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

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## 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.

• 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.

• 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**.

- 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.

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<tr>
<th>Learn about student access to Learning Catalytics from Mastering</th>
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<tr>
<td>• 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.</td>
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<td>• 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.</td>
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<td>• 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.</td>
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<td>• Once you decide to use Learning Catalytics, make sure to follow the appropriate steps to enable your course with Learning Catalytics by clicking <strong>Use with Students</strong>. After that, students will see the In-Class Learning pod on their Course Home.</td>
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<td>• 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.</td>
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• Once you click **Use with Students**, you will see the option to transfer grades from Learning Catalytics to Mastering in the module settings.

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<th>Identify how you will use Learning Catalytics to achieve learning goals</th>
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<td>• 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.</td>
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<td>• 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.</td>
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<td>• 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.</td>
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<th>Consider how you will measure student learning gains</th>
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<td>• 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.</td>
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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 students 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.

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### 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.

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**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”).

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<th>Consider how you will present Learning Catalytics to your students</th>
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<td>• 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.</td>
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<td>• Try to connect what they work on in Learning Catalytics to their learning outcomes and professional aspirations so they see the relevance and purpose.</td>
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<td>• 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.</td>
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<tr>
<td>• For students who don’t have a device, supply a printed PDF version of the module questions.</td>
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<td>• Explain Learning Catalytics on your syllabus, including why you are using it in your class.</td>
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<td>• 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.</td>
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• 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.
1. Once you click **Learning Catalytics**, you will be prompted to watch a video.

2. Select **Preview & Setup** 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.*

3. Be sure to review requirements for use prior to selecting **Use with Students**.

4. 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.

5. 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 your 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](http://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.
The Learning Catalytics Interface

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

Courses

The Courses area lists 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.
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.

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](image)

**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.
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.

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**.

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**.
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](image)

*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.*
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.*

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

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.

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**Stop Sessions from the In Class Learning Section**

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

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 **gear**, and then click **Review results**.

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
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.

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.

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.
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.

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.

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.

**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.

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.

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.
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.

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**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.

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.

   ![Screenshot of purchase options]

   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.

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**How Do Students Join Sessions?**

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

   ![Screenshot of Course Home page]

   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 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.

3. Select the session to review.

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