



Illustration by Ben Wiseman

Quick Start Guide: Learning Catalytics™ for Mastering™ and Modified Mastering™

Last updated 7/7/17

Table of Contents

How is Learning Catalytics integrated with Mastering?	3
Best Practices and Tips for Learning Catalytics	7
The Interface and Settings	15
Enable Learning Catalytics on the Student Course Home	25
Scoring and Grade Transfer	28
Create Modules and Run Sessions	33
Find and Create Questions in Learning Catalytics	42
Student Access	49
Additional Training and Support	55

How is Learning Catalytics integrated with Mastering?

Learning Catalytics (LC), a “bring your own device” student engagement, assessment, and classroom intelligence system, is now fully integrated into your Mastering or Modified Mastering courses. Below is a list of the key integration features:

- Instructors can easily access Learning Catalytics from the Course Home.

The screenshot displays the Mastering interface. On the left is a 'Course Calendar' for November 2013, showing dates from 27 to 30. The calendar has a 'Test' entry on Thursday, November 28, and a 'quiz' entry on Friday, November 29. Below the calendar are links for 'Create Assignment' and 'View All Assignments'. To the right of the calendar is a sidebar with several sections: 'In-Class Learning' (highlighted with a red box) containing a link to 'Learning Catalytics'; 'Test Your Knowledge' with a link to 'Dynamic Study Modules'; 'Course Materials' with links to 'Manage Documents' and 'Manage Record Lecture Video'; and 'Learn More' with links to 'Getting Started', 'How-To Video Tours', 'IMPORTANT NOTE: Discovery Videos No Longer Available!', 'FAQs', 'Best Practices', 'Ask an Expert Mastering User', and 'Virtual Biology Lab: Tips for Success'. Below the calendar is an 'Announcements' section showing a 'Course Home Page Announcement' dated 12/28/08 at 10:28am, with links for 'Create Announcement' and 'View All Announcements'.

- When you cross over from Mastering or Modified Mastering to Learning Catalytics, a course is created in Learning Catalytics with the same name as your Mastering or Modified Mastering course. Here you can create modules for use inside or outside of class.

[My Courses](#) > **Course 101**

Welcome, Instructor.

See our [training page](#) for resources to help you get acquainted with Learning Catalytics.


The screenshot shows the Learning Catalytics interface. At the top right are links for 'Settings', 'Students', 'Teams', and 'Gradebook'. Below these is a blue 'Create module' button. Underneath is a search bar and a table with columns for 'Module', 'Type', 'Date', and 'Results'. The table is empty, with a message 'No data available in table' and 'Showing 0 to 0 of 0 entries' at the bottom.

- Any scores students earn during sessions (modules you deliver) can be transferred to your Mastering or Modified Mastering gradebook. Grades flow into the Learning Catalytics category.

Note that you cannot transfer scores to any other category except the Learning Catalytics category.


- Students *do not* see a link to Learning Catalytics on their Course Home *until you enable Learning Catalytics for your students*. To enable LC for your students you must select **Use with Students**.

learning | catalytics
Learning Catalytics is a "bring your own device" web-based student engagement, assessment, and classroom intelligence system. Use open-ended questions to get into the minds of your students to understand what they know and adjust lectures accordingly.


Step 1. Preview & Set Up

Explore Learning Catalytics and determine how you will use it in your course.

- Browse the question library or write your own questions from scratch.
- Add questions to modules to use in your class.
- Preview the student experience.
- Arrange your classroom seatmap.

Preview & Setup

Step 2. Use with Students

Start using Learning Catalytics in your course.*

- Pose questions to students during class.
- Form discussion groups based on student answers.
- Review results in real time to identify student misconceptions.

 Use with Students

*Requirements for Use in Your Classroom

- Wi-fi or cell provider connectivity with capacity for all students to be online simultaneously (check with your IT department).
- Web-enabled device for each student (e.g. smartphone, tablet, laptop)
- The ability to use Learning Catalytics with your MyLab Course is a Beta feature. Please review our [Training](#) pages for more information.

- Once you enable LC by selecting **Use with Students**, all students have access to Learning Catalytics from within their Mastering or Modified Mastering course.

Important Tip: Students SHOULD NOT purchase access separately to Learning Catalytics at the Learning Catalytics website. Students need to have the same Pearson account for both Mastering or Modified Mastering and Learning Catalytics. If students create a different account (different username) on the Learning Catalytics website, then their scores will not successfully transfer from LC to your Mastering or Modified Mastering Gradebook. For this reason, we suggest students always access LC from their Mastering or Modified Mastering course.

- When students join sessions from the Mastering or Modified Mastering Course Home they do not need to enter a session ID. When a session is in progress, they see Join Now button on the Course Home.

- As soon as a session is stopped, scores for Learning Catalytics sessions can be automatically transferred to your Mastering or Modified Mastering Gradebook. Any updates to those scores are sent automatically, as well.
- After you've enabled LC for your students, you will see the option to transfer grades within the module settings. You can transfer all or some of your LC modules to your Mastering or Modified Mastering Gradebook. All transferred scores automatically flow to your Homework category. Note that there is no option to have LC scores flow to a different category.

Sample workflow for running a Learning Catalytics Instructor-Led Synchronous session* with students in class:

**Students can engage with LC in various ways, including self-guided learning, but this example is for the Instructor-Led Synchronous response type, which is the most common response type.*

- 1) Enable Learning Catalytics by clicking **Use with Students**. Students see Learning Catalytics on their Course Home once you've enabled it.
- 2) Create a new module.
 - a) Select whether you want to transfer grades to Mastering.
 - b) Add questions and customize the module as needed.
- 3) Start the session (deliver the module) when appropriate. For tips on peer instruction, see the [Learning Catalytics Implementation Guide](#).
- 4) Students join the session from their Course Home.
 - a) Students see a Join Session link. Students do not need the session ID when they join the session from their Mastering or Modified Mastering course
- 5) End the session once complete.
- 6) Review student answers within Learning Catalytics or review scores within your Mastering or Modified Mastering course Gradebook (if scores were transferred).

- 7) If you've allow review, students can review their own performance and results from Learning Catalytics or from their Mastering or Modified Mastering course.

Best Practices and Tips for Learning Catalytics

To use Learning Catalytics with your course, you must enable it for your students and notify them to confirm or purchase their access. Before enabling Learning Catalytics for your students and notifying them to confirm or purchase their access, read through the best practices below. Students don't see Learning Catalytics/ on their Course Home until you enable Learning Catalytics for your students. Please refer to the [Learning Catalytics Planning Toolkit](#) to help you have a successful implementation.

Best Practices: Before You Begin

Check classroom connectivity

- If you decide to implement Learning Catalytics for in-class learning, check with your IT department on campus. You need capacity for all students to be online simultaneously via Wi-Fi or cell providers.
- Involve your campus administration (dean, chair, and so on) with your request for classroom connectivity. Campus administrators can be very helpful to get you the resources you need to incorporate active learning into your class.
- It is suggested to request Wi-Fi capacity for 3x the enrollment of your class because some students may bring multiple devices to class.

Consider student access to web-enabled devices

- If you are concerned about all students having a web-enabled device (smartphone, tablet, or laptop) in class, consider purchasing a few low-cost used devices to loan to students. Many institutions have successfully implemented a loaner strategy with six or fewer devices for 500-student enrollment courses.
- For a loaner strategy, look into grant opportunities on your campus. For example, many schools offer mini-

grants through the Center of Teaching Excellence or Teaching Development Departments.

- Consider exploring device loaner programs that may already be available through your institution's library.

**Learn about
student access to
Learning
Catalytics from
Mastering**

- Learning Catalytics is included in Mastering with eText purchases (both online and new book packages) or sold separately. If students did not purchase the eText version of Mastering, then they will need to purchase access to Learning Catalytics through their Mastering Course Home.
- If students do not purchase the eText with Mastering, it is important that students associate their purchase of Learning Catalytics with the SAME username and password they use for their Mastering course.
- Communicate this information to your students early so they understand what they need to purchase for your course and how they access Learning Catalytics from Mastering.
- Once you decide to use Learning Catalytics, make sure to follow the appropriate steps to enable your course with Learning Catalytics by clicking **Use with Students**. After that, students will see the In-Class Learning pod on their Course Home.
- Make sure students know they need to crossover to Learning Catalytics from their Mastering course successfully at least once to successfully connect Learning Catalytics and Mastering. This will allow you to use great integration features such as grade transfer, single sign-on, and session awareness.

- Once you click **Use with Students**, you will see the option to transfer grades from Learning Catalytics to Mastering in the module settings.
-

Identify how you will use Learning Catalytics to achieve learning goals

- Consider your learning goals and what you want students to get out of the material. Think about learning outcomes that students struggle with most and how you might use interactive learning to increase your students' conceptual understanding of those topics.
 - Peer instruction helps students learn by encouraging them to articulate their thinking. The discussion process helps both the stronger and the weaker students. Research has shown that Peer Instruction yields significant gains in conceptual understanding, problem solving skills and long-term retention.
 - Work with the Pearson Results team to help analyze your data to compare learning outcomes before and after implementing Peer Instruction in your course. This is a great way to get buy-in from colleagues for teaching interactively. It can also be helpful for any future changes in your course design.
-

Consider how you will measure student learning gains

- Pair targeted activities with diagnostic assessment strategies. If you want to assess student gains, consider designing a module to assess student understanding of a process. Create a module with a five or six question set of multiple choice and true/false questions that require a short-answer response explaining answer choice so you can determine reasoning type (i.e. informal, mixed, or principled scientific reasoning) as a pre-test. This should take about 15-20 minutes to complete.

Questions should directly relate to the targeted active-learning exercises used in the lecture. Don't discuss the questions in class. Consider asking these questions again at the end of the semester as a post-test. This will allow you to compare the pre- and posttest results to measure student gains. It can help you implement targeted active-learning activities in the future.

Consider giving no points and encourage students to try their best. (April Cordero Maskiewicz, 2012 Spring)

- Consider asking questions in a pre-test in the beginning of the semester to get a baseline such as prior knowledge assessment, conceptual inventory, and attitudinal survey. Consider using standardized conceptual inventories like the Force Concept Inventory, where available and appropriate. At the end of the semester or on an exam, ask them again.
- Consider conducting a student survey to learn more about your students' experience. A survey can you provide you with helpful feedback on your Learning Catalytics implementation.

Identify good questions to ask

- Ask questions that address your students' misconceptions and reveal the kinds of uncertainties they might have about that material. For example, if you are writing a multiple-choice question, you'll want include choices that students might think are correct. Learning Catalytics permits you to create free-response questions where you do not need to know students' misconceptions beforehand.
- Questions should challenge students appropriately by being neither too easy, nor too hard, that is, somewhere between 30 and 70 percent of the

students should answer it correctly on their own, before discussion.

- Consider using various types of questions with Learning Catalytics such as region, sketch, ranking, word cloud, priority, many choice, short answer, data collection, direction, confidence, composite sketch, multiple-choice, and so on, to pose questions to student in the most natural way possible. This will help give you both more confidence in students' developed skills and a more precise understanding of students' misconceptions.

Develop a plan for how you will use Learning Catalytics that works for you

- Decide how you will incorporate Learning Catalytics into your course assessment plan. For example, will you make Learning Catalytics worth 5 percent of the overall grade (such as a participation grade)? Are you planning on using Learning Catalytics for in-class quizzes or assessments? If you will incorporate Learning Catalytics use into students' grades, decide whether you will score responses based on participation, correctness, or both.
- Decide whether you will transfer grades from Learning Catalytics to your Mastering Gradebook.
- If you are just starting out, consider incorporating Learning Catalytics once a week or every other lecture to give yourself time to move to the new format. Alternatively, consider only spending one-third or half your lecture time on Learning Catalytics activities.
- If you assign pre-lecture assignments in Mastering, you don't have to cover everything in class. Demonstrate how you adjust your teaching in reaction to the pre-

lecture assignments and students will be motivated to take the assignments seriously and will find class time more useful.

- Students should cover the easier aspects of the material outside of class and work in class along with the instructor on the more difficult content.
- Consider giving Learning Catalytics privileges to section instructors such as TAs so they can create a seat map, monitor responses during class, grade open-ended questions, and so on.

Explore the Learning Catalytics system and content

- Create modules, create questions, browse the question library (Pearson and/or Community content), and preview the student view. All of your work is saved in Learning Catalytics before you decide to use it with your students.
- To save time when preparing for class, it is important to avoid “reinventing the wheel” when possible. In Learning Catalytics, you will find Pearson-provided content as well as a searchable shared question library where instructors can share questions that they have successfully used in their classes. This way, you can prepare for class by combining your own questions with what you find to be the best questions that others have written. We encourage you to share questions that you have found particularly useful in class.
- Use a graphical tool to map out the classroom seating arrangement, and when students arrive in class each day they use any web-enabled device to indicate what seat they are sitting in. During class, you can — with only a few clicks — have Learning Catalytics

automatically assign students to groups and send a message to each student's device telling them who to talk to (e.g., "turn to your left and talk to Jon Snow").

**Consider how you
will present
Learning
Catalytics to your
students**

- Interactive techniques might be new to students. It is important to motivate students to participate from the very beginning of the course. Encourage your students to participate in interactive learning by explaining the method at the beginning of the course, by using the feedback from pre-lecture assignments to plan your lectures, and by making sure that your exams reflect the type of questions you ask in class.
- Try to connect what they work on in Learning Catalytics to their learning outcomes and professional aspirations so they see the relevance and purpose.
- Remind students of your requirement to use Learning Catalytics *before* you use it in class. Encourage your students to confirm their access to Learning Catalytics from within Mastering *before* you deliver your first Learning Catalytics session. If they wait until they are prompted to join a session, those who haven't purchased access will be prompted to do so when they try to join.
- For students who don't have a device, supply a printed PDF version of the module questions.
- Explain Learning Catalytics on your syllabus, including why you are using it in your class.
- At the beginning of the semester, show them the [analysis](#) (Scott Freeman, 2014) of how students in active learning courses do better than traditional lecture courses.

- Talk with students throughout the semester about how they are learning. Keep them informed about the learning outcomes for each lecture and how those learning outcomes are also incorporated into their homework and exams.

The Interface and Settings

Topics

[How to Access LC](#)

[Copy a Course](#)

[Send or share Modules](#)

[Section Instructor Access](#)

[The Interface](#)

[Courses](#)

[Questions](#)

[Classrooms](#) (seat map)

[Settings](#)

[Student Roster](#)

[Teams](#)

[Gradebook](#)

How to Access LC


You have easy access to Learning Catalytics right from the Mastering Course Home.

The screenshot displays the Mastering Course Home interface. On the left, the 'Course Calendar' for November 2013 is visible, showing dates from Sunday to Saturday. The calendar includes a 'Test' on Wednesday, November 13, and a 'quiz' on Thursday, November 28. Below the calendar is a 'Create Assignment' button and a 'View All Assignments' link. To the right of the calendar is the 'Announcements' section, showing a 'Course Home Page Announcement' dated 12/28/08 at 10:28am, with a 'Create Announcement' button and a 'View All Announcements' link. On the far right, a sidebar contains four sections: 'In-Class Learning' (highlighted with a red box) with a 'Learning Catalytics' link, 'Test Your Knowledge' with a 'Dynamic Study Modules' link, 'Course Materials' with 'Manage Documents' and 'Manage/Record Lecture Video' links, and 'Learn More' with links to 'Getting Started', 'How-To Video Tours', 'IMPORTANT NOTE: Discovery Videos No Longer Available!', 'FAQs', 'Best Practices', 'Ask an Expert Mastering User', and 'Virtual Biology Lab: Tips for Success'.

learning | catalytics

Learning Catalytics is a "bring your own device" web-based student engagement, assessment, and classroom intelligence system. Use open-ended questions to get into the minds of your students to understand what they do and don't know and adjust lectures accordingly.

1



Watch the Video

Step 1. Preview & Setup

Explore Learning Catalytics to determine how you will use it in your course.

- Browse the question library or write your own questions from scratch.
- Add questions to modules to use in your class.
- Preview the student experience.
- Arrange your classroom seatmap.

2

Preview & Setup

Step 2. Use with Students

Notify students to purchase access and start using Learning Catalytics in your course.*

- Pose questions to students during class.
- Form discussion groups based on student answers.
- Review results in real time to identify student misconceptions.
- ☐ Notify students via email to purchase access. [view/edit message](#)

5

Use with Students

*Requirements for Classroom Use

- Classroom connectivity:** Capacity for all students to be online simultaneously via Wi-Fi or cell providers (Check with your IT department)
- Web-enabled devices:** Smartphone, tablet, or laptop for each student
- Learning Catalytics access:** Included in Mastering with eText (both online subscriptions and new book packages) or sold separately

- Once you click **Learning Catalytics**, you will be prompted to watch a video.
- Select **Preview & Set Up** to open a new window for the Learning Catalytics system where you can create seat maps, set up modules, and so on. Any work completed in Preview & Setup mode is saved and remains in the course if you move onto **Use with Students**.

*Note: Students don't see anything you do in Learning Catalytics until you click **Use with Students** and deliver a session.*

- Be sure to review requirements for use prior to selecting **Use with Students**.
- It is suggested to select to **Notify students via email to purchase access**. This notification is also included as an announcement in your course for students to see on their Course Home.
- Select **Use with Students** to enable Learning Catalytics in your course. By selecting **Use with Students**, students get a link to Learning Catalytics from their Course Home. Students won't see Learning Catalytics from their

Mastering Course Home and you cannot transfer grades to Mastering from Learning Catalytics without selecting **Use with Students**. For details on enabling Learning Catalytics and the important steps for this process to avoid student confusion and issues, see [Enable Learning Catalytics](#).

Copy a Course

When a Mastering course is copied, all associated Learning Catalytics content is also copied. However, Mastering still prompts you to preview Learning Catalytics before enabling it for students in case you choose not to use Learning Catalytics in this new course. Therefore, you must select **Use with Students** in the new copied course before students are able to access Learning Catalytics in their course.

Send or Share Your Learning Catalytics Modules

You can send or share your Learning Catalytics modules with other instructors. You can make a colleague a section instructor in your Mastering course with the Learning Catalytics privilege and the section instructor will be able to copy the modules into their own course. However, that will give your colleague access to your entire Mastering course where you've made them a section instructor.

You can also send your Learning Catalytics course with all the modules to another educator. To do this, you must first copy the course linked with your Mastering course to make it a Learning Catalytics standalone course. From there, you can send a course to them.

Others with whom you send a course must have a Learning Catalytics instructor account. Creating an account requires an access code, which can be obtained from your [Pearson rep](#). If they have a Mastering educator account, then they are all set and can log into learningcatalytics.com with that account.

1. Sign in at www.learningcatalytics.com. Click **Copy a Course** and select the course you want to copy. Note that the title of the course will match the title of your Mastering course. The new course appears in the My Courses list with "Copy of" before the original course name. You can give the copy a unique course name.
2. Click the course you just copied to open it.

3. Click **Send course**.
4. Enter the email address of the instructor that you want to send this course to, and then click **OK**.

The recipients you listed receive an invitation email from Learning Catalytics. Clicking the **Accept this invitation** link in the message opens Learning Catalytics, where a recipient can log in to receive access to the course. After they accept the invitation, your course appears in each recipient's My Courses list.

From there, your colleagues can edit any settings or features of the copy, make copies of the copy and edit those, delete any copy, and copy modules from the course into their own courses.

Note: Learning Catalytics also allows you to share your course with a colleague. The difference between “send” and “share” is that sharing gives the person access to your specific LC course. If you send it, they are not entering your specific course but instead receive a copy of your course. Typically, sharing is used when you need TAs or other instructors to help with your course and you are using the standalone version of Learning Catalytics. If you use Mastering with Learning Catalytics, TAs and instructors join and help with your course via the Section Instructor feature within Mastering.

Section Instructors

Section instructors can help with all the tasks you can complete in Learning Catalytics, including copying courses and modules, creating new questions, editing the student notification message and inviting students, delivering in-class sessions, starting and stopping asynchronous sessions, responding to student questions, exporting the Learning Catalytics Gradebook, and so on. To do this, go into your Mastering course settings and give your section instructors the Learning Catalytics privilege.

Manage Section Instructors

Section Instructors for Course: Urry, Campbell Biology 11e-DEMO

Add Section Instructor (Login Name): Add

Set Section Instructor Privileges:

NAME (LOGIN NAME) AND EMAIL ADDRESS	COURSE SETTINGS	ROSTER	GROUPS	ANNOUNCEMENTS	SECTION INSTRUCTORS	ASSIGNMENTS	GRADEBOOK	ESSAYS	LEARNING CATALYTICS	COURSE MATERIALS	REMOVE
Instructor Account (educator_123)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Learning Catalytics Interface

The screenshot shows the Learning Catalytics interface. At the top, the logo 'learning | catalytics™' is displayed. To the right of the logo, there are links for 'Instructor Account', 'Pearson', and 'Log out'. Below the logo, a navigation bar contains links for 'Courses', 'Questions', 'Classrooms', 'Training and Support', 'Help', and 'Feedback'. A 'Student view' button is located on the right side of the navigation bar. Below the navigation bar, the text 'My Courses > Marieb 10E Spring 2017' is shown. A callout box points to the 'Courses' link, stating 'Click anytime to see the Student View.' Another callout box points to the 'Courses' link, stating 'Create or copy a module'. A third callout box points to the 'Questions' link, stating 'Menus provide access to courses, question library, classrooms at your institution, Training and Support, Help, and Feedback.' A fourth callout box points to the 'Settings' link, stating 'Manage settings, see student roster, create and manage permanent teams, and manage Gradebook'. A fifth callout box points to the 'Gradebook' link, stating 'Click gear to start session, edit module, review results, create PDF, copy module, or delete module.' Below the navigation bar, there is a table with columns for 'Module', 'Type', 'Date', and 'Results'. The table contains two entries: 'LC Demo SF' and 'Demo 1', both of which are 'Instructor-Led Synchronous'. The 'Results' column shows progress indicators (green and grey circles) and gear icons. A callout box points to the gear icon, stating 'Click gear to start session, edit module, review results, create PDF, copy module, or delete module.' Below the table, it says 'Showing 1 to 2 of 2 entries'.

Tip: If you sign in at learningcatalytics.com, you will notice a *slightly different* interface.

Courses

The Courses area lists of all of your Learning Catalytics courses. Courses are created automatically when you enter Learning Catalytics through Mastering. Within each course, you can create multiple modules. You can copy modules between your courses.

Questions

You can easily create your own questions on the fly or ahead of time with Learning Catalytics. You can also choose questions from the Pearson library (if available for your discipline) or from the community questions shared by other professors.



[Description of Question Formats](#)

For tips on question creation, refer to [Create or Edit a Question](#).

Classrooms

This lists all of the classrooms in Learning Catalytics *for your institution*. A classroom is associated with a course and shows the physical layout of the seats in the room. You can create a course without associating a classroom with it, but by creating a classroom in the system you will be able to see the spatial distribution of right and wrong answers around the room and you will be able to automatically group adjacent students sitting near each other for discussion based on their responses.

Once you have created a classroom, associate it with the course by editing the course and selecting your newly created classroom from the dropdown there. Then when you are delivering questions you will have several new features available to you:

- A seat map button next to each round's results that you can use to view the real-time results for that round overlaid on top of the seating chart
- An Assign Groups button that you can use to automatically assign students to optimal discussion groups based on their responses.

Create a Classroom Seat Map



[Create a Classroom Seat Map](#)



[Video: Adding a classroom seat map](#)

Training, Support, and Help

There are [How Do I? Videos](#), [Documentation](#), and an [Implementation Guide](#) with best practices available for training and support.

Videos cover basic tasks for completing a specific activity.

The Implementation Guide provides guidance for using Learning Catalytics successfully with best practices and suggestions for the various response types within Learning Catalytics.

Help covers detailed information on using Learning Catalytics with step-by-step directions.

If you need more help and training, you can click [Request Training](#) from the Learning Catalytics or Mastering websites.

Click **Training & Support** under Educator to see the resources on the Learning Catalytics or Mastering websites.

Settings

In settings, you can select your classroom, create new classroom, edit your review settings, enable the “I don’t understand” button and real-time graph, as well as enable automatic pacing.

General Information

Classroom [+ Create new classroom](#)
The seating map for the classroom where the course will be taught.

Settings

Allow review after hours
Allow students to review all of the questions and answers in your delivered modules after this much time has elapsed since the start of the session.

☐ Enable “I don’t understand” button and real-time graph
If checked, students will have access to a button at all times where they can indicate when they are understanding or not.

☐ Enable automatic pacing
If checked, Learning Catalytics will automatically manage the timing of question delivery, and automatically group students based on question results. (We recommend that new users keep this feature turned off initially.)

Default Grouping Settings

These settings apply to both Automated Synchronous modules and Instructor-Led Synchronous modules when automatic pacing is turned on.

Lower bound for grouping
e.g., 30 for 30%

Upper bound for grouping
e.g., 70 for 70%

Default group size
Students should be placed into groups of size...

Default group indicator
Group students based on their...

Default group comparison
Group students when the indicators (above) are...

Default group tolerance
Only group students that are sitting...

Save

Course Setting Tips

- **Title your Mastering course by section and semester.** When you are in Learning Catalytics, you see the Mastering course title. Titling your Mastering course very specifically with the section and semester information will make it easier for you to quickly find it in Learning Catalytics.
- **It can be a nice time saving feature to use other instructors' seat maps from your institution.** Instructors at the same institution see all the classrooms at that institution. Note: If you are concerned about other instructors editing your classroom seat map, you can name your classroom your name or something creative instead of the actual classroom name (i.e. West Hall).
- **In Course Settings, it is suggested to not select automatic pacing until you are comfortable using Learning Catalytics.** If you select this option, delivery is based on pace of student responses. It begins with a “count up” timer displayed on the student window and transitions to “count down” timer based on response frequency. When time expires in Round 1, students will be automatically grouped for peer instruction if 30-70% of students answered the question correctly. When time expires in Round 2 (or if too few or too many students answered the question correctly in Round 1) Learning Catalytics will automatically show students the results of the question.
- **If you are using the Team-Based modality, consider creating permanent groups for these activities.** The Team-Based Learning Collaborative has some [advice on how to form teams](#).
- **Enable “I don’t understand” button and real-time graph.** If checked, students will have access to a button at all times where they can indicate when they understand or not. This can provide you with a nice visual of student confusion.
- **Unless your class size is small, create a seat map if you want to do automatic grouping in the Synchronous modality.** Consider having your TA create your classroom seat map for you to save time. The seat map will give you a visual view of student responses. Watch the short [video](#) to see how Professor Christine Lindstrom uses Learning Catalytics for peer

instruction in her classroom. Read the Learning Catalytics user story from [Matt Stoltzfus, Chemistry Department, Ohio State University](#). If your class size is small, you can still group students automatically for discussion but they may be grouped with any other student in the room.

- **Check your review settings and let your students know about the review option.** Student surveys have indicated that students find the session review helpful to prepare for exams and reconnect with the content after class.

Student Roster (Students)

Click **Students** to see the students in your Learning Catalytics roster. All students enrolled in your Mastering course are automatically added to your roster when you click **Use with Students** from the Mastering Course Home.

[My Courses](#) > [Anatomy and Physiology I](#) > **Students**

Show 25 entries

Search:

Last name	First name	E-mail	Student ID
ouellette	sara	sara.ouellette@pearson.com	

Showing 1 to 1 of 1 entries

If you click the gear, you can remove students from the Learning Catalytics roster. Removing students in the Learning Catalytics roster will not remove students from your Mastering roster.

Note: Please make sure you download scores BEFORE you remove students so you have a backup of any student scores if needed.

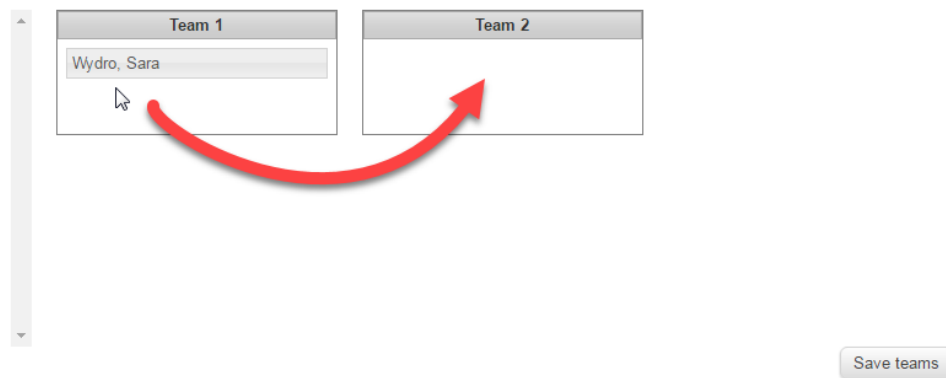
If you see students in your Learning Catalytics roster twice, then they have created a duplicate Learning Catalytics account. Typically, this occurs when students do not follow directions and create a new account instead of using one Pearson account for both Mastering and Learning Catalytics.

Teams

Use the Teams tool to create permanent teams for team-based learning activities. Drag students from the left side to a box on the right to add each student to a team.

Create Student Teams

Use this tool to create permanent teams for team-based assessment modules. Drag students from the left to a box on the right to form a team.



Gradebook


The Learning Catalytics gradebook is where you can see a list of students with the points they have earned for each module. You can edit scores as well as download them. You can also drill into the student performance.

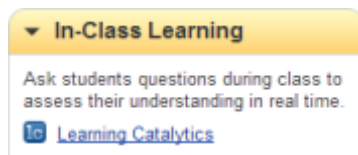
You can also transfer the Learning Catalytics points to the Mastering gradebook for easier grade management.

Enable Learning Catalytics on the Student Course Home

If you decide to use Learning Catalytics with your course, you enable students to access your associated Learning Catalytics course, and notify students to confirm or purchase access. You must follow the steps below and click **Use with Students** in order for the Learning Catalytics link to appear on the student Course Home.

Step-by-Step Directions

1. You have easy access to Learning Catalytics right from the Mastering Course Home page. On your Course Home page in Mastering, click  **Learning Catalytics**.





2. Once you click **Learning Catalytics** you will be prompted to watch a video, review requirements for use, preview the system, or invite students.

*Note: If you have not already done so, click **Preview & Setup** to explore Learning Catalytics features before you decide to use it and ask students to purchase it. Any work completed in Preview & Setup mode is saved and remains in the course if you move onto **Use with Students**.*

learning | catalytics

Learning Catalytics is a "bring your own device" web-based student engagement, assessment, and classroom intelligence system. Use open-ended questions to get into the minds of your students to understand what they do and don't know and adjust lectures accordingly.


 Watch the Video

Step 1. Preview & Setup 

Explore Learning Catalytics to determine how you will use it in your course.

- Browse the question library or write your own questions from scratch.
- Add questions to modules to use in your class.
- Preview the student experience.
- Arrange your classroom seatmap.

Preview & Setup

Step 2. Use with Students 

Notify students to purchase access and start using Learning Catalytics in your course.*

- Pose questions to students during class.
- Form discussion groups based on student answers.
- Review results in real time to identify student misconceptions.
- ☐ Notify students via email to purchase access. [view/edit message](#)

Use with Students

***Requirements for Classroom Use**

- **Classroom connectivity:** Capacity for all students to be online simultaneously via Wi-Fi or cell providers (Check with your IT department)
- **Web-enabled devices:** Smartphone, tablet, or laptop for each student
- **Learning Catalytics access:** Included in Mastering with eText (both online subscriptions and new book packages) or sold separately

1. [Optional] Under Step 2, click **view/edit message** to read and make changes to the message that you can send to students to notify them to confirm or purchase access to Learning Catalytics.

☐ **Notify students via email to purchase access.**
[view/edit message](#)

2. [Optional] Select the **Notify students** check box if you want to send the email message as soon as you click **Use with Students**. (If you want to use the message later, you can copy and save it from this box now. You won't see this option again.) It is recommended to select the "Notify students" check box to quickly and easily inform students. The automated email explains to students in detail what they need to do to access Learning Catalytics. This message is editable and also appears as an announcement.

3. Click **Use with Students**.

*Important: You must click **Use with Students** if you are planning to transfer Learning Catalytics scores to the Mastering Gradebook.*

*Once you click **Use with Students**, it is irreversible in that particular Mastering course. When you copy a course, you will need to click **Use with Students** in the copied course even if you've used Learning Catalytics with students in the original course.*

Clicking **Use with Students** automatically:

- Sends the notification email to all students registered in your Mastering course, and places an announcement on the student Mastering Course Home page. Make sure the check box is selected so students get this message. The announcement remains visible to students, including those who enroll in your course later.
- Places the Learning Catalytics link on the student Mastering Course Home page. Students must cross over successfully from Mastering to Learning Catalytics at least once. Students should NOT sign in directly at www.learningcatalytics.com until they have crossed over at least once. If students need to purchase access to Learning Catalytics, they must make

sure to enter their Mastering login credentials during the purchase process. The [Student Handout](#) walks students through this process.

- Creates the Learning Catalytics roster with names of all students in your Mastering course, and keeps the Learning Catalytics roster up-to-date automatically with changes that are made to your Mastering roster.
 - Provides you with the ability to select whether you'd like to transfer grades from Learning Catalytics to Mastering in the module settings.
4. After you select **Use with Students**, be sure to share the [Student Handout](#) with students to avoid issues with gaining access to Learning Catalytics. It is important that students do not create separate Learning Catalytics accounts for grade sync to be successful. Students should not create new accounts at learningcatalytics.com. In addition, students need to enter their Mastering login credentials during the purchase process. Directions for students are covered in the handout.

Scoring and Grade Transfer

- [Scoring](#)
- [Grade Transfer](#)

Scoring in Learning Catalytics

Scoring options are the same for both Synchronous modalities and the Self-Paced modality, and similar for Self-Test modality.

Important: *The Team-Based modality uses an entirely different scheme, for which you set different options. The tips below apply to all modalities except the Team-Based modality. For information about the Team-Based modality, refer to the lesson in this guide on Team-Based Assessments.*

Best Practices: Scoring

- **Scoring preferences are decided by module.** For each module, you can award points for participation only, correctness only, or proportionally for both. By default, it is set to score based on correctness only. The slider allows you to adjust the setting.
Tip: If you want to promote open discussion during peer instruction for a Synchronous session, it is suggested to give credit primarily or completely based on participation so that students are not too worried about answering questions incorrectly.
- **You can set a different point value for each question in a Synchronous, Self-Paced, or Self-Test module.** By default, questions have either a 1 or 0 point value. Automatically scored questions have 1 point value by default and questions that are not automatically scored have a 0 point value by default. See this [table](#) for helpful details about automatic and manual scoring.
- **If you give points for a question that is not automatically scored and you provide credit for correctness, you need to manually mark answers correct or incorrect.** A student receives the number of points you set for

that question when you mark a response as correct. If time isn't available to mark these questions individually, you can change the point value back to 0 at any time before or after delivery of the module.

- **If you add points to questions in a module that are not automatically scored (such as sketch or word cloud questions), consider providing credit for participation only.** This way, you don't have to mark the answer correct or incorrect.
- **Point values you assign are saved with the *module*, not with the question itself.** If you select the same question from the Question Library for a different module, its value defaults to 1 or 0.
- **If you copy a module, the saved point values are preserved in the new module.** You can always change point values in the original module or a copied module.
- **If you change points to a question to a past session, it will recalculate the students' points earned.** Any scoring change you make is saved in the Learning Catalytics Gradebook, and if you have selected Gradebook Transfer for the module, the change is transferred to the Mastering Gradebook and to students' Scores pages.
- **Any edits to a Learning Catalytics module's scoring parameters always affect scores for *all sessions* of that module, even those that *have already been delivered* in the same Learning Catalytics course.** If you don't want to affect scores for sessions already delivered, consider cloning the module within the course. Doing so lets you deliver the same content using separate modules.
- **If you edit a score in the Learning Catalytics gradebook, the score is a fixed value that overrides the module's scoring settings.**

For example:

You edit points in the Learning Catalytics gradebook for a student and you change the points earned for the module from 5 to 10 points. At this time, the total possible points are 10 for this particular module. This student now has 10 of 10 possible points for this module.

You decide to give more points for a question within a module for the entire class. You edit points in a module for a question. You change the points for a particular question in the module from 2 to 4. Now, the total possible points for the module is 12.

The grade for the student in the gradebook remains 10. Therefore, you changed the total possible points, but the student's score is a fixed value, which is now 10 out of 12 points. To correct this, you would have to adjust the student's score again to 12 so that the student now has 12 out of 12 points. As a result, if you want to change student scores because of a policy or other global change on a question or module level, it is preferable to edit the question or module settings as those changes will automatically update all student scores. Reserve the step of editing a student's score in the gradebook directly for situations where a student completed an assignment in an alternate way or did makeup work.

Step-by-Step Directions: Scoring in Learning Catalytics



[Set up scores for Learning Catalytics questions](#)



[Video: Working with Learning Catalytics scores](#)

Transfer Learning Catalytics Grades to Mastering

Student scores for Learning Catalytics sessions are reported to the Learning Catalytics Gradebook, and you have the option to transfer scores (credit or extra credit) to the Mastering Gradebook, as well. This can be done by module in the module settings. You have the option to click a checkbox so all modules in the future transfer to the Mastering Gradebook.

Gradebook Transfer ☒ Send grade data to MasteringBiology course (Biology Ess 4E)

Points transfer as credit ▼

☐ Make the above grade transfer settings the default for all new modules

Best Practices and Tips: Grade Transfer

- All grades transferred from Learning Catalytics to the Mastering Gradebook flow into the Learning Catalytics category. There is no way to edit the category for Learning Catalytics grades.
- In order to have grades transfer to the Mastering Gradebook, you **MUST** select **Use with Students**. If you don't select this, you will not be able to use the grade transfer from Learning Catalytics to Mastering. The option to transfer grades does not appear in the module settings until you make the selection.
- It is important for students to use the same username for both Mastering and Learning Catalytics. If students create a separate Learning Catalytics account from their Mastering account, grades will not transfer successfully. To avoid this, make sure to share the [student handout](#) at the beginning of the course.
- If you decide later that you don't want your Learning Catalytics grades transferred to the Mastering gradebook, you can always uncheck the Send grade data checkbox to stop the grades transfer. This will remove the Learning Catalytics assignment column from your Mastering Gradebook.
- You have the option to click a checkbox so all modules in the future transfer to the Mastering Gradebook. Existing modules aren't affected by new default

settings, but you can always edit an existing module to change its settings. Be sure to save your changes to the module for the new settings to take effect.

- Remember to click **Stop Session** to send scores to the Learning Catalytics gradebook.
- Once you transfer grades from Learning Catalytics to Mastering, you can link back to the Learning Catalytics sessions for review from the Mastering Gradebook.
- Typically a module is delivered in a single session, but if you deliver a module in more than one session in the same course, scores for each session are transferred separately and appear in separate columns in your Mastering course Gradebook.
- If you edit a student's score in the Learning Catalytics gradebook, your changes are automatically transferred and updated to the Mastering Gradebook.
- *Once a module has already been delivered to students:* If you change any scoring parameters, student scores will be recalculated based on the new parameters. Any new scores will be transferred to both the Learning Catalytics Gradebook and to the MyLab Gradebook if you use grade transfer.

Any edits to a Learning Catalytics module's scoring parameters always affect scores for *all sessions* of that same module, even those that have already been delivered in the same Learning Catalytics course. If you don't want to affect scores for sessions already delivered, consider cloning the module within the course. Doing so lets you deliver the same content using separate modules.

Step-by-Step Directions: Transfer Grades



[Transfer Learning Catalytics scores to Mastering](#)



[Video: Transferring Learning Catalytics scores to Mastering](#)

Create Modules and Run Sessions

- [Create Modules](#)
- [Start and End Sessions](#)
- [Review Student Work and Results](#)

Create a Learning Catalytics Module

Once you enable Learning Catalytics in your course, you can create your first module immediately from the LC account page or access this page at a later time by clicking **Create new module** on your Course Home. Either way, the modules you create are now tied to your Mastering or Modified Mastering course. When you deliver modules, it is called a session. Students do not need a session ID to join a session from their Mastering or Modified Mastering course.



[Select a Response Type](#) (video)

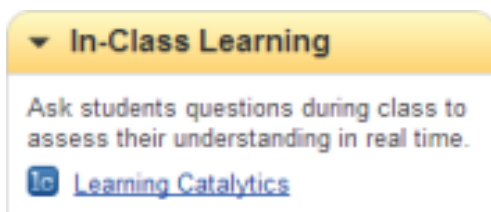
[Create an Instructor-Led Synchronous Module](#) (video)

For more detailed information on creating modules including Instructor-Led Synchronous, Team-Based Assessments, Self-Paced, Self-Test, or Automated Synchronous modules, see the [Learning Catalytics Implementation Guide](#).

Note: If you plan to use Instructor-Led Synchronous modules and want to group students automatically based on their answers and view the live seat map, you will need to [create a seat map](#) (video) prior to running sessions.

Step-by-Step Directions

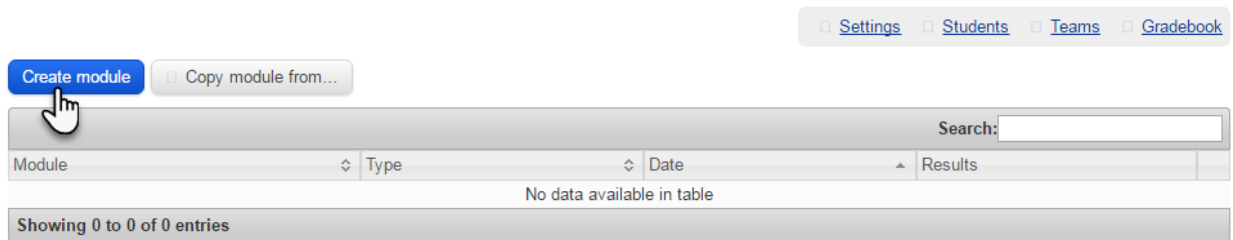
1. Click Learning Catalytics.



2. If you have not clicked **Use with Students** yet, a pop-up appears. Select **Preview & Setup**.

If you have clicked **Use with Students**, you are brought directly into Learning Catalytics.

Select **Create new module**.



The screenshot shows a navigation bar with links for Settings, Students, Teams, and Gradebook. Below this is a 'Create module' button, which is highlighted with a hand cursor, and a 'Copy module from...' button. Below these buttons is a table with columns for Module, Type, Date, and Results. The table is empty, with a message 'No data available in table' and 'Showing 0 to 0 of 0 entries'.

3. Name your module, select a date, and select a response type. For information on selecting a response type, see the video on [Response Types](#). The date you select is only used to sort modules within the table on the course page. Once you've made your selections, click **Save and Continue**.

Create Module

Give the new module a name, a delivery date, and select a response type.

Name*

The name of the module, as shown to students.

Date

The date is used for sorting modules within the table on the course page (enter as YYYY-MM-DD or click to select date).

Response type

Instructor-Led Synchronous

Students respond individually to questions as they are delivered one at a time, typically in class or online with an instructor present.

Automated Synchronous

Students respond individually to questions as they are delivered one at a time in an automated format, typically out of class at a set time when an instructor is not present.

Self-Paced

Students respond individually to questions in any order, typically outside of class.

Self-Test

Students respond individually to questions in any order and receive feedback on each of their responses, typically outside of class.

Team-Based Assessment

Students respond individually to all questions in the module, and then gather in their groups and respond as a team to the same questions.

Save and Continue

4. Customize your module settings. You can edit participation weight to give students credit for correctness, participation, or a mixture of both. In addition, you can hide sessions from students if needed.

Add Questions and Customize Module

The module has been created. Now it's time to customize the module settings and add questions.


Settings

Name*
The name of the module, as shown to students.

Date
The date is used for sorting modules within the table on the course page (enter as YYYY-MM-DD or click to select date).

Response type **Instructor-Led Synchronous** [Change response type](#)
Students respond individually to questions as they are delivered one at a time, typically in class or online with an instructor present.

☐ Hide sessions for this module from students
If checked, do not show active sessions for this module in the list of active sessions students see when they log on.

Participation weight **Final score = 100% Correctness + 0% Participation**
Students receive credit only for correct responses  Students receive credit for any response
Responses in each round receive separate grades; for example, credit-bearing responses on two rounds of a three-point question would result in six points overall.

☐ Do not allow students to review their performance on this module
If checked, do not show sessions for this module in the list of older sessions that students can review within Learning Catalytics.

Gradebook transfer ☐ Send grade data to MasteringBiology course (10E)
Points transfer as

☐ Make the above grade transfer settings the default for all new modules

*Notice the option to send grades to Mastering. If you have not yet selected **Use with Students**, you will not see this option yet. All Learning Catalytics scores automatically transfer to a Learning Catalytics Category in the Gradebook if you transfer grades from Learning Catalytics to your Mastering or Modified Mastering course.*

5. Add questions to your module. You can add your own questions or add questions from the library. The library contains Pearson content and community content.

Note: When adding questions from the library, the filter automatically defaults to Pearson content and the discipline of your Mastering or Modified Mastering course.

Questions

Format	Question	Points
<input type="checkbox"/> Create a new question <input checked="" type="checkbox"/> Add a question from the library <input type="checkbox"/> Copy or move checked questions		

6. Once you've added your questions to the module, select **Save and Finish**.

Note: Some question types default to zero points because they are never automatically scored. More information about [question types](#).

Questions

Format	Question	Points	
<input type="checkbox"/> 1. sketch	In the picture shown, please circle the four structures that are asso...	0	<input type="checkbox"/>
<input type="checkbox"/> 2. matching	Match the area of the central nervous system with its function.	1	<input type="checkbox"/>
<input type="checkbox"/> 3. region	From your study of respiration and the central nervous system, you ha...	1	<input type="checkbox"/>
<input type="checkbox"/> 4. multiple choice	The State Troopers pulled Newt over under suspicion that he was drivi...	1	<input type="checkbox"/>
<input type="checkbox"/> 5. word cloud	Many organs receive dual innervation from both the sympathetic and pa...	0	<input type="checkbox"/>
<input type="checkbox"/> 6. matching	List the correct order of events that occur at a cholinergic synapse ...	1	<input type="checkbox"/>
<input type="checkbox"/> 7. region	Click/Touch to indicate the region that represents the phase of actio...	1	<input type="checkbox"/>
<input type="checkbox"/> 8. confidence	The nervous system is a derivative of which germ layer?	0	<input type="checkbox"/>

☐ [Create a new question](#)

☐ [Add a question from the library](#)

☐ [Copy or move checked questions](#)

Save and Finish



Start and End Sessions

Once you have created and saved modules, you can start the session immediately after saving.

Note: You can start and end sessions from your mobile device. See [use a mobile device to deliver a session](#).

Start Sessions

- 1) From the list of modules for your course, open the module you will use. Before you start the session you can preview the questions in the module using the navigation tools on the page.

[My Courses](#) > Learning Catalytics DEMO

[Settings](#) [Students](#) [Teams](#) [Gradebook](#)

Create module

☐ Copy module from...


Search: <input type="text"/>			
Module	Type	Date	Results
LTS Training	Instructor-Led Synchronous		00
Showing 1 to 1 of 1 entries			

2) When you're ready, click **Start session**.

The screenshot shows the Learning Catalytics interface. At the top, the breadcrumb trail reads 'My Courses > Learning Catalytics DEMO > LTS Training'. Below this, a blue button labeled 'Start session' is highlighted with a mouse cursor. To the right of the button are links for 'Edit', 'Review results', 'Create PDF', and 'Delete module'. Below the button is a 'Jump to' dropdown menu showing '1' and '2'. The main content area displays a question: '1. many choice' followed by 'Which of the following statements is/are true regarding lab safety?'. The options are: A. Eating, drinking & smoking are never allowed in the lab; B. Students should not apply cosmetics in lab; C. Students should always wash hands thoroughly with antimicrobial soap before leaving the lab; D. Students should not remove anything from the lab. Below the question, the 'Answer' is listed as 'A, B, C, and D', and a note states 'All of the statements are true.' The 'Notes' section at the bottom mentions 'ASM-8.6 Learning Outcome: Practice safe microbiology, using appropriate protective and emergency procedures.' and 'This question could be used to assess if students are following the material covered in the course, to engage the students during class time, and/or check to see if they have either done pre-lecture or post-lecture reading.'

3) If you are delivering the session from a computer attached to a projector, then drag the student window to the projector (visible in the classroom) or to the second monitor (for your convenience during online delivery), if available.

For best practices for in-class or out of class module delivery, student grouping, or peer instruction, see the [Learning Catalytics Implementation Guide](#).

If you have a smartphone, [refer to this printable PDF file](#)  to see how to prepare and use your device to control Learning Catalytics during class.

If you are delivering sessions from a computer, see [how to set up Learning Catalytics](#) in the classroom.

Stop Sessions from the In Class Learning Section

1) When you are finished delivering all the questions, select **Stop Session**.

The screenshot shows the Learning Catalytics interface. At the top, the breadcrumb trail reads 'My Courses > ALL 1/E MyEconLab > module week 2'. Below this, a red box highlights a button labeled 'Stop session'. To the right of the button are links for 'Edit', 'Open student window', and 'Ask a new question on the fly'. Below the button is a 'Jump to' dropdown menu showing '1' and '2'. The main content area displays a question: '1. multiple choice' followed by 'Which of the following will happen if an American tourist buys a painting from India?'. Below the question, there are links for 'Stop delivery', 'Pause delivery', 'Deliver again', and 'Show all results'.

Don't forget to click **Stop session** to allow:

- Student scores to report to the Learning Catalytics Gradebook, and transfer to the Mastering or Modified Mastering Gradebook and to students' Scores pages.
- The maximum possible points for a session is based on only the questions that were delivered in that session.
- Students to review their responses and the correct answers, after the review waiting period has elapsed (you can move undelivered questions so students won't see correct answers to questions you want to use later).



Review Student Answers and Results

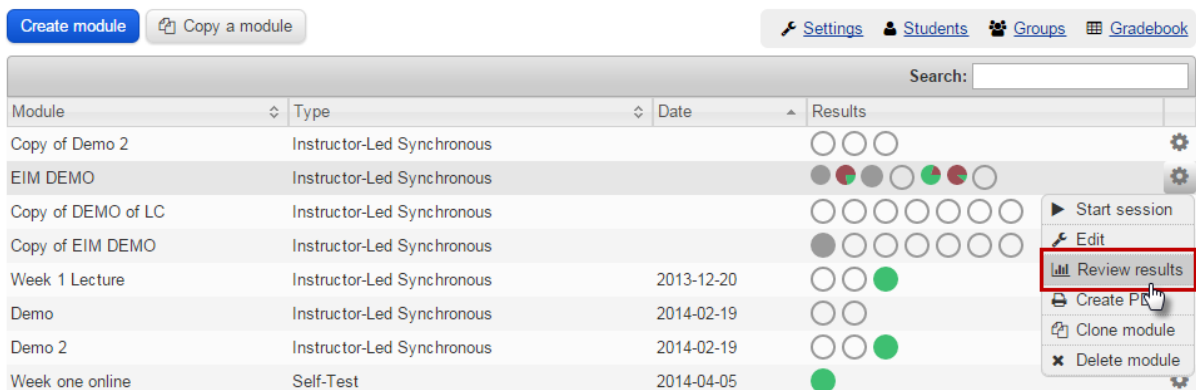
To review the results for the most recent session for a module, follow the steps provided below.

Note: If you have delivered the module previously (in a prior session), earlier results are no longer visible graphically in the list of modules for the course. You can, however, select each session to see its results, as described below.

To preserve the graphical display for each session, clone the module so you can deliver a different, but identical, copy of the module content for each section of a course.

Step-by-Step Directions: Review session results

- In the row for a module that you have delivered, click , and then click  **Review results**.



The screenshot shows the Pearson Learning Catalytics interface. At the top, there are buttons for 'Create module' and 'Copy a module', and links for 'Settings', 'Students', 'Groups', and 'Gradebook'. Below these is a search bar. The main area is a table with columns: Module, Type, Date, and Results. The table lists several modules, including 'Copy of Demo 2', 'EIM DEMO', 'Copy of DEMO of LC', 'Copy of EIM DEMO', 'Week 1 Lecture', 'Demo', 'Demo 2', and 'Week one online'. Each row has a graphical display of results (circles) and a gear icon. A context menu is open for the 'Copy of EIM DEMO' row, showing options: 'Start session', 'Edit', 'Review results' (highlighted with a red box), 'Create PR', 'Clone module', and 'Delete module'.

Module	Type	Date	Results
Copy of Demo 2	Instructor-Led Synchronous		
EIM DEMO	Instructor-Led Synchronous		
Copy of DEMO of LC	Instructor-Led Synchronous		
Copy of EIM DEMO	Instructor-Led Synchronous		
Week 1 Lecture	Instructor-Led Synchronous	2013-12-20	
Demo	Instructor-Led Synchronous	2014-02-19	
Demo 2	Instructor-Led Synchronous	2014-02-19	
Week one online	Self-Test	2014-04-05	

Alternatively, you can point your mouse over the graphical display to see the question and to click into the results of a specific question. If you have delivered the


module previously (in a prior session), earlier results are no longer visible graphically in the list of modules for the course.


If you see a mostly red graphical display, most of the student answers were incorrect. If you see mostly green, most of the answers were correct. A grey graphical display means the scores have not yet been marked incorrect or correct because the question was not scored automatically.

- If you have delivered the module *more than once*, click the session you want to review. If you didn't deliver the session more than once, you are brought directly to the session results.

[My Courses](#) > [Anatomy and Physiology I](#) > [EIM DEMO](#) > [Review results](#)

Show 10 entries					Search:	
ID	Started at	Students	Status			
21991867	2014-05-05 13:01:58 -0400	15	completed	⚙		
19707079	2014-05-05 12:00:24 -0400	0	completed	⚙		
83997937	2014-05-05 11:35:34 -0400	2	completed	⚙		
25925042	2014-05-05 11:24:21 -0400	3	completed	⚙		
54609616	2014-05-05 11:10:36 -0400	2	completed	⚙		
Showing 1 to 5 of 5 entries						

You can distinguish sessions by the session ID in the **ID** column, and start time in the **Started at** column. You can sort sessions by any column in the table by clicking  next to any column head.

In each session row, you can also click , and then click **x Delete data** to delete the results from any session, such as a session you opened as a test or by mistake.

[My Courses](#) > [Anatomy and Physiology I](#) > [EIM DEMO](#) > [Review results](#)

Show 10 entries					Search:	
ID	Started at	Students	Status			
21991867	2014-05-05 13:01:58 -0400	15	completed	⚙		
19707079	2014-05-05 12:00:24 -0400	0	completed	⚙		
83997937	2014-05-05 11:35:34 -0400	2	completed	⚙		
25925042	2014-05-05 11:24:21 -0400	3	completed	⚙		
54609616	2014-05-05 11:10:36 -0400	2	completed	⚙		
Showing 1 to 5 of 5 entries						

- As you are reviewing the session, you can display results for each question in the session and see the responses of each student (by name) for that question.



(2) multiple choice

Which of the following would be a warning sign that a volcano might erupt in the near future?

- A. An increase in the number of earthquakes near the volcano
- B. A decrease in the size of the volcano cone
- C. A decrease in the ground temperature surrounding the volcano
- D. A constant amount of gas being emitted from vents near the volcano

Round 1

9 responses, 56% correct

A. 68%
B. 22%
C. 22%
D. 0%

Round 2

9 responses, 22% correct

A. 22%
B. 11%
C. 33%
D. 33%

Student	Round 1	Round 2
Britt, Michael	C (2.00 points) Revert to previous attempt Mark correct (2 points) Comment	D (2.00 points) Revert to previous attempt Mark correct (2 points) Comment
Gray, Diane	A (2.00 points) Revert to previous attempt Mark incorrect (0 points) Comment	C (2.00 points) Revert to previous attempt Mark correct (2 points) Comment
Ilin, Samuel	A (2.00 points) Revert to previous attempt Mark incorrect (0 points) Comment	
Miller, Patrick		D (2.00 points) Revert to previous attempt Mark correct (2 points) Comment
Ouellette, Sara	B (2.00 points) Revert to previous attempt Mark correct (2 points) Comment	D (2.00 points) Revert to previous attempt Mark correct (2 points) Comment
Reynolds, Mary	C (2.00 points) Revert to previous attempt Mark correct (2 points) Comment	A (2.00 points) Revert to previous attempt Mark incorrect (0 points) Comment
Riggs, Molly	A (2.00 points) Revert to previous attempt Mark incorrect (0 points) Comment	
Rizzi, Jonathan	A (2.00 points) Revert to previous attempt Mark incorrect (0 points) Comment	A (2.00 points) Revert to previous attempt Mark incorrect (0 points) Comment
Seminski, Jessica		B (2.00 points) Revert to previous attempt Mark correct (2 points) Comment
Valentine, Kate	A (2.00 points) Revert to previous attempt Mark incorrect (0 points) Comment	C (2.00 points) Revert to previous attempt Mark correct (2 points) Comment

Showing 1 to 10 of 11 entries


[Mark all as correct](#) [Mark all as incorrect](#)

- For each student's response, the background color indicates whether Learning Catalytics evaluated the response as **Correct** (green background). Depending on the question format, a red background might mean the student's answer was **Incorrect**, or it might mean that the response is marked Incorrect because it cannot be automatically scored by Learning Catalytics.






You can always click **Correct** or **Incorrect** to manually grade a response and change the score associated with it, and you can click **Comment** to provide individualized feedback for the student. Students see these comments when they click **Review older class sessions** from their home page.

NEW For Team-Based sessions, you also have the ability to click **Revert to previous attempt** for a Team Round response that another student submitted by mistake.

- On this page, you can also select the following:

 **Download results** for the session in different formats.

[My Courses](#) > [Anatomy and Physiology I](#) > [EIM DEMO](#) > **Session 21991867**

 [Download results](#)  [Attendance information](#)  [Messages](#)  [Resend grades](#)  [Delete data](#)

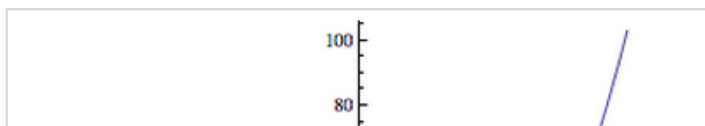
[Summary format \(tallied scores for each student\)](#)


[Long format \(separate rows for each student and question\)](#)


[Wide format \(one row per student; each question in different columns\)](#)

1 2 3 4 5 **6** 7



Draw an arrow pointing in the positive x direction that is tangent to this graph at $x = 1$.





 **Attendance information**, where you can also manually add a record of a student's attendance; for example, if you want to keep track of students that attended class but did not log into Learning Catalytics that day.


 **Messages**, to see a sortable list of messages sent by students during the session. From there you can click the linked name of a student to see his or her performance in Learning Catalytics sessions, and mark messages as being read.

[My Courses](#) > [Anatomy and Physiology I](#) > [EIM DEMO](#) > [Session 21991867](#) > **Messages sent to instructor**

Show 25 entries				Search: <input type="text"/>	
Student	Message	Sent at	Marked read at		
Valentine, Kate	this quiz is too hard	2014-05-05 13:08:36 -0400	never marked read		Mark as read
Gray, Diane	help!!!!!!	2014-05-05 13:08:43 -0400	never marked read		Mark as read
young, nicole	this is cool.	2014-05-05 13:09:07 -0400	never marked read		Mark as read
Showing 1 to 3 of 3 entries					

On the performance page for any student, you can click other links that let you send email to the selected student, or view the performance for other students.

 [Previous student \(Kevin Patrick\)](#)  [Next student \(Richard Williams\)](#) [Email this student](#)

 **Delete data** to remove this session from your records. Do this only for a session you opened as a test or by mistake.

Find and Create Questions in Learning Catalytics

- [Filter and Search the Question Library](#)
- [Create or Edit a Question](#)

Filter and Search the Question Library

The question library page allows you to "star" questions as favorites for easy retrieval, and to easily locate "private" (unshared) questions that you have created, or that have been created by someone whose course you have access to. Less space is consumed by each question listed. The use of screen space lets you show as many as 25 questions that match your search.

The screenshot shows the 'Search question library' interface. At the top is a search bar. Below it, a dropdown menu shows 'Show 5 entries'. The list contains five questions, each with a checkbox, a star icon, a question type (all are 'short answer'), a question description, a mathematical expression or text, and an 'Add to module' link. The questions are:

- 1. Write the given number in scientific notation. 48,610,000 Note: When en... (Add to module)
- 2. Divide.
$$\frac{14m^3n^3 - 21mn + 7n}{7mn}$$
 Note: When enterin... (Add to module)
- 3. Use the distributive property to write the expression without parentheses. Th... (Add to module)
- 4. Write the whole number in standard form. Eighty-one thousand, nine hundred (Add to module)
- 5. 19.A.3 Using your answers to questions 1 and 2, what is the Amount Accrued... (Add to module)

At the bottom, it says 'Showing questions 1-5 of 15' with navigation links 'Previous 1 2 3 Next' and a link to 'Add checked questions to module'.

You can use the filter options in any combination. The more criteria you select, the more targeted your results will be. As you select and clear options, the resulting list of questions changes dynamically, with one exception: When you use the text search box, you need to press **Enter** to let Learning Catalytics know you've finished entering search text.

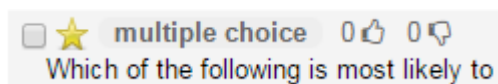
Only show: Select a content source

[Pearson content](#) has been provided by Pearson. Pearson content has been developed specifically for use with Learning Catalytics. Therefore, you will see content that is different from what you find within Mastering.

[Community-contributed content](#) gives you access to all questions in the library that you or others have created and shared.

[My private content](#) limits the results to questions you have created but have not shared. Private content includes questions you have [copied and edited](#).

[My starred content](#) shows all questions that you have starred by clicking the star next to the question in the list of entries on this page.



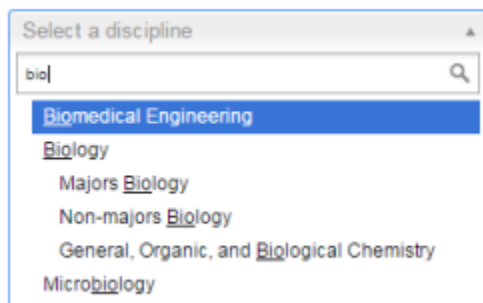
Or click **x** to remove the selection and include questions from all sources in your results list.



Discipline: Select a discipline

Click the box and begin typing the name of a discipline for which you'd like to see questions. The list responds as you type.

Type "bio"



You can also scroll through the hierarchical list, but you might find your way more quickly by typing. For example, Biology is nested under Natural Sciences, so you'll need to scroll further than you might expect.

You can select a discipline at any level in the hierarchy. Selecting a top-level discipline includes questions in all the disciplines nested below it. The more indented a discipline listing is, the more restricted the resulting list of questions is.

Book: Select a book

If you searching only for Pearson content, and have selected a discipline for which Pearson has provided questions for one or more specific textbooks, you can select a book from the list—either the book you are teaching with or any other book in the list.

You can type part of the title or author's name to reduce the length of a long list.

Showing questions 1-11 of 11
([+ More Engineering questions](#))

If you've selected a book and narrowed the results list to a specific question format (type), a link at the bottom of your results list reminds you that additional questions are available for the discipline. Clicking the link removes the book constraint and displays the list of all questions that match the discipline and question type.

Format: Select a question format (type)

Your options are any of the [question types available](#) in Learning Catalytics. You can click **x** to see questions that use any type.

Added by: Enter a contributor's name

For best results, enter the whole name, but you can also enter just a portion of the name. You'll see a list of questions shared by authors whose names include the character string you entered.

You can enter your own name to see a list of questions you have created—both shared and unshared (private) content—that match other criteria you have selected.

Q Search box: Search the question library based on a word in the question prompt or a content tag.

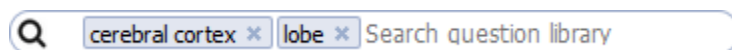
- **Search by selecting one or more tags:** Begin typing in the box to display an alphabetical drop-down list of tags that contain the text you enter. Tags are text strings that have been applied to questions by contributors, with the aim of aiding quick retrieval of related groups of questions. The tags are independent of any other filters you have currently selected (so entering "sup" contains tags for marsupials, supersonic, and supply and demand, regardless of the selected discipline), but the questions returned by a search are restricted by all the current filter selections, including discipline.

The list of tags narrows as you continue typing, and at any point you can press **Enter** to select the highlighted tag to add it as a filter criterion. The results list changes to include only those questions to which that tag is applied. If you'd like, you can enter different text and select an additional tag. There's no limit on the number of tags you can select to fine tune the list of questions found.

- **Search for free text:** You can ignore the tags and keep typing to search for any word or phrase that appears in a question's *prompt* (not in the answer or explanation). When you've finished typing, press **Enter** to indicate that you've completed that entry. Then you can type another word or phrase and press **Enter** again. These entries are treated as temporary tags by the search engine and, like tags, there's no limit to the number you can add to restrict your results.

Tip: If you want to dismiss the list of tags, especially if a tag is highlighted that you don't want to search for, press Esc or click outside of the search box, and then press Enter.

- **Search for both tags and text:** You can combine both tags and free text without any limit on either. In this example, "cerebral cortex" is a tag, and "lobe" is free text.



- [Remove an item from the search box](#): Click the **x** in the tag. The results list responds accordingly.

Create or Edit a Question

You can create or edit some questions from the question library. You cannot edit a question provided by Pearson.

Planning

Take a look at suggestions below, and become familiar with the [wide variety of rich question types](#) that are available for Learning Catalytics.

Best Practices for Question Creation

- Ask questions that address your students' misconceptions and reveal the kinds of uncertainties they might have about that material. For example, if you are writing a multiple-choice question, you'll want include choices that students might think are correct. Learning Catalytics permits you to create free-response questions where you do not need to know students' misconceptions beforehand.
- Tips for writing good ConcepTests can be found in research on peer instruction. ConcepTests are "short conceptual questions, typically posed in a multiple-choice format, on the subject being discussed". (Eric Mazur, 2007):
 - Focus on a single important concept, ideally corresponding to a common student difficulty
 - Require thought, not just plugging numbers into equations
 - Provide plausible incorrect answers
 - Be unambiguously worded
 - Be neither too easy nor too difficult

Each ConcepTest has the following general format:

1. Question posed (1 minute)

2. Students given time to think (1-2 minutes)
3. Students record/report individual answers via Learning Catalytics
4. Neighboring students discuss their answers (2-4 minutes)
5. Students record/report revised answers
6. Feedback to teacher: Tally of answers
7. Explanation of correct answer (2+ minutes)

In this format, students are not graded for answers to the ConcepTests, but given participation points as credit.

For more information, refer to [Peer Instruction: Engaging Students One-on-One, All at Once](#).

- Questions should challenge students appropriately by being neither too easy, nor too hard, that is, somewhere between 30 and 70 percent of the students should answer it correctly on their own, before discussion. (Lasry, 2008) With this approach in mind, see Julie Schell's, Professor of Education at the University of Texas at Austin, post, "[3 Tips for Teaching – Great Question Writing](#)" on [Teach.com](#) to get 3 tips for writing effective questions to engage students.
 - *Shore up students' prior knowledge* to make sure your students have enough prior knowledge to self-assess accurately whether they can do a problem or not.
 - *Lighten students' cognitive load* because working memory is very susceptible to overload. There is only a finite amount of space available for it. For more details, refer to [Schell's post](#). One suggestion may be to provide students with tutorials in Mastering before lecture to scaffold students' learning by providing more support for learning early on. After students work on the tutorials, review the results to gain a better understanding of student misconceptions.
 - *Un-situate students' learning*: Transfer and application questions can be the hardest questions for students because they often see their learning as situated or bounded by subject, classroom, or even topic.

There are a few approaches, “hugging” and “bridging” that Schell outlines in her [post](#). “Hugging” works toward transfer as they ask questions to apply knowledge in new by very similar contexts. “Bridging” on the other hand or far transfer requires a significant leap between the learning and a new or foreign application context.

- Consider using various types of questions with Learning Catalytics such as region, sketch, ranking, word cloud, priority, many choice, short answer, data collection, direction, confidence, composite sketch, multiple-choice, and so on, to pose questions to student in the most natural way possible. This will help give you both more confidence in students’ developed skills and a more precise understanding of students’ misconceptions.

Step-by-Step Directions



Refer to [Online Help](#) for a detailed walk-through of how to create a question or copy and edit a question.

Additional Tips

- When you select a question type, keep in mind that some question types can be automatically scored by Learning Catalytics, and other question types require individual marking as correct or incorrect if you score based on correctness. If you score based on 100% on participation, students will get the points for the question even if you don’t mark a question as correct or incorrect. If you allow students to review past sessions, it is suggested to mark whether questions were correct or not for review purposes.
- If you are adding an image into the question prompt or into an answer/explanation, you must not only upload the image, but you must also drag it to the appropriate enhanced editor as well. From there, you can double-click the image to edit its properties, including **Alternative Text** that can be read by screen readers for visually impaired students.
- As mentioned earlier, you cannot edit a question provided by Pearson.
- You cannot create a question on the fly if you are running sessions from a mobile device. This feature is only available from a computer.

Student Access

Learning Catalytic on the Course Home provides your students with easier access to Learning Catalytics from within their Mastering or Modified Mastering course, including the ability to:

- Confirm and purchase access to establish a connection to Learning Catalytics
- Join sessions in progress
- Review past sessions and results

Best Practices for Student Access

- Advise students that Learning Catalytics will be an active part of the course and include in your course syllabus.
- Make sure they don't go to learningcatalytics.com and create a separate account. In order for grades transfer from Learning Catalytics to Mastering or Modified Mastering to work, students must not create a separate Learning Catalytics account. They need to have the same Pearson account for both Mastering or Modified Mastering and Learning Catalytics. To avoid this, students should confirm or purchase access and join sessions from the Mastering or Modified Mastering course.
- Use the [Student Get Started Handout](#) to help your students access Learning Catalytics for the first time.
- Make sure students understand that they should check or purchase access before you deliver your first in-class session. Students get access to Learning Catalytics if they purchase the eText version of Mastering or Modified Mastering. If students do not purchase the eText version, they can purchase access to Learning Catalytics from within the Mastering or Modified Mastering. They are given a pop up to purchase access for 6 or 12 months. During the purchasing process, they are asked for their Pearson username and password. They must use the same username and password for both Mastering and Learning Catalytics for grades to transfer successfully.

How Do Students Get Access to Learning Catalytics?

Once you enable Learning Catalytics in your course by selecting **Use with Students** on your Course Home, your students will see it on their Course Home page.

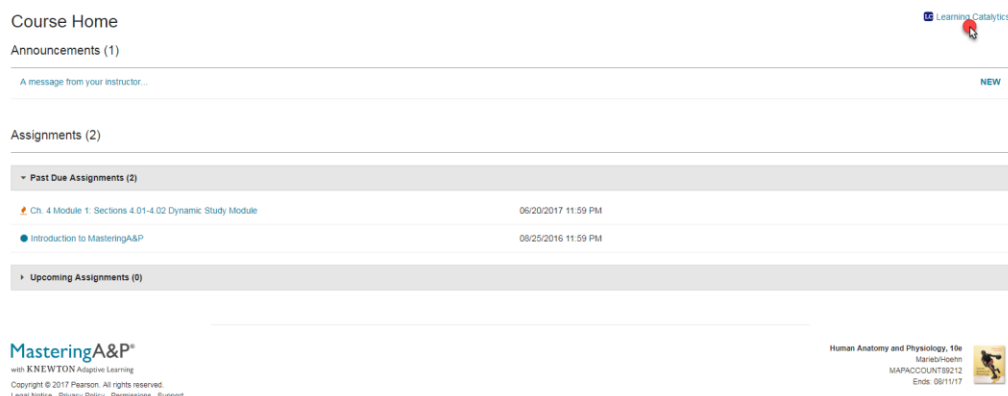
If students purchased Mastering or Modified Mastering with eText, they can access Learning Catalytics right away from the Mastering or Modified Mastering course. If students purchased Mastering or Modified Mastering without eText, they are prompted to purchase access to Learning Catalytics. Note: Students need to associate their purchase with the SAME username and password they use for the Mastering or Modified Mastering course.

Step-by-Step Directions:



[Student Handout \(PDF\)](#)

1. Students click  **Learning Catalytics** on the Mastering or Modified Mastering Course Home page to confirm or purchase access.



The screenshot shows a 'Course Home' page. At the top right is a 'Learning Catalytics' button with a red icon. Below the header, there's an 'Announcements (1)' section with a message from the instructor. The 'Assignments (2)' section is expanded, showing 'Past Due Assignments (2)'. The first assignment is 'Ch. 4 Module 1: Sections 4.01-4.02 Dynamic Study Module' due on 06/20/2017 11:59 PM. The second is 'Introduction to MasteringA&P' due on 08/25/2016 11:59 PM. Below this is an 'Upcoming Assignments (0)' section. At the bottom, there's a 'MasteringA&P' logo and text about KNEWTON Adaptive Learning, copyright 2017 Pearson, and a link to the legal notice. On the right, there's a small image of a person and text about 'Human Anatomy and Physiology, 10e' by Marieb-Hoehn, ISBN 0321921212, ending on 08/11/17.

Student Tip: After confirming access and crossing over from the Mastering or Modified Mastering course to Learning Catalytics, students can join sessions from the Mastering or Modified Mastering course or from learningcatalytics.com using their Mastering or Modified Mastering username and password. However, they must sign in with the **exact** same username and password as their Mastering or Modified Mastering course for grades to transfer successfully from Learning Catalytics to the Mastering or Modified Mastering.


2. **If the student purchased Mastering with eText**, the student can access Learning Catalytics right away from the Mastering course.

If the student purchased Mastering without eText, the student is prompted to purchase access to Learning Catalytics.

- a. Select a purchase option.

Student Purchase Options

[I have an access code](#) [6-month access to Learning Catalytics](#) [12-month access to Learning Catalytics](#)

- b. Student must be sure to associate the purchase with the SAME username and password used for the Mastering course. Select  **Yes** and enter the Mastering login information.

Do you have a Pearson Education account?

☒ Yes

*Login Name


*Password

[Forgot your Login Name or Password?](#)

☐ No

[Not sure if you have an account?](#)

How Do Students Join Sessions?

1. Once the instructor has started a session, students click  on the Course Home page.

Course Home

Announcements (1)

[Learning Catalytics - Please confirm or purchase access...](#)

Assignments (6)

 Learning Catalytics



1

NEW

If prompted, students then identify their seat in the classroom (either enter an alphanumeric ID or choose a seat from the provided map), and choose **OK**. During a Learning Catalytics session, instructors may refer to the seat map to check to see if students are having difficulty.

If students join sessions at learningcatalytics.com:

- Students **must** sign in with the **exact same username as their Mastering account** for grades to transfer successfully from Learning Catalytics to Mastering.
- Students need to enter a session ID that you provide or choose a listed session.

How Do Students Review Past Sessions and Results?

Students *do not* have a Learning Catalytics Gradebook. They see their Learning Catalytics scores in the Mastering or Modified Mastering Gradebook, if you've selected to transfer scores.

You can enable the review option for earlier sessions to help can reinforce student understanding or provide them with a way to study for an exam. Sessions are available to review by default. You may set a waiting period before students can review a past session. Once the waiting period has passed, students can follow the steps below to review their session. They can review sessions they did or did not participate in.

To review sessions, students:

1. Click **Learning Catalytics**.
2. Select Review older class sessions.

Welcome!

➔ Enter a class session ID to join a session:

59773021

➔ Or review your responses to modules that are no longer active:

3. Select the session to review.

[Home](#) > Review older sessions

Show 5 entries					Search:
Course	Module	Session	You	When	
Marieb 10E Spring 2017	LC Demo SF	23890506	participated	Fri, Feb 17, 2017 at 2:57pm	
Showing 1 to 1 of 1 entries					Previous 1 Next


4. Students can see their answers submitted and whether they got them correct.

Of the 2 questions with a correct answer, you answered 2 correctly; you responded to 2 of the 2 questions that had no correct answer.

Show 5 entries Search:

Item Round 1


1 Draw how many candles would be on your birthday cake

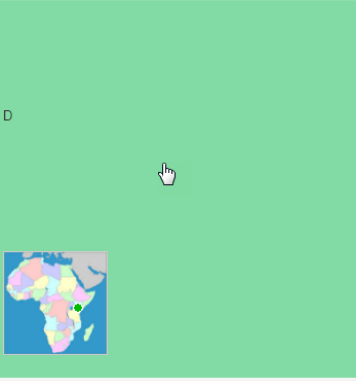


2 A card is drawn at random from a standard 52 card deck. What is the probability that it is a black card or a face card?

A. $\frac{4}{52}$
 B. $\frac{6}{52}$
 C. $\frac{26}{52}$
 D. $\frac{32}{52}$

3 Please find Kenya on this map.





What students see when they review?

When students review a session, they see:

- Their response and the correct answer (if the question *has* a correct answer)
- An explanation (if one is stored with the question). To see the explanation, they need to click the question to see **Details**.

Example:

Details



Michael Jackson likely died from an electrolyte imbalance brought on by decreased breathing. What common phrase best describes his ultimate cause of death? Please mark your answers by distributing the confidence of your answer across the choices. If you are 100% sure in your answer, place all four of your confidence votes in that answer. If you are somewhat unsure, distribute your four confidence votes among the answers.

- A. Cardiac arrest
 B. Heart attack
 C. Heart failure
 D. These are all different names for the same condition

Answer

A

Technically speaking, decreased breathing leads to increased CO₂. Increased CO₂ makes the blood more acidic. When the blood is more acidic, the additional H⁺ ions enter cells. When the H⁺ enters cells, K⁺ leaves the cells. Additional K⁺ outside the cells, called hyperkalemia, leads to extended action potentials. These extended action potentials in the heart will disturb the electrical activity in the heart. Disturbances of electrical activity in the heart is termed cardiac arrest. Heart attack results when there is inadequate blood flow to the heart. Heart failure is due to damage to cardiac muscle. While similar, each of the conditions differ in their root cause.

- Even if the question has no correct answer, they'll see whether their response has been manually marked correct and any comments you may have provided.
- For Slide questions, if you presented PowerPoint slides that appeared in Learning Catalytics, they can see all the slides that were presented during the session as well as any answer/explanation you may have provided.

Additional Training and Support

[Planning Toolkit](#): Start with this resource to access worksheets and checklists that facilitate and support a successful implementation.

[Get Your Students Started Handout](#): Download a handout to share with your students on how to get started with Learning Catalytics within Mastering or Modified Mastering.

[Implementation Guide](#): Provides insightful best practices and strategies for effective implementation based on feedback from experienced faculty.

[Online Help](#): Provides detailed information about features and functions. Also available from within your Mastering course.

[How Do I? Videos](#): Short videos that demonstrate tasks. Videos are also available from within the Learn More area on your Mastering Course Home page.

[Prerecorded Sessions](#): Access recordings of the Live Online Training sessions to watch at your convenience. All prerecorded sessions are led by experienced Faculty Advisors who offer advice and best practices.

[Pearson Support](#) is also always available. Search for articles by topic or contact us if you need additional help.