

# labranch21




## Branching Objects

**Branching allows LAMS Authors to create several 'pathways' through a sequence.**

They are similar to [Optional objects](#), in that they create parallel pathways through a sequence, but differ in the sense that there is no learner-based interaction to determine which Branch to take.

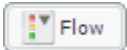
Also, unlike [Optional Activities](#) and [Optional Sequences](#), Branching Objects only allow a linear progression through the sequence, that is, a learner cannot go backwards and complete a different branch.

### Branching Tutorials

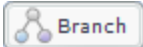
	<b>Teacher-Selected Branching</b> Assign Learners to Individual Branches in the <b>M</b> onitoring Environment.
	<b>Grouping-Based Branching</b> Automatically assign Learners to Branches using on a <b>G</b> rouping Activity.
	<b>Tool-Output Branching</b> Use <b>feedback from an activity</b> to assign Learners to Branches.

## Branching Tool Authoring

Placing a branching activity is as simple as creating any other object or activity in LAMS. Click the



menu, and select



then click and drag the object onto the [Authoring Space](#).

The [Properties Inspector](#) allows the author to change the name of the object, and also specify the branching type. [More on this in just a moment](#).

The next step is to actually create the activities and branches that will make up the Branching Activity as a whole. To keep the authoring space from becoming cluttered, the contents of a Branching Activity are hidden inside the object itself - or, put more simply, you can double-click the object to see what's inside.



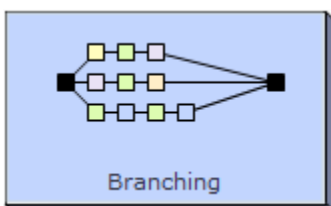
The Branching Space opens with two icons visible, a green 'entry' door, and a red 'exit' door. Each branch must start at the entry door and end at the exit door.

To create branches, simply drag-and-drop the activities from the toolkit and create transition lines as if for a normal LAMS sequence.

By clicking on a transition line and using the Properties Inspector, the author can specify a name for each individual branch.

Its best practice to give each branch a short but intrinsic name, for easy identification later on. The names will display near the start of each particular branch.

**When all branches have been completed, the Branching Object can be closed and the Conditions and Mappings for the branching can be created.**




On the Authoring space, LAMS will display a preview of the activities inside a Branching activity.

## Branch Selection

LAMS provides Authors with three different ways to define which Branch a learner should complete.


### Method One: Teacher Allocated

The simplest option to create on the Authoring side is 'Teacher Allocated.' When 'teacher allocated' branching is selected, no further author-side configuration is needed, however when the sequence is launched, a [LAMS monitor](#) must manually assign each learner to a specific branch. (See the monitoring section of this page below.)

	<b>Teacher-Selected Branching</b> Assign Learners to Individual Branches in the Monitoring Environment.
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### Method Two: Group-Based Branching

LAMS allows authors to route learners along specific branches based on a preexisting [Grouping Object](#). Once both the grouping object and branching activity have been created, the author must create 'Mappings' of each group to a particular Branch. (Alternatively, the author can elect to define these in the [monitoring environment](#)).

	<b>Grouping-Based Branching</b> Automatically assign Learners to Branches using on a <b>Grouping Activity</b> .
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#### These step-by-step instructions describe how to create a Group-Based Branching:

1. Create a [grouping object](#). Either 'random' or 'chosen' groups can be used, but the number of groups must be **fixed** in order to set up the branching as an author. If the grouping is based on 'number of learners', LAMS cannot predict how many groups will be created, and thus the branching allocations are performed by the monitor when the sequence is run.
2. Create a transition from the grouping object to the Branching Activity.
3. In the [Properties Inspector](#), click the **Branching Type** drop-down box and select 'Group-based.'
4. A second drop-down box will appear, allowing a choice between all the grouping objects in the sequence. (For this reason, sequences that contain multiple grouping objects should use a different name for each object.)
5. When the link to the grouping object has been created, click the "Setup Mappings" button, which is now visible.
6. This will list all of the groups from the grouping object alongside all the branches in the branching activity. Simply select one or more groups to link to a particular branch and add them to the 'Mappings' column.


When using Group-Based branching, the branching decisions are completely automatic. LAMS displays the Grouping Object to Learners, and the transition from the main sequence to the branched activity is seamless.

### Method Three: Tool-Output Based Branching

The third branching method involves basing the branching decisions from the output of a particular activity - that is, output from an activity based on what the learner has contributed.

Some activities may have specific conditions (such as the number of correct responses for a Multiple Choice), and most activities support **Text-based conditions**, where LAMS can make branching decisions based on certain words that a Learner has or has not typed into an activity.

The [Q&A](#), [Forum](#), [Survey](#), [Chat](#) and [Notebook](#) activities all support these branching conditions.

	<b>Tool-Output Branching</b> Use <b>feedback from an activity</b> to assign Learners to Branches.
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**\*+There are two key concepts involved in Tool-Based branching: Conditions and Mappings .+\***

- **Conditions** are a way of grouping learners by their performance in the relevant activity. For example, a condition may be

based on whether a learner has answered all questions in a quiz correctly or not. For more information on currently available conditions, [view this page for the Multiple Choice](#) or [this page for the Forum](#).

- **Mappings** describe which Condition sends learners to which branch. Once LAMS determines which Condition the Learner is a part of, the Mapping is used to send that Learner to a particular branch.
- A particular Condition may only be mapped to a single branch, but a single branch may have **several different** conditions mapped to it.

#### These step-by-step instructions describe how to create a Tool-Output Based Branching:

1. Create the Branching Activity as normal.
2. Place either a [Forum](#) or [Multiple Choice](#) activity in the sequence BEFORE the Branching activity, and create the transition lines.
3. Select the Branching activity. Using the [Properties Inspector](#), select Tool Output from *Branching Type* menu.
4. A new drop-down will appear, allowing for selection of any one of the Forum or Multiple Choice activities in the sequence.
5. Choose the [Setup Conditional Statements](#) button.
6. Define the Conditions as required for the sequence, and then click **Done**.
7. The **Setup Mappings** dialog will open. This dialog specifies which Conditions are Mapped to each Branch.
  - a. Select a Condition from the First Column.
  - b. Select the Branch where the Condition will be mapped.
  - c. Click >> button to create the mapping.
  - d. Repeat until all conditions have been mapped to a branch.

## Branching Tool Monitoring

### Summary Tab

When a monitor double-clicks a branching object on the **Summary Tab**, it expands to display the activities inside, just like on the [authoring canvas](#).

The monitor can then open the individual activities within the branching object to view the summary pages for those activities.

 **Live Edit cannot be used to modify the Branching if a learner has already entered the a Branch.**

### Learner Tab

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On the Learner tab, a the Branching Activity may again be expanded to display all the activities it contains. However, only the branches that have been completed by the particular learner being viewed can be displayed.

For example, in the image at Left, the Learner has only completed Branch One - the activity can be opened to view the Learner responses. Branches Two and Three cannot be opened, since the learner has not attempted those Branches.

## Portfolio Export



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When a portfolio is created from a sequence containing a Branching Object, either Single Learner or Entire Class, the Portfolio for each learner contains only the activities from the branches they attempted.

For example, the image at left displays the portfolio for the Learner shown above. Similarly, only the activities from Branch One are available in the portfolio.