

Integration with Blackboard via LTI 1.1 and the Basic LTI tools block

Introduction

This guide utilises PebblePads LTI 1.1 integration in conjunction with the Basic LTI tools block.

The LTI Tools block provides a number of features to provide easy access to PebblePad directly from Blackboard Learn. These include single sign on to PebblePad and the transfer of group information from Blackboard to support course activities in ATLAS.

The Basic LTI tool is not exclusively used for integration with PebblePad and is widely used within the Blackboard community for providing extra LTI functionality to other systems, therefore not all of the settings available within the block are supported/used by PebblePad/ATLAS. This guide covers only settings that are relevant to PebblePad/ATLAS.

Known issues

- There are currently no known issues affecting this type of integration

Links to external resources

- The block can be downloaded from: <https://github.com/OSCELOT/bb-basiclti>
- Full documentation can be found here: <http://www.spvsoftwareproducts.com/bb/basiclti/>

What is covered in this guide and what is not?

As with most systems there are a number of options that are visible to you but not all are used by our platform, therefore only those that are relevant to the tools configuration are referred to in this document.

The following tasks are covered in this guide

- Prerequisites
- Setting up Pebble+
- Setting up ATLAS
- Setting up Linking to Resources
- Setting up a module
- Testing the configuration

The following tasks are NOT covered in this guide

- Using the integration as an Instructor
- Using the integration as a Learner

What can you do, what are the limitations of this implementation and what is not supported?

With this type of integration you WILL be able to:

- Single Sign On from Blackboard to Pebble+
- Single Sign On from Blackboard to ATLAS
- Create PebblePad accounts upon single sign on for new users
- Synchronise Blackboard course members with an ATLAS workspace
- Synchronise Blackboard groups to ATLAS sets
- Pass grades back to Blackboard
- Create assets based on content item links
- Auto submit responses created via content item links

The following limitations are in place:

- Unable to use PebblePocket app if LTI is the only method of authentication
- Unable to search for/share with users who haven't already logged into the system
- Auto submit will pick the first workspace the learner is a member of when the content item has been added to multiple workspaces.
- Blackboard's Grade Centre will only show one grade per LTI link (Does not support multiple assignments in ATLAS) – the last grade released will be displayed. Multiple LTI links can be added to the one Blackboard course, each linking to a different workspace.
- You can only synchronise members / grades for workspaces created via Blackboard. It is not possible to link an existing workspace to a Blackboard course.
- Each created link is unique. Once a link has been deleted it is not possible to relink Blackboard back to its corresponding ATLAS workspace.

Prerequisites

- Latest version of the Basic LTI tools block (currently 3.2.4)
- A Pebble+ account with resources
- Administrative access to Blackboard
- Creator level access on a Region in ATLAS

Notes on Membership Synchronisation

- Membership syncs will be carried out whenever an Administrator or Instructor connects to PebblePad via a Blackboard course
- Students connecting from Blackboard to PebblePad initiate a membership sync if no synchronisation has taken place in the preceding hour
- An automatic, overnight memberships sync takes place if there were no synchronisations during the preceding day

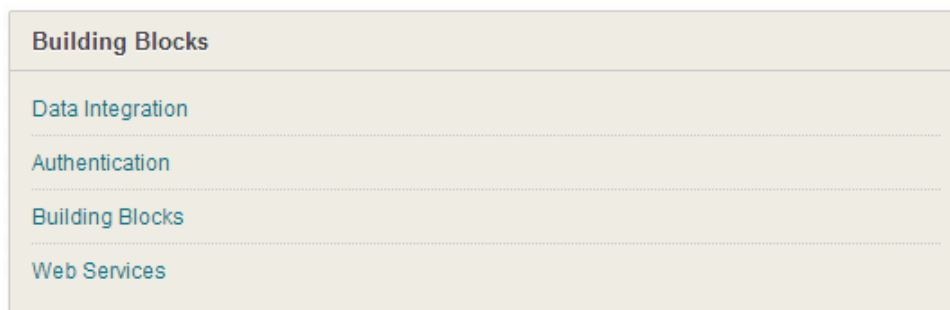
LTI Express

LTI Express is alternative workflow that has been designed by us to help streamline the process that an Instructor uses to provision a workspace and roll out resources to their Learners. LTI Express is ideal for both single and multiple assignment workflows and handles the direction of flow through the system for a user in the following ways:

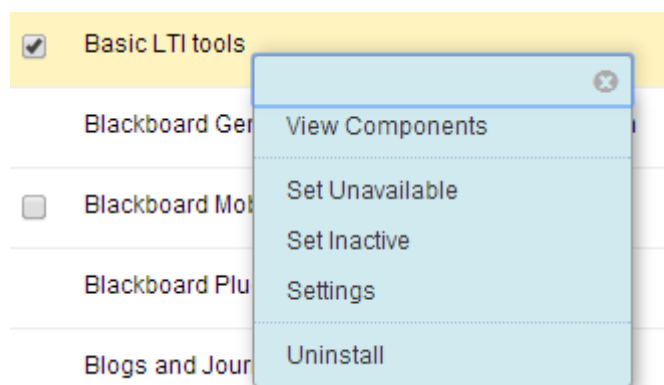
- If a workspace doesn't exist and an instructor with the Creator role in ATLAS clicks on the link they will be taken to the workspace wizard screen.
- If the workspace exists then they'll be taken to that workspace.
- If a Learner clicks on the link and no resource is present on the workspace then they'll be taken to the Pebble+ dashboard
- If a resource is associated with the assignment then they'll be taken to Pebble+ and the resource will be loaded for them. The link will honour the usage capability of the resource as well as auto submit if needed.

Setting up the Basic LTI tools block

1. Login to Blackboard with an account that has System Administrator permissions.
2. Click on 'System Admin' from the menu ribbon and then click on 'Building Blocks' from the Building blocks panel



3. Click on 'Installed Tools' and then 'Upload Building Blocks' tab.
4. From the 'Install Building Block' page click on the 'Browse' button.
5. Locate the .war file and after selecting it click on 'Submit'.
6. You will be taken to a page where you need to select 'Approve' (this appears at the bottom of the page). Once the block has been approved 'Return' has to be selected to continue the setup.
7. Click on the Option menu next to Basic LTI Tools and choose 'Settings'.



8. Click on 'System Settings'. Enter the 'Name', 'Description' and 'Administrator email' for your institutions Blackboard. The only other settings you should enable here are:
 - 'Outcomes' and 'Membership' displayed under the 'Services' section; and
 - 'Instructors can register new tools' and 'Enable mashup tool' displayed under 'Other Options'.
9. Click on the 'Submit' button to save and return to the 'Basic LTI tools' page.
10. Click on 'Default Settings', then 'Data Settings'.

Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

Context Data

Setting	Value
Context ID	Checked
Context Title	Checked

Personal Data

Setting	Value
User ID	Required by tool
Value to use for user ID	Username
SourcedId	Checked
User name	Required by tool
Email	Required by tool
User Roles	Checked

Course Role Mappings

Blackboard course role	LTI role	ATLAS role
Instructor	Instructor	Lead Tutor
Course builder	Content Developer	Tutor
Teaching Assistant	Teaching Assistant	Tutor
Marker	Mentor	Moderator
Student	Learner	Member
Guest	N/A	N/A

11. Click on the 'Submit' button to return to the 'Basic LTI tools' page
12. Click on 'Default Settings' and then select 'Launch Settings'. We suggest that Pebble+ opens in a new window so select 'New Window' under the 'Open Tool In' option. You do not need to change any of the other options, select submit to confirm the defaults.
13. Click on 'Submit' to return to the 'Basic LTI tools' page.

Any LTI tools you now add will be created with these settings by default. You can change them for individual tools as required.

Setting up Pebble+

1. Click on 'System Admin' from the menu ribbon and then click on 'Basic LTI tools' in the 'Tools and Utilities' panel.
2. Click 'Register New Tool'
3. Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

NAME	
Name	PebblePad Pebble+
Description	Your Personal Learning Space

CONNECTION DETAILS	
Launch URL	Testing: https://apptest.pebblepad.com/login/login/sso UK: https://v3.pebblepad.co.uk/login/login/sso AUS: https://v3.pebblepad.com.au/login/login/sso US: https://pebblepad.com/login/login/sso CA: https://app.pebblepad.ca/login/login/sso
Consumer key	To be provided by Support
Shared secret	To be provided by Support
Signature method	HMAC_SHA1

OTHER SETTINGS	
Icon file	http://tinyurl.com/ppplus

4. Click on the 'Submit' button to return to the 'Basic LTI tools' page
5. Finally check the checkbox for the tool and click 'Content menu' then 'Tools' to add the tool to the tools menu.

Setting up ATLAS

1. Click on 'System Admin' from the menu ribbon and then click on 'Basic LTI tools' in the 'Tools and Utilities' panel.
2. Click 'Register New Tool'
3. Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

NAME	
Name	PebblePad ATLAS
Description	PebblePad's assessment tool

CONNECTION DETAILS	
Launch URL	Testing: https://apptest.pebblepad.com/ATLAS/Accounts/OAuth UK: https://atlas.pebblepad.co.uk/ATLAS/Accounts/OAuth AUS: https://v3.pebblepad.com.au/ATLAS/Accounts/OAuth US: https://pebblepad.com/login/ATLAS/Accounts/OAuth CA: https://app.pebblepad.ca/ATLAS/Accounts/OAuth
Consumer key	To be provided by Support
Shared secret	To be provided by Support
Signature method	HMAC_SHA1

SERVICES	
Outcomes	Required by tool
Memberships	Required by tool
Accept requests for group membership data?	Checked (<i>optional</i>). This will create a set in the workspace for each group on the course.

OTHER SETTINGS	
Icon file	http://tinyurl.com/ppatlas

4. Click on the 'Submit' button to return to the 'Basic LTI tools' page
5. Finally check the checkbox for the tool and click 'Content menu' then 'Tools' to add the tool to the tools menu.

Optional: If you wish to use LTI Express you'll need to go through the steps as above again but using the name **PebblePad (LTI Express)** instead (all other values will remain the same).

Once you have the new tool added you'll need to edit the **Launch settings** for the LTI Express tool and add the custom parameter **pebble_forward_learner_to_plus=true**

Finally click **Submit** to save.



Setting up Linking to Resources

1. Click on 'System Admin' from the menu ribbon and then click on 'Basic LTI tools' in the 'Tools and Utilities' panel.
2. Click 'Register New Tool'
3. Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

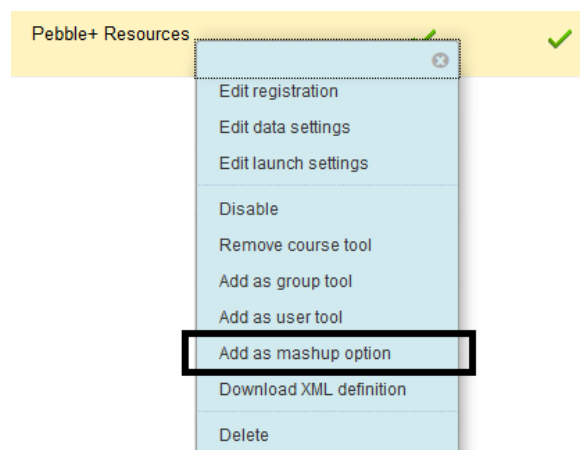
NAME	
Name	Pebble+ Resources
Description	Link to your resource templates and WorkBooks

CONNECTION DETAILS	
Launch URL	Testing: https://apptest.pebblepad.com/alt/OAuth UK: https://v3.pebblepad.co.uk/v3portfolio/OAuth AUS: https://v3.pebblepad.com.au/alt/OAuth US: https://pebblepad.com/alt/OAuth CA: https://app.pebblepad.ca/alt/OAuth
Consumer key	To be provided by Support
Shared secret	To be provided by Support
Signature method	HMAC_SHA1

MESSAGE TYPES	
Content-item message	Checked

OTHER SETTINGS	
Icon file	http://tinyurl.com/ppplus

6. Click on the 'Submit' button to return to the 'Basic LTI tools' page
7. Click on the Option menu next to the 'Pebble+ Resources' tool and choose 'Add as mashup option'.



8. Finally check the checkbox for the tool and click 'Content menu' then 'Tools' to add the tool to the tools menu.

Creating a module

The Pebble+ module provides status information on activities in a user's PebblePad account as well as a launch button which uses single sign on to access Pebble+.

Once created the module may be added by a user (if permitted), or added to a tab by the administrator.



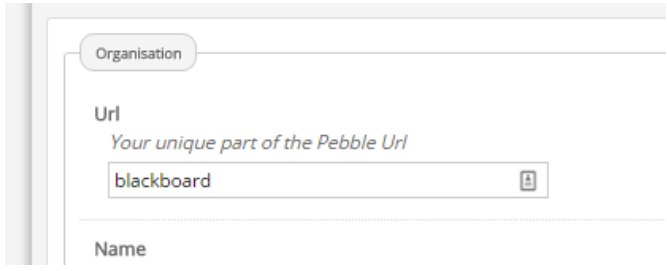
1. Click on 'System Admin' from the menu ribbon and then click on 'Tabs and Modules' in the 'Communities' panel.
2. Click 'Modules'
3. Click 'Create Module'
4. Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

GENERAL PROPERTIES	
Title	PebblePad Pebble+
Module Type	Basic LTI tool
Module Category	You can choose any of the available options
Allow Users to Personalize the Module	No
Allow Users to Detach the Module	No

AVAILABILITY	
System Availability	Yes
Available for Use on a Course Module Page	Yes
Available for Use on an Organisation Module Page	Yes
Available for Users to Select from Module List	Yes
Available to	Everyone
Allow Asynchronous Loading	Checked

5. Click the 'Submit' button

CONTENT DETAILS	
Name of existing tool	PebblePad Pebble+
Content URL	<p>Testing: https://apptest.pebblepad.com/alt/{org}/Home/Feed UK: https://v3.pebblepad.co.uk/v3portfolio/{org}/Home/Feed AUS: https://v3.pebblepad.com.au/alt/{org}/Home/Feed US: https://pebblepad.com/alt/{org}/Home/Feed CA: https://app.pebblepad.ca/alt/{org}/Home/Feed</p> <p>Replace {org} with your organisation Url code, you can find this from with Admin Settings Options in Pebble+</p> 
Content type	Auto select
Allow launch?	Checked
Launch button?	Checked

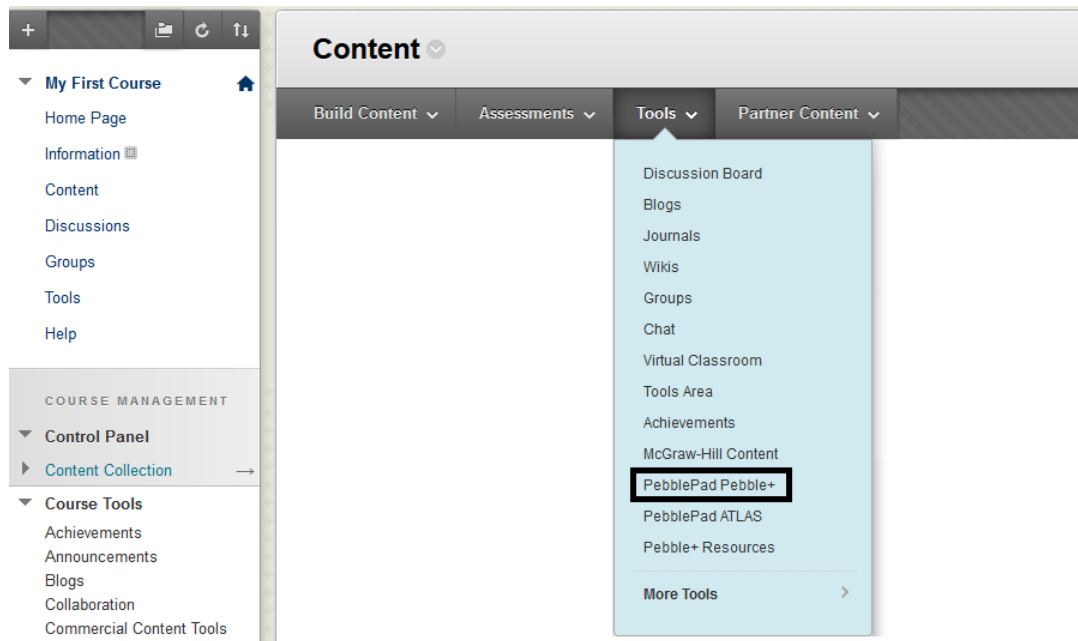
6. Click the 'Submit' button

Now that you have created the module it will be available for users to add to their 'my institution' page or a course home page.

Testing the configuration

Pebble+

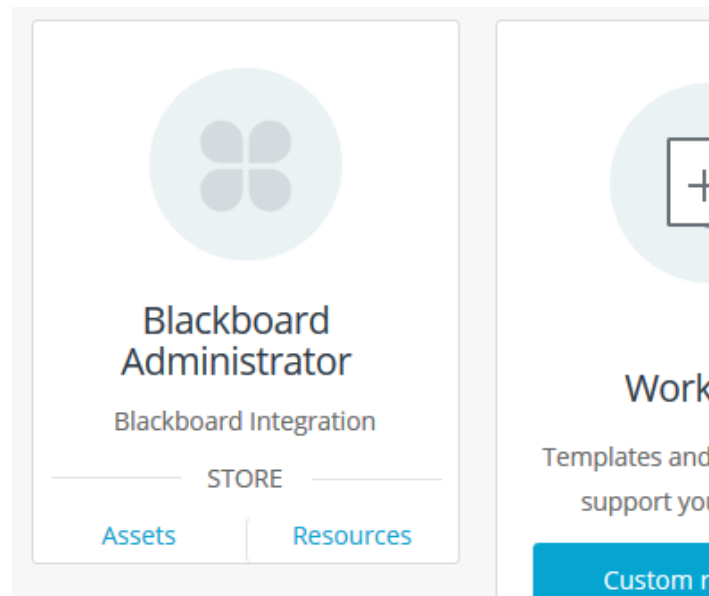
1. Navigate to a course from the 'Courses' menu
2. Turn on editing mode
3. Click on 'Content' in the side navigation bar
4. Click on 'Tools' and click the 'PebblePad Pebble+' tool



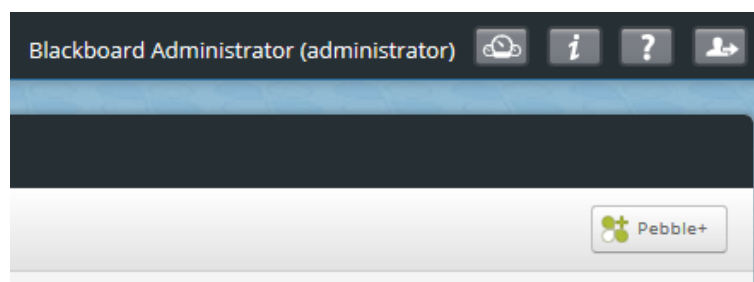
5. You can leave all the predefined options as default.
6. Click the blue 'Submit' button to return to the course.
7. You will now see that the 'PebblePad Pebble+' tool has been added.



- Click on the newly create link and you should be signed into Pebble+, if the tool has been configured successfully you should see your Blackboard Forename and Surname on the profile tile.

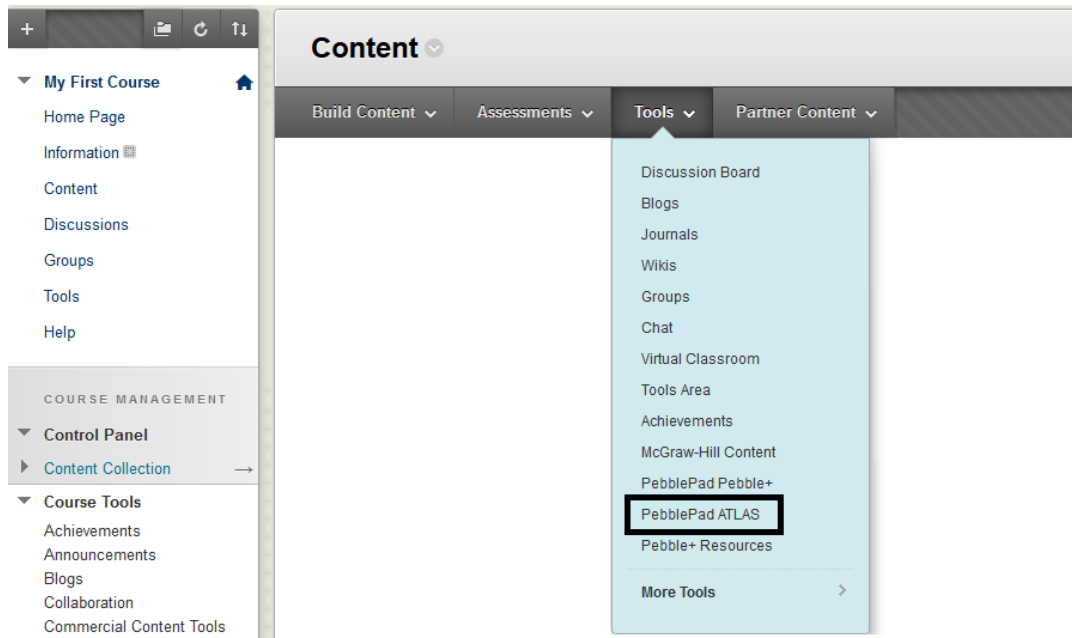


- Finally click on the ATLAS  icon to launch ATLAS and check that your username is correct.

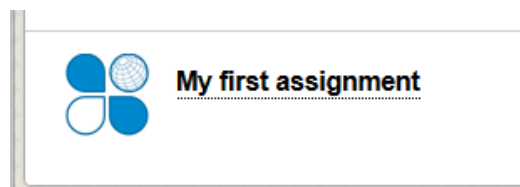


ATLAS

1. Navigate to a course from the 'Courses' menu
2. Turn on editing mode
3. Click on 'Content' in the side navigation bar
4. Click on 'Tools' and click the 'PebblePad ATLAS' tool



5. Enter 'My first assignment' into the 'Link Name' field and leave all the predefined options as default.
6. Click the blue 'Submit' button to return to the course.
7. You will now see that the 'PebblePad ATLAS' tool has been added.



- Click on the newly created 'My first assignment' link and you should be signed into ATLAS. If the tool has been configured successfully you should see your Blackboard username at the top right of the screen and be presented with 'Create a workspace' wizard.

As per the prerequisites you need to have at least Creator level access on a Region or be a Region Manager in ATLAS, if not you will be redirected to the ATLAS dashboard instead of seeing the wizard.

- Click 'Continue' to create a brand new workspace.
- Notice that the 'Title' of the workspace has been set to a combination of your Blackboard course name and link name and the 'Description' has been set to Blackboards course code. Also notice that there is a 'Managers' and 'Members' tab. If you can see these then you know that memberships service connection is working. If you do not see these tabs then ensure that your Blackboard install is publically accessible and you are not running on a localhost.
- Click the 'Managers' tab and check that you can see your course instructors.
- Click the 'Members' tab and check that you can see your course leaners.

13. From the 'Basic Settings' tab change the workspace to start in 'Active mode' and Click 'Finish.'
14. Click the 'Managers' tab under 'Management' and check that your account has been added as a 'Lead Tutor'

Managers are those involved in the management of the workspace and/or the management and assessment of st

Display Name		Active roles
Blackboard Administrator		Lead Tutor Tutor Moderator Personalise
Ida Aguilar		Lead Tutor Tutor Moderator Personalise
Mathew Evans		Lead Tutor Tutor Moderator Personalise

15. Click the 'Members' tab under 'Management' and check that a synchronised group has been created and all of the student accounts have been added.

Please note that the synchronisation of members will only occur when an Instructor clicks the ATLAS link.

Management - Members

Members are typically those users whose work is submitted to, and managed on, a workspace. Members have more restrictive permissions than managers.

user group (Synchronised) User

This group is synchronised via "LTI" Modify permissions

filter existing members

Display Name	Username	Email
Alan Allen	student1039	Alan.Allen@digital-river.co.uk
Amal Chaney	student1037	Amal.Chaney@digital-river.co.uk
Amal Gilmore	student1003	Amal.Gilmore@digital-river.co.uk
Amanda Bush	student1024	Amanda.Bush@digital-river.co.uk
Anril Weeks	teacher1003	Anril.Weeks@digital-river.co.uk

- Click 'Sets' tab under 'Management' and check that any existing Blackboard groups have been synchronised to Sets.

Blackboard

Groups

*The **Groups** tool allows Instructors to organise Students into Groups of any size. Instructors can provide communication and collaboration tools that only Group members can access. Groups can be created one at a time or in sets. Groups can be designated as Self-Enrol, allowing students to add themselves to a Group, or Manual Enrol, allowing the Instructor assign students to a Group. [More Help](#)*

Create ▾ Import Export Group Settings

Bulk Actions ▾ View Options ▾

<input type="checkbox"/>	Name	Group Set	Enrolled Members	Self-Enrol	Available
<input type="checkbox"/>	Group A	-	50	No	Yes
<input checked="" type="checkbox"/>	Group B	-	41	No	Yes

Bulk Actions ▾ View Options ▾

Displaying 1 to 2 of 2 items Show All Edit Paging...

ATLAS

Management - Sets

Settings Remove selected sets Set wizard View/search set membership View declined members

Sets allow large groups of users to be organised into smaller units, typically tutor groups. Tutors, moderators etc can only see the work of members belonging to the set(s) they are allocated to.

⚠ There are 1 member(s), 4 manager(s) and 0 external(s) that have not been assigned to a set. These people may not be able to view any submissions on this workspace.

filter the sets

<input type="checkbox"/>	Title	Members	Managers	Externals			
<input type="checkbox"/>	Group A	50	0	0			
<input type="checkbox"/>	Group B	41	0	0			

Showing 2 items Items: 50 ▾

17. Click 'Assignments' under 'Management' and 'Allow direct file uploads' and click the 'Save' button.

Allow direct file uploads

Submissions will be accepted by file upload and may be restricted to specific file types

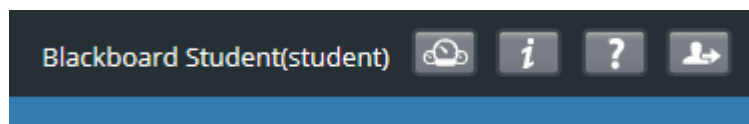
File uploads are limited to 500MB per submission and may require downloading before being viewed

Accept all types of file

Restrict submissions to specific file types

Please note that enabling file uploads is a step that you will be taking as the Blackboard Administrator to test the integration is working correctly and isn't a requirement of the integration.

18. Now log into Blackboard as a student and click on the 'My first assignment' link, you should be logged into ATLAS and land on the 'About' page. You should be able to see your Blackboard username at the top right of the screen.



19. Click the 'Submissions' tab and click 'Upload a file'

20. Press the 'Continue' button

21. Click 'Select file', browse and select a file for upload

22. Enter a 'Title', check the 'I am entitled to upload this file...' disclaimer and press the 'Confirm' button

23. Once the file has uploaded switch back to your Admin account and log back into ATLAS.

24. Click the 'Submissions' tab and open up the file submission.

25. Click on the leave Feedback button and click 'Add grade'



26. Enter a grade into the 'Grade' textbox. Blackboard supports any alphanumeric characters for grades so you can either use number or letters.

Feedback for My first submission

Add feedback
Add grade

Grade:

Release options:

Release grade now

Hold for later release

Save & close
Save & add comment
Cancel

27. Click the 'Save & close' button to release the grade back to Blackboard.
28. From Blackboard course click on the 'Grade Centre' link in the side navigate and click 'Full Grade Centre'. Notice that the grade you entered in ATLAS is now in the corresponding link column.

Grade Centre : Full Grade Centre

When screen reader mode is on, the Grade Centre data appears in a simplified grid. You cannot freeze columns or edit inline, make
When screen reader mode is off, you can type a grade directly in a cell on the Grade Centre page. To enter a grade: click the cell, t
[More Help](#)

Create Column
Create Calculated Column
Manage
Reports

Move To Top
Email

Grade Information Bar							
<input type="checkbox"/>	Last Name	First Name	Student ID	Last Access	Availability	Weighted Total	My first assi
<input type="checkbox"/>	Allen	Lloyd		13 March 2017	Available	--	Passed
<input type="checkbox"/>	Barber	Dylan			Available	--	
<input type="checkbox"/>	Student	Mathew		07 March 2017	Available	--	--

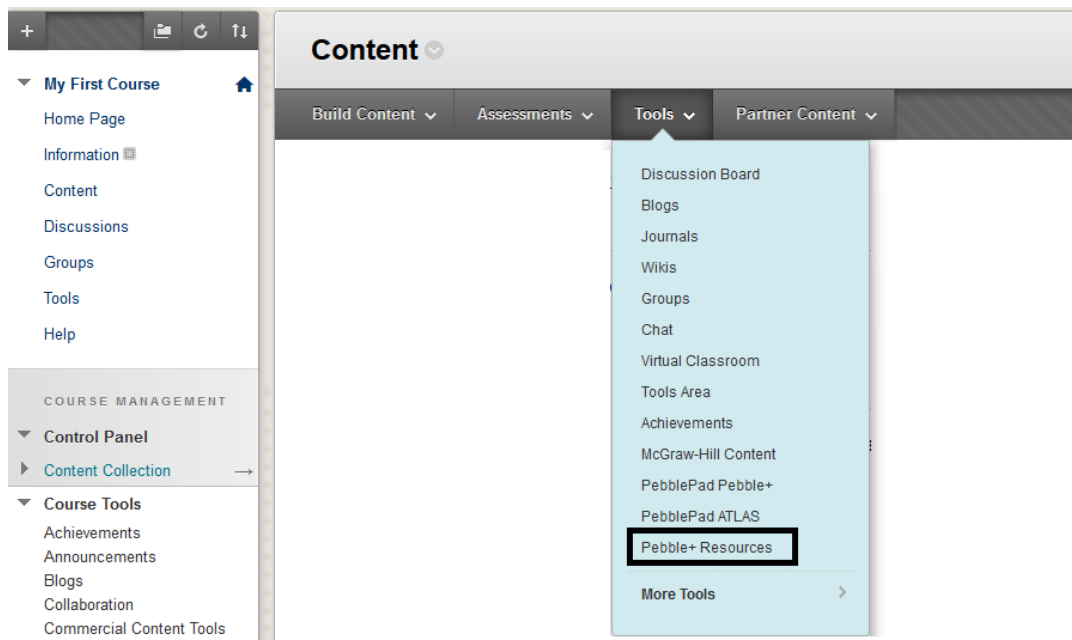
Selected Rows: 0
<

Move To Top
Email

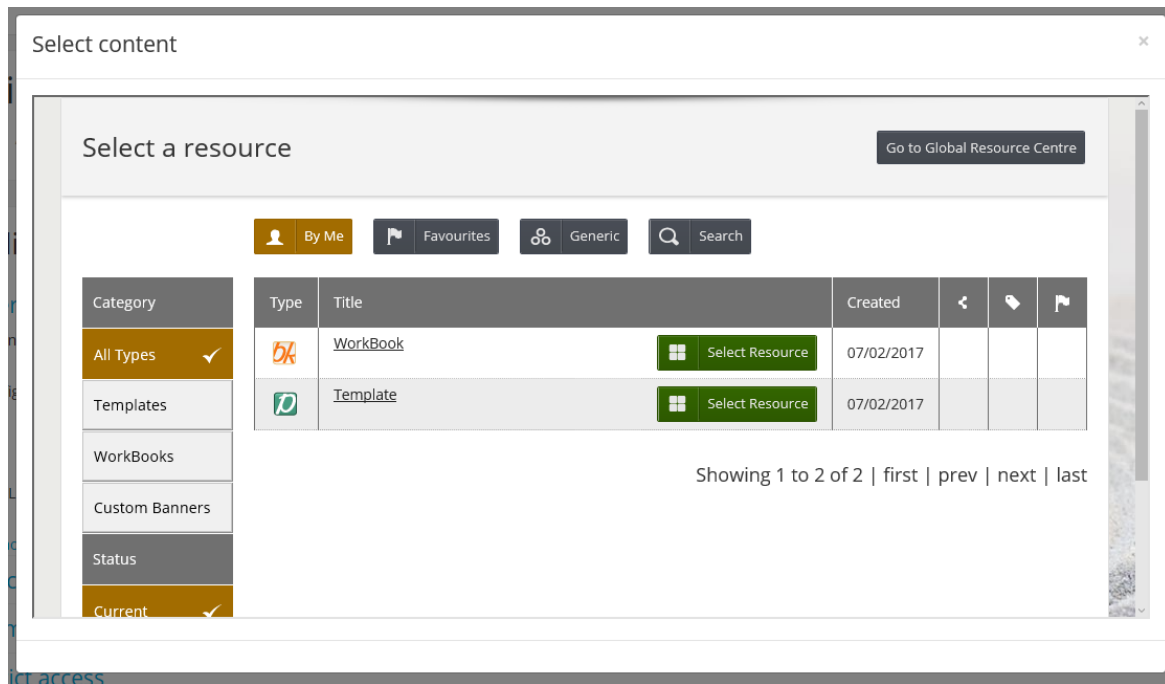
Content Item

Choosing a resource

1. Navigate to a course from the 'Courses' menu
2. Turn on editing mode
3. Click on 'Content' in the side navigation bar
4. Click on 'Tools' and click the 'Pebble+ Resources' tool



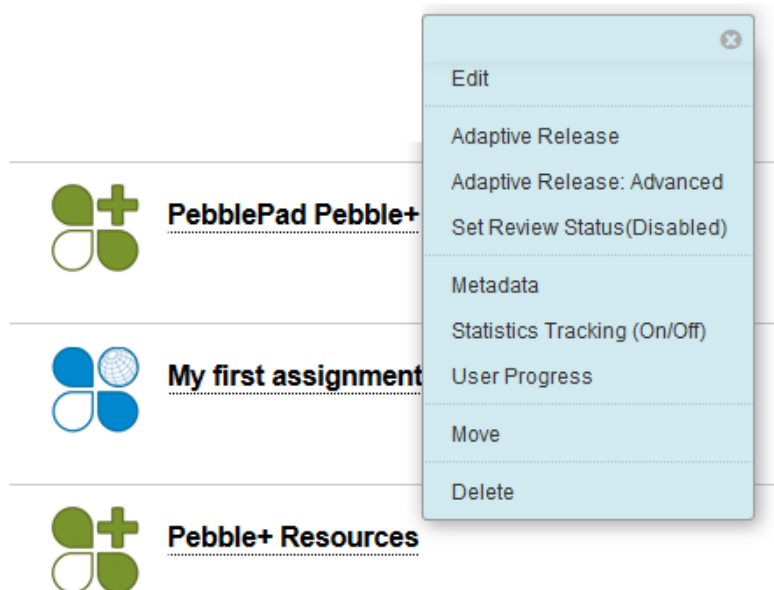
- A popup modal will show you a list of all of your Pebble+ resources. Click on 'Select Resource' for the resource you would like to test with and you will automatically be redirected back to Blackboard.



- Click 'Save and return to course'
- You will now see that the 'Pebble+ Resources' tool has been added.

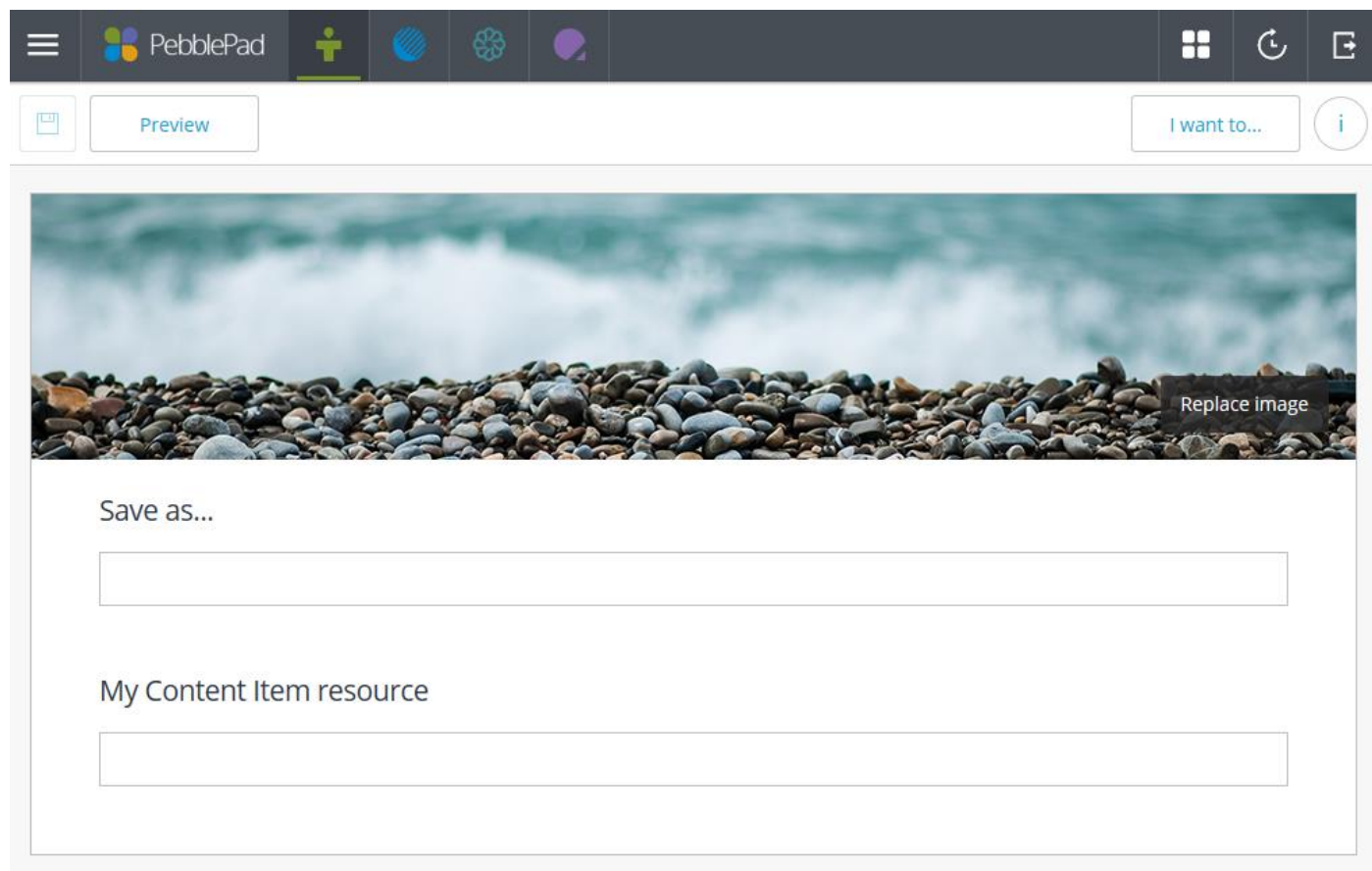


- If you wish you can rename the tool using the options menu.



Using a Resource

Log in as a student and click the 'Pebble+ resource' link and you should be logged into Pebble+ and presented with the selected resource in edit mode.



The screenshot shows the PebblePad edit mode interface. At the top is a dark navigation bar with the PebblePad logo and several icons. Below this is a white toolbar with a 'Preview' button, an 'I want to...' button, and an information icon. The main content area features a large image of a pebble beach with a 'Replace image' button in the bottom right corner. Below the image are two text input fields: the first is labeled 'Save as...' and the second is labeled 'My Content Item resource'.