

LabXchange™

Your Ally in Science Education

Your Name Here

Teacher Ambassador
LabXchange



What is LabXchange?

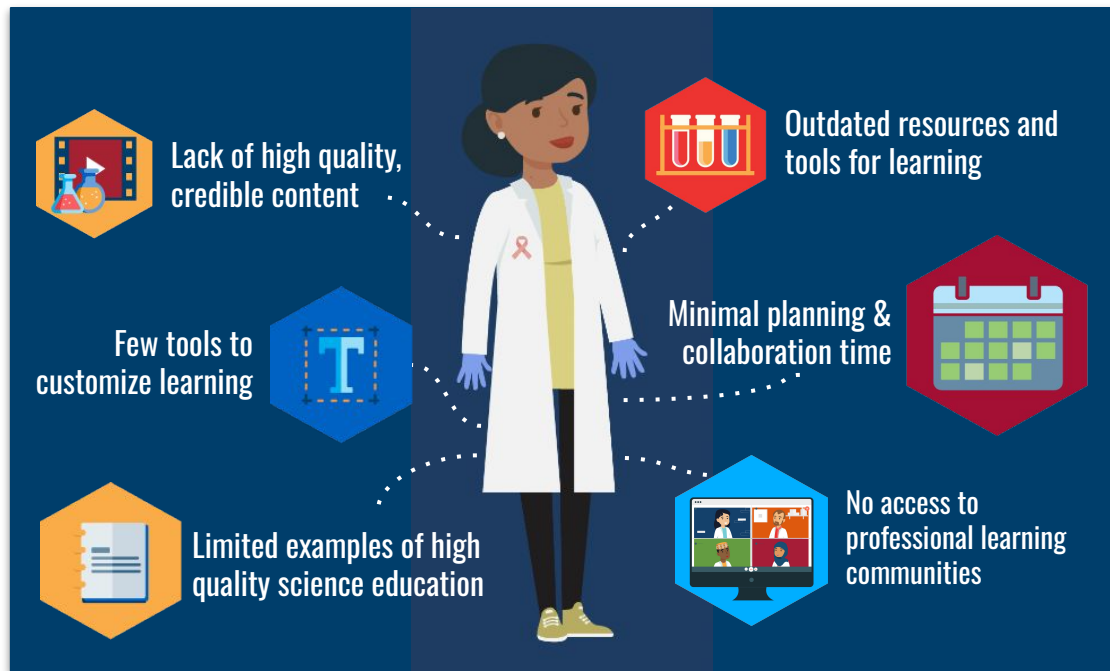


LabXchange is a global science classroom open to every curious mind.

Created at Harvard University with support from the Amgen Foundation, this powerful digital tool makes high-quality science education accessible and gives learners and educators, everywhere, the courage to chart a meaningful path in science—for **FREE!**

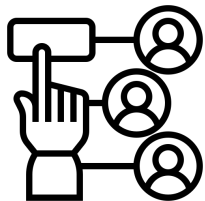
AMGEN® Foundation

The Educator Challenge



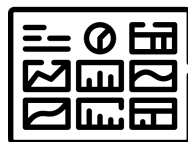
YOU want more time and support for doing what you love - *teaching and impacting students!*

How LabXchange Can Help!



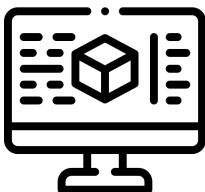
20,000+ Science Resources

Content from over 150 credible collaborators.



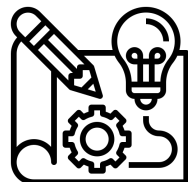
Personal Dashboard

Find, organize and share your favorite content.



Simulations & Interactives

Learners can experiment risk free and experience real science.



Customization & Creation Tools

Customize and create content to personalize learning for students.

Create a FREE Educator Account



How to sign up for a FREE Educator Account

1. Go to www.labxchange.org
2. Click on the **Sign Up** in upper right corner
3. Confirm your age and click **Next**
4. Click on Get started **Sign Up**

A screenshot of the LabXchange website homepage. The header includes the LabXchange logo, navigation links for 'Explore', 'Subjects', and 'Library', a search bar, and options for 'English', 'About', 'Log in', and 'Sign up'. The main content area features a large blue banner with the text 'Welcome to the world's science classroom' and a sub-headline 'Experience science as it should be: a journey of bold thinking, deep imagination, and supportive community.' Below this are 'Explore' and 'Join for free' buttons. A section below the banner lists 'We offer educational resources from over 150 leading organizations.' with a 'See all' button and logos for partner organizations like PhET, Khan Academy, The Jackson Laboratory, hmi, LEARNING FOR JUSTICE, Our World in Data, HarvardX, and FairOpportunityX. At the bottom, there is a video player with a play button and the text 'START YOUR JOURNEY IN SCIENCE' followed by a paragraph of introductory text.

Our Collaborators



**20,000+ High Quality
Science Resources**
Content from over 150
credible collaborators.

A screenshot of the LabXchange website homepage. The main header features the text "Welcome to the world's science classroom" and "Experience science as it should be: a journey of bold thinking, deep imagination, and supportive community." Below this is an "Explore" button. The page is decorated with a grid of colorful hexagonal icons representing various scientific fields like biology, chemistry, physics, and earth science. A navigation bar at the bottom includes logos for PhET, Khan Academy, HHMI, Our World in Data, and The Jackson Laboratory, along with a "See all" button. A video player is visible at the bottom left, and a section titled "START YOUR JOURNEY IN SCIENCE" is on the right, with text encouraging users to discover how LabXchange can help them.

Welcome to the world's science classroom

Experience science as it should be: a journey of bold thinking, deep imagination, and supportive community.

Explore

PhET
Khan Academy
HHMI
Our World in Data
The Jackson Laboratory

See all

START YOUR JOURNEY IN SCIENCE

Whether you're an educator, learner or science professional, it can be difficult to find the time, resources, and support you need to reach your potential. Discover how LabXchange can help you

Our Library



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The screenshot displays the LabXchange library interface. At the top, there are navigation tabs for 'LIBRARY', 'PEOPLE', and 'SOURCES'. Below this is a 'Refine by' section with a 'Clear all' link and several filter buttons: 'All', 'Pathways', 'Clusters', 'Simulations', 'Interactives', 'Videos', and 'Texts'. A dropdown arrow is visible next to 'Texts'. Below the filters, it shows '22,650 results' and 'All content types' with a 'Sort by' dropdown set to 'Relevance'. Three resource cards are visible:

- Gel Electrophoresis** (LabXchange): This simulation introduces gel electrophoresis, a technique used to separate biological molecules. In this simulation, gel electrophoresis is used to separate dyes and visualize them in an agarose gel.
- Transforming Bacteria** (LabXchange): In this simulation, users will practice transforming bacterial cells with a recombinant plasmid using the heat shock method.
- Foundational Concepts and Techniques in Biotechnology** (LabXchange): The goal of this cluster is to expose learners to fundamental concepts and lab techniques essential to the field of biotechnology, including creating a recombinant plasmid and expressing and purifying a protein.

Our Subject Pages



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Content from over 150
credible collaborators.




Free resources,
for **everyone**.

Browse Subjects

- Biology
- Chemistry
- Physics
- Earth & Space

Biology ↗

 **Introduction to Biology**
Overview of core topics [Explore Cluster](#)

MIDDLE SCHOOL	HIGH SCHOOL	ADVANCED
Ecology	Cell Structure	Biotechnology

Our Simulations & Interactives



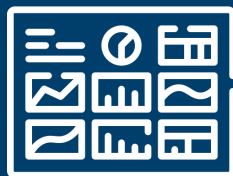
Simulations & Interactives

Learners can experiment risk free and experience real science.

The screenshot shows the LabXchange Library interface. On the left, there are filters for Subject Area, Content Type (2), Background Knowledge, Source (with a search box and a list of sources), Popular Tags, and Language (1). The main area displays a list of simulation cards, each with a star icon, a thumbnail image, a title, a brief description, and statistics for favorites, views, and remixes.

Simulation Title	Favorites	Views	Remixes
Gel Electrophoresis	845	401,180	488
Micropipetting Solutions	207	341,756	227
Transforming Bacteria	577	212,591	270
Restriction Enzyme Digest	514	111,539	191

Your Personal Dashboard



Personal Dashboard

Find, organize and share
your favorite content.

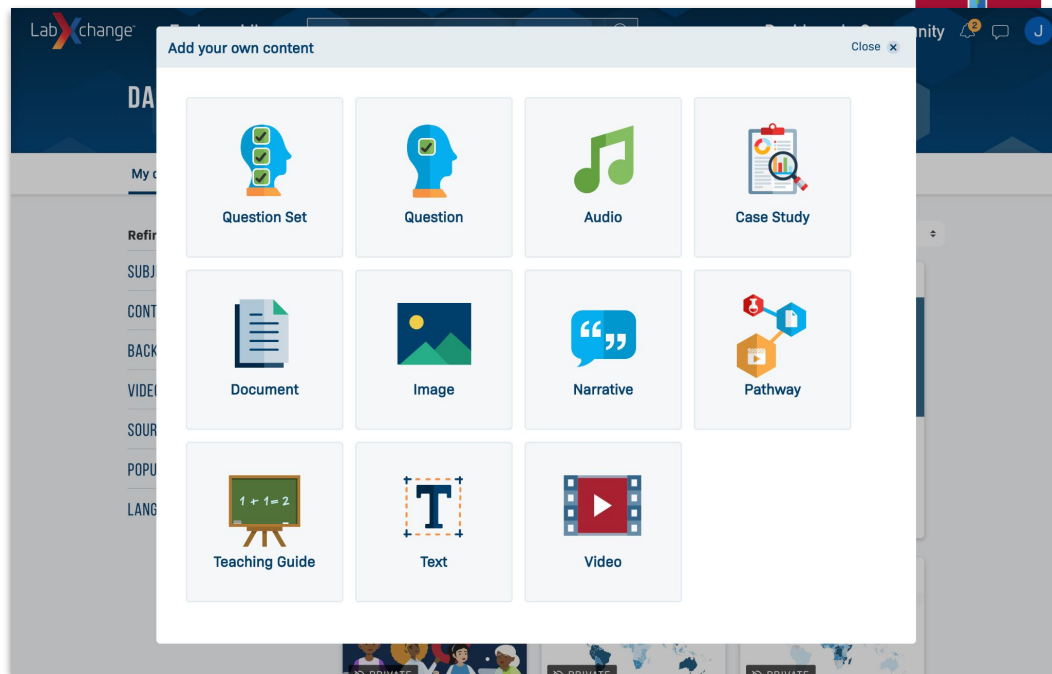
A screenshot of the LabXchange personal dashboard. The top navigation bar includes 'LabXchange', 'Explore', 'Library', a search bar, and 'Dashboard' (highlighted) and 'Community'. Below the navigation is a 'DASHBOARD' header. A menu shows 'My content' (selected), 'Favorites', 'Classes I teach', 'Classes I'm in', and 'Messages'. The main content area shows 'Refine by' filters (Subject Area, Content Type, Background Knowledge, Video Duration, Source, Popular Tags, Language) and 'Showing 32 results'. A large dashed box contains a plus sign and the text 'Add new content'. To the right, there are two content cards: one for 'Your Ally in Science Education' and another for 'WHAT IS YOUR SCIENCE ORIGIN STORY?'. The top right corner features a decorative banner with various science-related icons like a microscope, a graduation cap, a mountain, an atom, and a virus.

Your Dashboard Tools



Customization & Creation Tools

Customize and create content to personalize learning for students.



Learning Pathways



Customization & Creation Tools

Customize and create content to personalize learning for students.

A screenshot of the LabXchange Library interface. The top navigation bar includes 'LabXchange', 'Explore', 'Library', a search bar, 'Dashboard', and 'Community'. Below the navigation, there's a 'Private' lock icon and 'Library catalog > Pathway'. The main content area features a pathway card for 'Exploring Evolution'. The card includes a 'Favorite' star, an 'Assign' dropdown, and a 'View Profile' button. The description states: 'This activity is for students who have some background knowledge about evolution, and who are using the Natural Selection Simulation to explore and deepen their understanding. The Natural Selection Simulation allows students...'. Below the description is a 'more' link and the upload date 'February 24, 2023'. Metadata includes: Subject: Evolution; Language: English; Background Knowledge: Some; License: LabXchange Standard License. A 'Start pathway' button is at the bottom right of the card. A video player at the bottom shows 'The Amazing Story of the Peppered Moth' by SERP Institute.

Sharing Content



Customization & Creation Tools

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A screenshot of the LabXchange website interface. At the top, a navigation bar shows 'Library catalog > Pathway > Vaccine Development'. A 'Share' modal is open, displaying options: 'Share' (Facebook), 'Tweet' (Twitter), 'Pin it', 'Share to Classroom', and 'Copy link'. Below the modal, the page title 'Vaccine Development' is visible, along with statistics: '87 Favorites • 8,539 Views • 15 Clones'. The main text begins: 'This pathway introduces the concepts of clinical trials during vaccine development. Viruses, the coronavirus SARS-CoV-2—which causes COVID-19—serves as an example.' Below the text, it says 'Uploaded May 20, 2020'. A metadata table is shown:

Subject	Language	Background Knowledge	License
Immunology +8	English	None	LabXchange Standard License

At the bottom right, there is a 'Resume pathway' button. Below the main content, a preview card for 'What is a vaccine?' is shown, with a star icon and a 'TEXT' label.

Your Online Class



Customization & Creation Tools

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USING VIRTUAL LABS TO TEACH SCIENCE REMOTELY

Class code: 69B439 [Copy code](#)

[Content](#) [Learners](#) [Progress](#) [Discussion](#)

About this class

This class will support the LabXchange Workshop "Using Virtual Labs to Teach Science Remotely" offered on 7/22/20, 7/29/20 and 8/5/20. Pre-work and follow-up resources for the live webinar session will be provided here to support you in integrating virtual labs into your teaching.

Shared on July 20, 2020



Using Virtual Labs to Teach Science Remotely: Workshop Outline

LabXchange
This text provides an outline of the objectives for this workshop and details the four parts of the workshop, including pre-work, a

Shared on July 20, 2020



Using Virtual Labs: Pre-Webinar Assignment

Learners



Exploration. Discovery. Possibility.



Dive into a world of interactive learning
Experience what science should be: exploration through bold thinking, collaboration, and endless imagination.

Educators → Learners →

Explore LabXchange: Dive deeper into the platform's features.

Experiment: Try out different tools and functionalities.

Share Your Experiences: Collaborate with colleagues and share your successes and insights.



**EVERYONE NEEDS SCIENCE.
SCIENCE NEEDS EVERYONE.**

Together, we can unlock the door to science for everyone, everywhere.