottom right of the SWIMS screen. Click on the bottom right square next to the image to make it black – this determines where on screen the image will appear.

4. you can give your question a category which allows you to filter your questions later on when you have a large number on the system. e.g. "test MCQ" or you could give it a class code number and/ or subject e.g. "BB101 genetics", "13101 structures"
5. with the `status` option you can also determine if you want to keep the question for your own use (private), share it with other staff in your cluster (cluster) or make it available to anyone on SPIDER (public)

When you are happy with all your selections, click the disk icon at the top left of the screen to `save` your question.

We will now make another question, this time a drag and drop style:

1. click on the `new` question button then the `drag and drop` button
2. the screen will now show a form with similarities to the MCQ question, except this time there are `Option to drag` and `Matches` sections. You can think of the former as the "answers" and the latter the "questions".
3. Type "Match the following cities (on the left) with the country they are in" in the `Question` section
4. Type "Edinburgh" in the first `option to drag` box and "Scotland" in the first of the `Matches` sections
5. Repeat this with "London" & "England", "Cardiff" & "Wales", "Dublin" & "Ireland", "Paris" & "France" etc

the question is now finished, so you can save it, or add in further options as with the MCQ, such as feedback. In this case, the feedback has 2 boxes, one for the correct response e.g. "Correct, Edinburgh is in Scotland", the other for when the user is wrong e.g. "Wrong, the city that is in Scotland is Edinburgh". Again you can determine if the options are randomised, give the question a status and category. Once you are done, click the save button (disk at top left).

We will now create one last question before putting our questions into a quiz.

1. Click the new button and this time select the Numeric question type
2. Numeric question types allow you to ask questions that use formulae to generate answers, which gives you the option of creating a question that changes each time. The formula can use "variables", which allow you to use ranges or random numbers to make the question different each time.
3. Type the following into the `Question` section: "What is the mean value of \$a, \$b, \$c and \$d?". Each of the \$a, \$b represent a variable, which will be replaced by a number when the student views the question
4. type numbers into each of the \$a `variable range from` and `to` sections e.g. putting 10 in the `from` box and 20 in the `to` box will mean \$a will be presented as a number between 10 and 20
5. repeat this for each of \$b, \$c and \$d.
6. Now we have all our variables set, we need to put the calculation formula in the `answer formula` box. Type in  $(\$a+\$b+\$c+\$d)/4$
7. If you want to allow for rounding differences, you can allow a percentage error by putting a value in the `% err` box, e.g. 5 will allow a 5% error.

That's the question done. Again you can add feedback, set a status and category for the question or add an image if you want. When you have finished adding these, click the save button.


If you want to edit a question, instead of clicking the new button, click the edit button. A list of your questions will be shown in a drop down and you can select the one you wish to edit. Once you have made your changes, you can save it as before. Note that once a question is included in a live quiz (visible to students, see below) you cannot edit a question without first removing the quiz from student access.

### 4.1.2. Creating Quizzes

Now that we have a number of questions, we can use them to construct a quiz. Click on the `quizzes` button at the bottom of the screen, which takes you to the make quiz screen. The first section of this allows you to edit or create new quizzes. The lower section allows you to delete questions from the system, export questions or load in a question file. For now, type a name for your quiz in the `Make a new quiz` called section and click OK. Your quiz has now been created, so click `next` to continue. You will now see a screen outlining a number of options. You can change quiz details and add or remove questions from a quiz. For the moment we will just add in the questions we have just made.

1. scroll to the lower section of the screen and you should see a list of questions, your own and any public questions authored by other users, in the `Add Questions to this quiz` section.

2. You can filter this list by selecting a Category from the dropdown, or entering a string to limit the questions to a particular category you entered when building the questions
3. tick the boxes next to the questions you want in your quiz
4. click the add questions to quiz button and your

The page will update, and you will now see the questions you have added appear in the **Questions** already in the quiz section. You can easily add more or remove questions by ticking the box next to the question(s) and clicking the delete or add question to quiz buttons. You can also view a question alone to test it by clicking on the  icon. This will open a new window and show the question as it will appear in the quiz.

To test the quiz, click on the `test` button at the bottom of the screen. This takes you to the `Test quiz` page, which allows you test not only your own quizzes but those of your colleagues. Select your quiz from the dropdown list and click the `go` button, and you can try your quiz out.

Once you have tested your quiz, return to the quiz by clicking the `quizzes` button, then selecting it for editing in the `Edit quiz` drop down. This time look at the top section, that allows you to alter the quiz details. This section allows you to

- rename the quiz
- set the quiz category:
 

self assessment	– quiz gives mark and feedback to each question, total mark via myQuiz results
formal assessment	– quiz gives no feedback or marks, total mark given via myQuiz results
formal exam	– quiz gives no feedback or marks, no mark shown in myQuiz results (intention is to return marks via myExam results/ EEL)
- allowed attempts
- present questions in set or random order
- unlock quiz to allow student access

If you make any changes here, just click the `update quiz` button to store them. The last item in the list is `Classes with access to quiz`. By default, this will be empty, but as well as marking the quiz as "students have access to quiz", you need to assign it to one or more classes.

1. click the `edit classes` button
2. select the class(es) you want to have access to the quiz
3. click the `save` button

Once this is done, you need to return to the class resource page and add in the assessments and quizzes content category if it doesn't already exist for your chosen class. If you have made your quiz accessible to students, then it will appear to them via this category. If it is not available to students, staff users can still access the quiz this way, but it will have a locked padlock icon next to it as in the image shown.



### 4.1.3. Advanced quiz functions - batch delete, export and load

Returning to the make quiz page (quizzes button), toward the bottom of the page there are options to delete questions from the database, export and load quizzes.

#### **Delete multiple questions**

This option takes you to a screen that lists all the questions you have ownership of in the system. The layout is essentially the same as for adding/ removing questions from a quiz, but in this case the question **will be deleted from the system**, and will no longer be available.

1. you can filter the list of questions using the filter option as in the quiz builder screens.
2. check the box(es) next to the question(s) you want to delete
3. click the `delete questions from database` button
4. you will be asked to confirm your decision before the questions will be deleted. If you `cancel` you will be returned to the selection page, if you `confirm delete` you will see confirmation of the questions deletion.

If a question is still associated with a quiz it will **not** be deleted and a message will be shown to indicate which quizzes it is currently associated with. You need to remove the question from the quiz then delete it. When you have noted any messages, click the "done" button to return to the selection screen.

### **Export quiz questions**

This option allows you to save an entire quiz to a file which you can download for safekeeping or reload into the system.

1. select the quiz you want to save from the drop down list
2. click the `Export` button
3. your quiz will be packaged into a file, and link to the file displayed.
4. right click on the link and choose `save as` or hold the shift key before clicking to open the file for saving.

### **Load question file**

This option is the inverse of exporting.

1. click `Browse` to find the question file you want to load into the system,
2. click the load button.

If the load is successful, the questions will be listed as they are included in the database. You can then add the questions to a quiz as above.

## **4.2. pageLoader**

This tool allows you to load a package of web files contained within a zip archive file. Each file will be parsed by the system to incorporate the site security and allow user preferences to be used within the web content, as well as adding customised navigation to the files. Once loaded into the system, the module of web content can be configured with various properties.

1. return to the SPIDER home page
2. under staff tools click the `pageLoader` link under the `Web Modules` heading

you will see the `pageLoader` page. On the left are any modules you have uploaded, on the right a tool to upload a new module. To upload a module:

1. enter a title for the module in the module title box
2. click the `Browse` button and select the zip file containing all your HTML, images etc e.g.  
U:\staff\SPIDER\_training\pageLoader\basic.zip
3. click the `OK` button

The system will now upload and extract the files from the zip archive, putting a message on screen to show you its progress. When it is done, it will return you to the `pageLoader` page. This time you will see your new module on the left, with a `process content` button under the action heading.

1. click the `process content` button
2. the system will now look through all the files to add authentication and other system requirements so that the files will work correctly as a module on SPIDER.
3. scroll to the bottom of the page and click the `done` button
4. you will be returned to the `pageLoader` page

Now that the files have been processed you can see 2 new options under the action button – `delete` which will remove the module and all the associated files and `manage` which allows you to manage your web module within SPIDER

1. click on the `manage` link
2. you will be shown the `Managing module page`

In the module details section you can change:

- the module name
- what class its associated with

- whether it is live (visible to students)
- availability dates
- pre-requisite modules (WIP)
- linked assessment (quiz)

Once you have made any changes, click *save* to store them.

At the bottom of the page in the *Module pages* section, each web page is listed and you can sort the rank order that they will appear in by altering the values in the drop downs. When you are happy with the order, click the *save* button to store the changes.

### rank 0

Giving an item a rank of 0 means it won't appear in the auto-generated navigation list in the module. This is useful if e.g. you want to have a page that is linked to from other pages in your HTML, but doesn't fall into a sequence of pages

To view your pages, click on any of the links under the *File name* heading, or if you have made the module live for a class, go to the class resource page and view it via the *web modules* category (if this category doesn't exist, you can add it via the class tools).

## 4.3. pageBuilder

The SPIDER pageBuilder tool allows you to construct web pages without needing to edit and upload standard HTML files. In addition it includes all the standard SPIDER features, such as ensuring your files are secure, as well as automatic page navigation within the web module, simple incorporation into any class already on the system and time delayed delivery and removal from view.

1. return to the SPIDER home page
2. under staff tools click the *pageBuilder* link under the *Web Modules* heading

### 4.3.1. Objects

The basic unit of the pageBuilder system is the **object**. An object can simply be a block of text, or some HTML. Graphics such as a gif or jpg image file can also be loaded as objects, as can video, chime molecules, flash and shockwave movies. Once loaded, these objects can be combined to create **pages**. Multiple pages can be combined to create a **module**.

#### Create a new object

1. click on the *new object* link.
2. select the type of object you want to "build"
3. fill in a name for the object and if you want, a category (this can be used later to filter the listings of your objects)
4. for text or HTML objects, type your text/ HTML in the box provided
5. for images or other files, click the *Browse* button and select the file you want to upload. If the file is a movie, chime object or flash/ shockwave object, put in the height and width parameters
6. click the *save* button and your object will be created

**1** **Build new object**

Select media type:

text

html

image

**2**

<b>Object Name:</b>	<input type="text"/>
<b>Category:</b>	<input type="text" value="new"/> <input type="button" value="next"/>
<b>Image file:</b>	<input type="text"/> <input type="button" value="Browse..."/>
<input type="button" value="save"/>	

Try creating an HTML object and either load an image, chime molecule, movie or director file from the folders in U:\staff\SPIDER\_training\pageBuilder

If you return to the pageBuilder home page, you will see your new objects listed to the right of the screen. If you have given your objects a category, you can filter the list to only show objects that have a certain category using the `limit to` selector.

### 4.3.2. Pages

PageBuilder pages are made up from one or more pageBuilder objects. For example, a page could be made from a text object, an image and an HTML object. Each object is arranged in grid on the page.

#### Create a new page

1. click on the `new page` link on the pageBuilder home page
2. fill in a name for the page. You can also add a category (this can be used later to filter the listings of your pages)
3. click save changes
4. your new page will be saved

Once you have created a new page, you will be shown a page describing your new page and what objects it contains. At first there will be no objects, as shown in the image.

**2** Edit page - Page Builder - page 5

Page Details	
Page Title:	Page Builder - page 5 ID: 13
Category:	pageBuilder

Page Grid	
Header:	none
Body	
add section	add section
Footer:	none

save changes

The page grid is made up of a Style sheet, a Header, one or more Body sections and a Footer. The style sheet, header and footer are optional, but you should include at least one body object. Each section of the page grid contains a select item that lists all your objects.

To add objects onto your page grid:

1. select a style sheet object (optional)
2. select a header object (optional)
3. select a left and/or right Body object
4. select a footer object (optional)

When you are happy with your selections, click the save changes button and your changes will be saved and the page immediately updated. The Page Preview section below the page grid will update to show you approximately what your page will look like. You can add further body blocks to the page grid to create longer pages or make use of multiple objects to create a single page.

### 4.3.3. Modules

Modules are created from number of pageBuilder pages. Pages added into a module are automatically "stitched" together by the inbuilt navigation. Modules are assigned to a class and can be given availability dates to restrict student access, and only made live when it is completed using the live option.

#### To create a new module

1. click on the new module link

- fill in the module title and class
- a category and availability options can also be assigned
- click the add button to save your module

1 **Title:**

**Class:**

**Live?**

**Options**

**Category:**

**Available from:**  /  /

**Until**  /  /   
*leave blank for always available*






You will now see the *Managing module* page. The module details for pageBuilder modules are exactly the same as for pageLoader modules, so refer to the above section for instructions on this section. The lower half of the page, the module pages section, allows you to add in any pages you have made with pageBuilder.

Added pages are automatically assigned the next rank, so will appear at the end of the module.

To add a new page to a module

- select the page from the drop down
- click the add page button

2

Module Pages	
Page Title	rank
 <a href="#">Page Builder - page 1</a>	<input type="text" value="1"/>
 <a href="#">Page Builder - page 2</a>	<input type="text" value="2"/>
 <a href="#">Page Builder - page 3</a>	<input type="text" value="3"/>
 <a href="#">Page Builder - page 4</a>	<input type="text" value="4"/>
 <a href="#">Page Builder - page 5</a>	<input type="text" value="5"/>
<input type="button" value="save"/>	

3

To remove a page from the module:

- click on the bin icon next to the page you want to remove

To change the order (ranks) pages are presented in

- select the rank(s) that you want the page(s) to have in the select list
- click the save button to store the new rankings

To view your pages, click on any of the links under the *File name* heading, or if you have made the module live for a class, go to the class resource page and view it via the *web modules* category (if this category doesn't exist, you can add it via the class tools).