

15: MOODLE DATABASE

WELCOME TO THE MOODLE DATABASE TUTORIAL!

In this tutorial, you will learn:

- What a Moodle 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 using 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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INTRODUCTION TO THE MOODLE DATABASE ACTIVITY

A database is a collection of organized, easily accessible information. The Moodle Database activity allows students to build a collection of specific kinds of information about a topic and develop factual knowledge. Once the students have entered multiple records in the Database activity, teachers can use the information as a resource for discussion, additional research, or as the jumping off point for another type of activity.

The setup of a Database activity occurs in stages:

1. Determine the Moodle Database availability and grading requirements and prepare instructions for student instructions.
2. Define the information the database will collect. This will determine the fields used for each database entry. The types of fields include text, image, date, checkbox, and many more. In the Moodle Database, fields display in the order you create them. For this and many other reasons, plan your fields before you begin the setup process.
3. Design the database templates. Templates determine how the database displays to students.
4. Pilot the database in the student role, and then make any necessary adjustments.
5. After completing all the above steps, student can add entries to the database.

The process for using a Moodle Database in your classroom includes the following:

1. The instructor designs the Database activity and sets it up in Moodle.
2. Students add entries to the database according to the teacher's instructions. Each entry consists of the same set of fields.
3. As students populate the database, they can view and search all entries.
4. If desired, the teacher can rate entries when using the List view, according to a scale defined during setup. Teachers can use ratings to grade the activity.
5. If desired, teachers can allow students to rate or comment on entries.

WAYS TO USE A MOODLE DATABASE

Why use the Moodle Database with your class?

The Database activity can provide purposeful and observable output for students (or other participants) who need to develop a body of factual knowledge. Teachers can also use the Moodle Database as part of a more complex activity. For example, you may have students populate a database of their favorite authors. From there, you may use a Moodle Workshop activity to have students write a biography of one of those authors, or you could facilitate a forum discussion about 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 English students populate a database with different forms of writing, such as an essay, biography, genre fiction, etc. Include fields for a description of the writing type and well-known examples of the type of work.
- Have science students populate a database of the life forms they are studying. Include fields for images and for the taxonomic classification.
- Have physical therapy 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 a Database activity?

The teacher should plan the activity and the database fields to ensure clarity for students. The teacher should monitor student entries and be prepared to delete inappropriate records. If the auto-linking filter is enabled, any entries in the database will automatically link to places 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 database entries.

SETTING UP THE MOODLE DATABASE

VIDEO DEMONSTRATION:

Watch these brief videos that show how to set a Moodle Database.

Database Activity in Moodle: Share Content—<https://youtu.be/e53PNZOHTSU?si=YL7UFAoJcoLPf6kZ>

Moodle - Tricks of the Trade: Using the Database Activity—
https://youtu.be/z8St8W0dr3M?si=tFhZLXVniPbM_rZe

NOTE: Video demonstrations were not created by Oklahoma CareerTech, and they may use a different version of Moodle. However, the steps are the same as the ones that you will use.

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

1. Go to your course page.
2. Turn editing on by clicking the **Edit** toggle in the upper right corner of your computer screen.
3. Choose the topic or section in the course where you will add the activity.
4. Click the **Add an activity or resources** button below that topic or section. 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 or resource 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.	<p>Section: General Field: Description</p> <p>Enter instructions for the student describing how you want them to use this Database.</p>	<p>Notice that you can use formatting tools for this text.</p> <p>For training purposes, use the following description:</p> <p>We will be visiting the Antioch cemetery to find and record information about the headstones and monuments still standing. For each grave marker, please record:</p> <ul style="list-style-type: none"> • 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. <p>You will enter this information in the database so that we have a unique record for each marker we locate in the cemetery.</p>
4.	<p>Section: General Field: Display description on course page</p> <p>You may click this checkbox to have description display on course page.</p>	<p>If you check the box, the course page will display the description below the Database activity name.</p> <p>If you do not check this box, only the Database activity name will appear on the course page.</p> <p>For training purposes, check the box to display the description on the course page.</p>
5.	<p>Section: Entries Field: Approval required</p> <p>Choose yes or no from the dropdown list.</p>	<p>If you choose yes, all entries must be approved by the teacher/facilitator before they will be viewable in the database by other students.</p> <p>For training purposes, leave this field and all other Entries fields in the default state (No).</p>
6.	<p>Section: Entries Field: Allow editing of approved entries</p> <p>Choose yes or no from the dropdown list.</p>	<p>This option appears if you choose to require approval.</p> <p>If disabled, approved entries cannot be edited.</p>

Step	Action	Notes
7.	<p>Section: Entries Field: Allow comments on entries</p> <p>Choose yes or no from the dropdown list.</p>	<p>If you choose yes, each record will show a link for a Comments field for participants.</p>
8.	<p>Section: Entries Field: Entries required before viewing</p> <p>Click to choose the number of entries a student is required to submit before being able to view other entries in the Database.</p>	<p>This field defaults to None. This number should be less than or equal to the number of entries required for completion.</p> <p>Tip: If you want to prevent participants from seeing all entries except their own, you can require two entries before viewing, but set the maximum number of entries to 1. This can be used when created a database of personal information, such as a list of addresses and phone numbers of participants.</p>
9.	<p>Section: Entries Field: Maximum number of entries</p> <p>Click to choose the maximum number of entries that a student may submit.</p>	<p>This field limits the number of entries a student can submit. Choose None to allow unlimited entries per student.</p>
10.	<p>Section: Availability Field: Available from/to checkboxes</p> <p>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.</p>	<p>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.</p> <p>Students will see the activity on the course page even if it is not yet available for submissions.</p>
11.	<p>Section: Availability Field: Read only from/to checkboxes</p> <p>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.</p>	<p>Use these fields if you have a pre-populated database that you want students to use, but you do not want them to add it.</p> <p>Students will see the activity on the course page, even if it is not yet available for viewing.</p>
12.	<p>Section: Ratings Field: Roles with permission to rate</p> <p>This list displays for informational purposes. You must save the database to activate this setting.</p>	<p>By default, only teachers can rate database entries from the database’s List view, although students can be given permission to do so if desired.</p> <p>Teachers can grant this permission by change a course administration setting.</p>

Step	Action	Notes
13.	<p>Section: Ratings Field: Aggregate type</p> <p>Choose from the dropdown list to determine how ratings are used for a grade.</p> <p>If you choose No ratings, the remaining fields in this section become inactive. The activity will not appear in the gradebook.</p>	<p>The aggregate type defines how ratings are combined to calculate the final grade in the gradebook. For example, if each student submits five database entries, the ratings for each student’s entries will be combined according to your selection in this field.</p> <ul style="list-style-type: none"> • 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 rating—The highest rating becomes the final grade • Minimum rating—The smallest rating becomes the final grade • Sum of ratings—All ratings are added together. Note that the total cannot exceed the maximum grade for the activity.
14.	<p>Section: Ratings Field: Scale > Type</p> <p>This field only appears when choosing a ratings aggregate type.</p>	<p>Types include None, Scale, and Point.</p> <p>If choosing Scale, a dropdown list of rating scales appears. Teachers may choose to ask their Moodle server administrator to set up a custom scale.</p> <p>If choosing Point, scale type the maximum grade in the field.</p>
15.	<p>Section: Ratings Field: Restrict ratings to items with dates in this range</p> <p>Click this checkbox if you want to set a date range to allow ratings. When checking this box, you must also enter the desired range in the date fields.</p>	<p>The teacher can choose to allow only entries within a certain date range to be rated.</p> <p>The date fields are inactive if this box is not checked.</p>
16.	<p>Section: Ratings Field: Grade category</p> <p>If using ratings, choose from the dropdown list the category in which the grade will appear.</p>	<p>This setting controls the category in which this activity’s grades are placed in the gradebook.</p> <p>This section ties to the Rating section and the gradebook, so options in the dropdown list will depend on other factors related to course and Database activity’s setup.</p>

Step	Action	Notes
17.	<p>Section: Ratings Field: Grade to pass</p>	<p>This setting determines the minimum grade students need to earn to successfully complete the activity.</p>
18.	<p>Section: Common module settings Field: Availability</p> <p>Choose to show or hide the assignment on the course page. You can also choose to make the database available but hidden on the page.</p>	<p>You may change the setting at any time.</p> <p>Making an activity available but hidden on a course page can help reduce page clutter, and it can provide a way to control access to the activity, since the teacher/facilitator must give participants the link to the activity.</p>
19.	<p>Section: Common module settings Field: ID Number</p> <p>Enter an ID number, if desired. An ID number is not required.</p>	<p>Using an ID number allows teachers to easily identify the activity for grade calculation and custom reporting. If the activity is not included in any grade calculation, the ID number field may be left blank.</p>
20.	<p>Section: Common module settings Field: Force language</p>	<p>Choices include Do not force, English, and English (US).</p> <p>Forcing language to English (US) eliminates the British and Australian spellings, such as “enrolment.” However, forcing language can sometimes interfere with browser-based language translators used by non-English-speaking participants.</p>
21.	<p>Section: Common module settings Field: Group mode</p> <p>Choose the group mode desired for this database.</p>	<p>This allows students to access the database as members of a group rather than as individuals.</p> <p>There are 3 options:</p> <ul style="list-style-type: none"> • No groups—There are no subgroups. Everyone is part of one big group • Separate groups—Each group member can only see activity from their own group, others are hidden from their view • Visible groups—Each group member works in their own group’s database, but they can also see other groups’ databases <p>When forcing group mode at the course level, you cannot change the group mode at the activity level.</p>

Step	Action	Notes
22.	<p>Section: Common module settings Field: Grouping</p> <p>Choose the grouping mode desired for this database.</p>	<p>The default is None. For other options to appear in this field, you must first set up groups in the course administration area.</p> <p>A single grouping can include just one group or several groups.</p>
23.	<p>Section: Restrict access > Access restrictions > Add restriction... Field: Activity completion</p> <p>If desired, select an activity from the dropdown list and the condition students must meet before accessing the database.</p>	<p>You may use the restriction in place of the grade condition fields.</p> <p>Click the X next to any type of access restriction to delete it.</p>
24.	<p>Section: Restrict access > Access restrictions > Add restriction... Field: Date</p> <p>If enabled, you must enter the appropriate dates that will restrict access to the database.</p>	<p>This set of fields allows students to view and access the database only during the specified period.</p>
25.	<p>Section: Restrict access > Access restrictions > Add restriction... Field: Grade</p> <p>If desired, select an activity from the dropdown list and the grade students must achieve before accessing to the database.</p>	<p>You may set multiple grade conditions. If you do, students can only access the database when after meeting all specified grade conditions.</p>
26.	<p>Section: Restrict access > Access restrictions > Add restriction Field: Group</p> <p>Select a group criteria required to gain access to the database.</p>	<p>You can select a single group or any group.</p>
27.	<p>Section: Restrict access > Access restrictions > Add restriction Field: User profile</p> <p>Select a field and a condition that users must meet before accessing the database.</p>	<p>You can restrict access based on any field from a user's profile. For example, you can limit an activity to users with certain email domains, such as oklahoma.gov, a last name that starts with a certain letter, etc.</p>

Step	Action	Notes
28.	<p>Section: Restrict access > Access restrictions > Add restriction</p> <p>Field: Restriction set</p> <p>This setting allows nested restrictions.</p>	<p>This advanced setting allows teachers to place restrictions within a restriction, such as users from a certain group who have completed a required activity.</p>
29.	<p>Section: Activity completion</p> <p>Field: Completion tracking</p> <p>Select the desired completion tracking status from the dropdown list.</p>	<p>For tracked activities, the user will see a notation next to the activity’s link on the course page that indicates completion.</p> <p>Options include allowing students to manually mark activity completion. Teachers can automatically track completion based on certain conditions, or they can choose to not track the activity.</p> <p>When setting multiple completion conditions, student must meet all conditions set by the teacher.</p>
30.	<p>Section: Activity completion > Show activity as complete when conditions are met</p> <p>Field: Require view, Require grade, Require entries</p> <p>Click the appropriate boxes to track completion with the system and to place requirements on student actions.</p>	<p>These conditions appear when setting “Show activity completion when conditions are met.”</p> <p>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.</p>
31.	<p>Section: Activity completion > Show activity as complete when conditions are met</p> <p>Field: Expect completed on</p> <p>Click the Enable box if to require database completion by a set date. Enter the appropriate date in the date fields.</p>	<p>These conditions appear when setting “Show activity completion when conditions are met.”</p> <p>The date is not shown to students and only displays in the activity completion report.</p>
32.	<p>Section: Tags</p> <p>Leave this field at the default for training.</p> <p>Tags are not required.</p>	<p>Tags provide a way for users to locate related content in Moodle by linking information across topics and across the site. Users use tags to search for topics of interest. Teachers can choose from established tags, or create their own.</p>

Step	Action	Notes
33.	Section: Competencies Leave this field at the default for training.	Competencies are student proficiencies or defined levels of understanding.
34.	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 activity setup, where you will define the fields in each record and how they will display.

DEFINING DATABASE FIELDS

IMPORTANT: Planning your database fields, field types, and wording before setting up the activity will speed up the development process.

Step	Action	Notes
1.	After completing the initial setup, clicking the Save and display button reveals a page with a series of tabs.	You will land on the Database tab. You can create your first database field on this screen. You can also import a preset database file from this screen.
2.	Below the Start building your activity heading, click the Create a field button.	A dropdown menu of database field types will appear.
3.	Choose Image from the dropdown menu.	
4.	For the Field name , type Grave Image 1 .	When you select a field type, you will first enter its name. Each field must have a unique name to identify it. Moodle provides spaces to enter the relevant parameters for the field, depending on its type.

Step	Action	Notes
5.	<p>For the remaining parameters, choose the following:</p> <p>Field description: [Leave blank] Required field: Check the box Width in single view: 360 Height in single view: 240 Width in list view: 180 Height in list view: 120 Maximum size: 1MB</p>	
6.	<p>Click the Save button in the lower right corner of your screen.</p>	<p>The Manage fields screen appears (the Fields tab). Your first field appears in the table. To make changes to a field, click the three vertical dots to the right of the field name to reveal the Edit link.</p>
7.	<p>You can create the remaining fields on the Fields tab by clicking the Create a field button to reveal the dropdown menu showing all the field types.</p>	<p>Using the steps listed above, create the remaining fields using the information in the following table.</p>

For training purposes, create the following fields using the listed settings, beginning with the second image:

Field Number	Field Type	Field Name	Field Setup
1.	Image	Grave image 1	Field description: [Leave blank] Required field: Check the box Width in single view: 360 Height in single view: 240 Width in list view: 180 Height in list view: 120 Maximum size: 1MB
2.	Image	Grave image 2	Field description: [Leave blank] Required field: [Leave unchecked, not required] Width in single view: 360 Height in single view: 240 Width in list view: 180 Height in list view: 120 Maximum size: 1MB
3.	Image	Grave image 3	Field Description: [Leave blank] Required field: [Leave unchecked, not required] Width in single view: 360 Height in single view: 240 Width in list view: 180 Height in list view: 120 Maximum size: 1MB
4.	Dropdown list	Location	Field Description: According to map grid Required field: Check the box Options (one per line): 1A 2A 3A 1B 2B 3B 1C 2C 3C
5.	Short text	First name	Field Description: First name on grave marker Required field: Check the box Allow autolink: [Leave unchecked, no link]

Field Number	Field Type	Field Name	Field Setup
6.	Short text	Last name	Field Description: Last name on grave marker Required field: Check the box Allow autolink: [Leave unchecked, no link]
7.	Date	Date of birth	Field Description: DoB on marker, if legible
8.	Date	Date of death	Field Description: DoD on marker, if legible
9.	Text area	Inscription	Field Description: Inscription on marker Required field: [Leave unchecked, not required] Width: 60 Height: 35
10.	Text area	Additional observations	Field Description: Additional observations Required field: [Leave unchecked, not required] Width: 60 Height: 35

DATABASE TEMPLATES

The templates determine how the database looks when it displays information. To view the templates, click the **Templates** tab, and then click the **dropdown menu** near the top of the screen. The most used templates include:

- **Add entry**—The form on which participants enter data
- **Single view**—Displays one entry at a time
- **List view**—Displays a range of entries at a time (for example, a list of 10, 20, or 50 entries on a screen)
- **Advanced search template**—Used when sorting the entries by field name

When you first begin using the Database activity, feel free to use the default templates. However, at some point, you may want to adjust the appearance and functionality of your database screens. Getting the templates to look the way you want may require knowledge of HTML or CSS coding. If you do not know how to code web pages, find someone who can help you.

When on the **Templates** tab, the **Available tags** appear in the left column. Tags are placeholders for the information entered into the database. If you have already created fields for your database, your fields will appear in the list. Fields for tags are designated with **double-square brackets**: `[[tag field]]`.

Actions are include other data collected by Moodle and other features, such as edit and delete icons, user name, the time of the entry, and comment fields. Actions tags are designated with **double-pound signs**: `##actiontag##`. Moodle docs lists the following action tags:

- **##actionsmenu##** creates a dropdown menu with the available user's actions in the current database entry. This is the recommended way to add options to entry. However, actions links tags are still available, including **##edit##**, **##delete##**, **##approve##**, or **##disapprove##**.
- **##more##** creates a link to the single view, which may contain more detailed info
- **##moreurl##** creates just the URL for the above link, useful for creating your own links. You can click on the link icon and type **##moreurl##** into URL field or in source view type: `[[fieldname]]`
- **##comments##** creates a link to the view/edit comments page, the link text is the current number of comments (only appears if comments are turned on)
- **##user##** creates a link to the user page of the user who submitted the entry, link text is their name
- **##timeadded##**
- **##timemodified##**
- **##userpicture##** displays the user picture in List view
- **##approvalstatus##** inserted as inline css provides highlighting for unapproved entries
- **##tags##** displays tags (enabled by default in Manage tags in the Site administration)

The right column on the Templates tab displays the template.

IMPORTANT: If you add a field to your database after you have set the templates, it will not automatically appear in your database display. To add the new field to your templates, you can click the **Reset** button in the lower right corner of your screen. However, if you previously edited any of the templates, you will lose your changes. For this reason, finalize the database fields before altering the template designs.

Be sure to pilot the Database activity. Begin by clicking the **Database** tab. On the screen that appears, click the **Add entry** button. Practice using the database while in the student role. Add several entries, browse the database using both the Single and List views, and practice searching the entries.

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. Try using a database in conjunction with other Moodle activities.

SUMMARY AND RESOURCES

This tutorial provides the steps for setting up a Database activity in Moodle, including the decisions required when you create this type of activity.

To learn more about this topic, visit:

- https://docs.moodle.org/403/en/Database_activity_settings
- https://docs.moodle.org/403/en/Building_Database
- https://docs.moodle.org/403/en/Database_templates
- https://docs.moodle.org/403/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.

Many 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 Support Staff listed under Contact Info on ctYOU.org top navigation bar.

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