career**tech**

15: MOODLE DATABASE

WELCOME TO THE MOODLE DATABASE TUTORIAL!

In this tutorial, you will learn:

- What a Database is
- Some ways to use the Database activity with students
- How to set up the Database activity in Moodle

If you have not used one of CareerTech's "How to Moodle" tutorials before, view the instructions for using it as a self-paced tutorial or as a resource for classroom instruction.

Before taking this tutorial, you should be familiar with:

- Setting up a course in Moodle
- Adding an activity to a topic in your course

To begin, select from the menu below or simply turn to the next page.

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MENU OF TUTORIAL TOPICS

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INTRODUCTION TO MOODLE DATABASE ACTIVITY

A database is a collection of data that is organized to be easily accessible. The Database activity in Moodle allows students to build a collection of specific kinds of information about a topic. It is a good way to help students develop factual knowledge. Once the students have entered multiple records in the Database, it can then be used as a resource for discussion, additional research, or as the jumping off point for another type of activity.

The Database activity is set up in stages.

1. First, define how the Database will be used in terms of instructions for students, availability, and grading.
2. Next, define the information to be collected. This is done through fields that are included in each Database record. There are several different types of fields, including text, image, date, checkbox, and many more. Fields will display to the student in the order you create them here. It is a good idea to plan out your fields before you start setup in Moodle.
3. After the fields are defined, you will select a template. The template determines what the Database will look like when students are using it.
4. Now the Database is ready for students to add entries.

The general process for using a Database in your classroom is:

1. The instructor designs the Database activity and sets it up in Moodle.
2. Students add records to the Database according to the teacher's instructions. Each record consists of the same set of fields that must be populated.
3. As the Database is built, it can be searched and viewed by students and the teacher. If desired, students can be allowed to make comments on a record.
4. If desired, the teacher can rate entries according to a scale defined during setup. These ratings are used to grade the activity.

WAYS TO USE A DATABASE

Why use the Moodle Database with your class?

The Database activity can provide a purpose and observable output for students who need to develop a body of factual knowledge. It can also be one step in a more complex activity. For example, you may begin by having students populate a Database of their favorite authors. From there, you may use a Workshop to have students write a biography of one of those authors, or use a forum to create a discussion of what makes a writer appealing to some people and not to others.

Here are some ways to make the Database activity an effective pedagogical tool.

- Have your English students create a Database of different forms of writing, such as essay, biography, genre fiction, etc. Include fields for a description of the writing type and well known examples of the type of work.
- Have your biology students create a Database of the life forms they are studying. Include fields for images and for the taxonomic classification.
- Have your physical education students develop a Database of exercises. Include fields for the targeted muscles, images, and descriptions.

These are just a few suggestions. Experiment with your own ideas.

What is the teacher's role in the Database activity?

The teacher should plan the activity and the fields used carefully to ensure clarity for students. Once the Database is populated, the teacher should monitor student input and be prepared to delete inappropriate records. If the Database auto-linking filter is enabled, any entries in a Database will be automatically linked where the words or phrases appear within the course. This can be especially useful if you are using a pre-populated Database as a resource for students. Finally, the teacher can use the rating system to create grades for student entries into the Database.

SETTING UP THE MOODLE DATABASE

To set up any activity in Moodle, you must first:

1. Go to your course page.
2. Turn editing on.
3. Choose the topic or week where you will add the activity.
4. Click **Add an activity** under that topic or week. This displays the list of available activities.

Now follow these steps to create a Database:

Step	Action	Notes
1.	Choose **Database** from the **Add an activity** dropdown list.	The Database settings page will display.
2.	**Section:** General **Field:** Name Enter a name for your Database.	The Database name should be concise but descriptive. This name will appear on the course page. The name is hyperlinked so users can click to open the Database activity. For training purposes, use the name: Antioch Cemetery Monument Database.

Step	Action	Notes
3.	**Section:** General **Field:** Description Enter instructions for the student describing how you want them to use this Database.	Notice that you can use formatting tools for this text. For training purposes, use the following description: We will be visiting the Antioch cemetery location to find and record information about the headstones and monuments still standing there. For each grave marker, please record: • One to three pictures of the marker. • The name on the marker, if legible. • The birth and death dates on the marker, if legible. • Any other inscriptions on the marker, if legible. • The location of the marker on the map provided. You will enter this information in the Database so that we have a unique record for each marker we locate in the cemetery.
4.	**Section:** General **Field:** Display description on course page Click this checkbox to have description display on course page.	If you check the box, the course page will display the description below the Database name. If you do not check this box, only the Database name will appear on the course page. For training purposes, check the box to display the description on the course page.
5.	**Section:** Entries **Field:** Approval required Choose yes or no from the dropdown list.	If you choose yes, all entries must be approved by the teacher before they will be viewable in the Database by other students. For training purposes, leave this field and all other fields in the default state.
6.	**Section:** Entries **Field:** Allow editing of approved entries Choose yes or no from the dropdown list.	If disabled, approved entries cannot be edited.

Step	Action	Notes
7.	**Section:** Entries **Field:** Allow comments on entries Choose yes or no from the dropdown list.	If you choose yes, each record will show a link to enter comments.
8.	**Section:** Entries **Field:** Entries required before viewing Click to choose the number of entries a student is required to submit before being able to view other entries in the Database.	This field defaults at None, and should be less than or equal to the number of entries required for completion.
9.	**Section:** Entries **Field:** Maximum number of entries Click to choose the maximum number of entries that a student may submit.	This field limits the number of entries a student can submit. Choose None to allow unlimited entries per student.
10.	**Section:** Availability **Field:** Available from/to; Enable Click to check the Enable box if you would like to limit the dates during which students can submit entries to the Database. Enter the desired from and to dates.	You can create a window for submissions with these fields, but still allow students to view the Database with the following fields in the Availability section. Students will see the activity on the course page even if it is not yet available for submissions.
11.	**Section:** Availability **Field:** Read only from/to; Enable Click to check the Enable box if you would like to make the Database available for viewing but not for submissions. Enter the desired from and to dates.	Use these fields if you have a pre-populated Database that you want students to use but not add to. Students will see the activity on the course page even if it is not yet available for viewing.
12.	**Section:** Grade **Field:** Grade category Choose from the dropdown list the category in which this forum will appear if ratings are enabled.	This setting controls the category in which this activity's grades are placed in the gradebook. This section is tied to the Rating section as well as the gradebook, so options in the dropdown list will depend on other factors related to course and Database setup.

Step	Action	Notes
13.	**Section:** Ratings **Field:** Roles with permission to rate This list displays for informational purposes.	By default, only teachers can rate Database entries, though students can be given permission to do so if desired. The list of roles may be amended via the permissions link in the administration block.
14.	**Section:** Ratings **Field:** Aggregate type Choose from the dropdown list to determine how ratings are used for a grade.	If "No ratings" is selected, the remaining fields in this section become inactive. The activity will not appear in the gradebook. The aggregate type defines how ratings are combined to form the final grade in the gradebook. For example, if each student makes 5 Database entries, the ratings for each student's entries will be combined according to your selection in this field. • **Average of ratings**—The mean of all ratings • **Count of ratings**—The number of rated items becomes the final grade. Note that the total cannot exceed the maximum grade for the activity. • **Maximum**—The highest rating becomes the final grade • **Minimum**—The smallest rating becomes the final grade • **Sum**—All ratings are added together. Note that the total cannot exceed the maximum grade for the activity.
15.	**Section:** Ratings **Field:** Scale Choose the desired rating scale.	For example, selecting 10 in this field will allow the rater to rate each Database entry on a scale between 10 and 1.
16.	**Section:** Ratings **Field:** Restrict ratings to items with dates in this range Click to check this box if you want to set a date range to allow ratings. If you check this box, you must also enter the desired range in the date fields.	The teacher can choose to allow only entries within a certain date range to be rated. The date fields are inactive if this box is not checked.

Step	Action	Notes
17.	**Section:** Common module settings **Field:** Availability Choose to show or hide the assignment on the course page.	Use the Hide setting to prevent the activity from appearing on the course page. You may change the setting at any time.
18.	**Section:** Common module settings **Field:** ID Number Enter an ID number if desired.	Setting an ID number provides a way of identifying the activity for grade calculation purposes. If the activity is not included in any grade calculation then the ID number field may be left blank.
19.	**Section:** Common module settings **Field:** Group mode Choose the group mode desired for this Database.	This allows you to have students access the Database as groups rather than as individuals. There are 3 options: • **No groups**—There are no sub groups, everyone is part of one big community • **Separate groups**—Each group member can only see activity from their own group, others are invisible • **Visible groups**—Each group member works in their own group's Database, but can also see other groups If the group mode is forced at course level, you will not be able to change the group mode at the activity level.
20.	**Section:** Common module settings **Field:** Grouping Choose the grouping mode desired for this Database.	The default is none. For other options to appear in this field, you must first set up groups in the course administration area. A single grouping can include just one group or several groups.
21.	**Section:** Restrict access > Access restrictions > Add restriction **Fields:** Activity completion If desired, select an activity from the dropdown list and the condition that must be met to allow access to the database.	This type of restriction may be used in place of the grade condition fields.

Step	Action	Notes
22.	**Section:** Restrict access > Access restrictions > Add restriction **Field:** Date If enabled, you must also enter the appropriate dates that will restrict access to the database.	This set of fields allows students to view and access the database only during the specified time period.
23.	**Section:** Restrict access > Access restrictions > Add restriction **Field:** Grade If desired, select an activity from the dropdown list and an acceptable grade range which must be met to allow access to the database.	These fields allow you to specify any grade conditions from other parts of the course that must be met prior to accessing the database. You may set multiple grade conditions. If you do, access to the database will only be allowed when ALL grade conditions that you specify here are met.
24.	**Section:** Restrict access > Access restrictions > Add restriction **Field:** Group Select a field a group criteria from the dropdown menu that must be met for the user to access the database.	You can select a single group or any group.
25.	**Section:** Restrict access > Access restrictions > Add restriction **Field:** User profile Select a field and a logical condition that must be met for the user to access the database.	You can restrict access based on any field from a user's profile.
26.	**Section:** Restrict access > Access restrictions > Add restriction **Field:** Restriction set This setting allows nested restrictions.	This is an advanced setting that allows for restrictions to be placed within a restriction.

Step	Action	Notes
27.	**Section:** Activity completion **Field:** Completion tracking Select the desired completion tracking status from the dropdown list.	The user will see a checkmark next to the activity name on the course page when the activity is complete, if tracked. Activity completion can be tracked manually by the student, automatically based on certain conditions, or not at all. Multiple conditions may be set if desired. If so, the activity will only be considered complete when ALL conditions are met.
28.	**Section:** Activity completion **Field:** Require view, Require grade, Require entries Click the appropriate boxes to enable if you are tracking completion with the system and would like to place requirements on student actions.	These conditions be used if Completion Tracking is set as "Show activity completion when conditions are met." If checked, the student must open the Database for the system to view the active, receive a certain grade, or create a certain number of entries.
29.	**Section:** Activity completion **Field:** Expect completed on Click the **Enable** box if you would like activity in the Database to be completed by a set date. Enter the appropriate date in the date fields.	The date is not shown to students and is only displayed in the activity completion report.
30.	Click the **Save and display** button at the bottom of the Database setup screen.	This will move you to the next stage of the Database setup, where you will define the fields in each record and how they will display.

DEFINING DATABASE FIELDS AND TEMPLATE

After the initial setup is complete, you will define the fields for your Database. When you click Save and Display at the bottom of the setup screen, Moodle displays a series of tabs with the Fields tab active.

Create a new field, which will appear in each Database record, by selecting from the "Choose" dropdown list under the Fields tab. This creates a field of the selected type. (Planning out your fields, along with field type, before setting up the Database in Moodle will make this process much quicker.)

When you select a field type, you will first enter its name. Each field must have a unique name to identify it. Moodle then provides fields to enter the relevant parameters for the field depending on its type.

Repeat this process for all the fields that you have planned.

For training purposes, use the following fields and settings:

	Field Type	Field Name	Field Setup
1.	Picture	Grave Marker Image 1	• Field Description: [leave this blank] • Width in single view: 500 • Height in single view: 500 • Width in list view: 200 • Height in list view: 200 • Maximum size: 1MB
2.	Picture	Grave Marker Image 2	• Field Description: [leave this blank] • Width in single view: 500 • Height in single view: 500 • Width in list view: 200 • Height in list view: 200 • Maximum size: 1MB
3.	Picture	Grave Marker Image 3	• Field Description: [leave this blank] • Width in single view: 500 • Height in single view: 500 • Width in list view: 200 • Height in list view: 200 • Maximum size: 1MB

	Field Type	Field Name	Field Setup

4.	Menu	Location	• Field Description: Location of marker according to map grid
			• Options (one per line):
			  ✓ 1A
			  ✓ 2A
			  ✓ 3A
			  ✓ 1B
			  ✓ 2B
			  ✓ 3B
			  ✓ 1C
			  ✓ 2C
			  ✓ 3C

5.	Text area	Name	• Field Description: Name on grave marker
6.	Date	Birth date	• Field Description: Birth date on marker, if legible
7.	Date	Death date	• Field Description: Death date on marker, if legible
8.	Text area	Inscription	• Field Description: Transcribe marker text here • Width: 60 • Height: 35
9.	Text area	Additional Observations	• Field Description: Include additional observations here • Width: 60 • Height: 35

Template

When you first start out with the Database Activity, it is fine to stick with the default templates as seen when you first enter the Templates tab. Editing the display through templates is optional. If you do not want to edit the display, you do not need to enter the Template tab.

To edit the Database displays, select the Template tab. Moodle displays a screen with another row of tabs. These tabs allow you to define and save the visual layouts for the Database. Because there are multiple ways to view the Database, there is a tab to define a template for each of those views. If you

are comfortable with editing and formatting using HTML tags, you can do so here to modify the visual layout used for your Database.

An important item to note about fields and templates: If you add a field to your Database after you have set the templates, it will not automatically appear in your Database display. One way to add the new field to your displays is to press the Reset Templates button. Moodle will add HTML for the new field. If you have not previously edited the templates, the new field will simply appear at the end of the fields that you previously defined. However, if you have previously edited any of the templates, your edits to the template will be lost when Moodle automatically adds the new field. For this reason, it is best to finalize the Database fields before changing the template code.

When you have completed these stages to your satisfaction, your Database Activity is ready for entries.

When you are finished setting up the fields, you may navigate to the Templates tab to adjust the display if desired. Save and view any changes you make until you are satisfied.

Finally, practice using the Database in the role of the student. Add some entries to the Database. View the entries and search them.

NOTE: If you are using this tutorial in a class training, have each participant set up the practice exercise as described. Then use one Database for everyone to practice making and viewing entries.

Use this exercise as a jumping off point to create other Databases that include different types of fields and that can be used in conjunction with other Moodle activities.

SUMMARY AND RESOURCES

This tutorial gave you the steps you will use to set up a Database Activity in Moodle, including the decisions you will be making when you create this type of activity.

To learn more about this topic, visit:

- https://docs.moodle.org/34/en/Database_activity_settings
- https://docs.moodle.org/34/en/Building_Database
- https://docs.moodle.org/34/en/Database_templates
- https://docs.moodle.org/34/en/Using_Database

HOW TO USE THIS TUTORIAL:

This tutorial can be used as a self-paced lesson or as a lesson plan in a classroom setting.

- **As a self-paced lesson.**

  If this is a completely new skill for you, work through the tutorial from beginning to end. However, if you have some prior experience with the topic, use the menu hyperlinks on page one to jump to a topic that you want to learn.

  Most topics include hyperlinks to video demonstrations. While the videos are useful, you don't have to watch them. All the information that you need is listed in the tutorial text and step instructions.

  Follow the steps in the example to practice the skill. This will help to correct any misunderstandings or mistakes before you use the skill in your classroom.

- **As a lesson-plan for a classroom.**

  When teaching this skill in a classroom, use the tutorial for:

  - ✓ **Motivation**—Use the tutorial introduction as a springboard for a deeper exploration of how instructors might use this functionality in their classrooms. Encourage discussion and contributions from your students.
  - ✓ **Demonstration**—Once your learners understand the purpose and pedagogical value of the functionality, demonstrate the steps of the relevant tasks as listed in the tutorial, using your computer and an overhead projector.
  - ✓ **Practice**—Use the tutorial example as a basis for student practice. Assist as necessary.
  - ✓ **Reference**—Encourage learners to use the tutorial post-session as a reference when using the functionality.

Return to the tutorial [main menu](#).

We would appreciate feedback on this tutorial! Please contact the ctYOU.org General Support Staff listed under contacts on ctYOU.org.