

Louisiana Believes

Distance Learning Support for Inquiry Hub

NOTE:

This webinar is designed for people who have already attended Inquiry Hub training.

If you have not already attended Inquiry Hub training, do not proceed as this webinar will not prepare you to implement the traditional Inquiry Hub curriculum.

Distance Learning Support for Inquiry Hub

To support school systems, schools, and teachers in ensuring continuous learning in science in the event of school closures, the Department will release guidance for implementing high quality open-source science curricula in a remote learning setting for every Inquiry Hub Biology Unit.

[Prototype: Unit 1 Bend 1](#)

Distance learning plans for Inquiry Hub Biology for each unit will contain the following:

- Links to Inquiry Hub remote learning resources
- Unit guidance
- Detailed lesson-by-lesson guidance, including activities and slides for virtual classes
- Printable lesson slideshows to send home with students

Design Considerations

Premise:	Application:
All content is equally important	No lessons were omitted; local educators will have to make decisions around time constraints
The design of high quality curriculum is strategic and should be altered only to the extent required by the circumstances	The guidance is not backwards designed in the same way the original units were; pedagogical recommendations are based on the original unit design decisions
“School” will look different in different places and at different times of the year	The guidance was written for the most extreme case -- virtual learning only for all students; teachers can walk back and integrate in-person learning as opportunities arise
Synchronous learning is required for students to appropriate engage in high quality science curriculum	Students will be expected to have computers/internet access; schools must be creative to accommodate; resources provide scheduling guidance
Daily virtual classes will not be feasible for most students	Ideal number of virtual classes is three per week, planning documents for advanced notice of scheduled classes and suggestions for those without internet access is included
Not all districts and teachers will have access to or be familiar with the same platforms for remote learning	Specific examples are given, but the guidance design supports the broadest application with any digital platform
“Typical” Inquiry Hub materials and trainings are vital for quality implementation	These are an added layer of guidance and do not take the place of the teacher’s manuals, initial implementation trainings, and the need for collaborative unit and lesson planning for optimal implementation

The background of the slide is a watercolor-style illustration. It features a central white area that tapers towards the top and bottom, creating a shape reminiscent of a lens or a window. This white area is surrounded by soft, blended washes of light blue and teal. The colors are layered and textured, with some darker blue areas at the bottom and sides, giving it a sense of depth and movement. The overall effect is clean, modern, and calming.

Deep Dive into Guidance

Distance Learning Support for Inquiry Hub

Take the next 5 minutes to skim through and orient yourselves to the [prototype](#). We will then walk you through some of the key components.

Guidance Overview

Distance Learning Support for iHub Biology

Unit 1 Bend 1: Why don't antibiotics work like they used to?

This resource is designed to support teachers in implementing distance learning for iHub Biology Unit 1 Bend 1. It is intended as a supporting document and should be used in conjunction with the [Inquiry Hub High School Biology Curriculum Resources](#). The resources contained in this document have been adapted from [inquiryHub Biology](#) with permission under [Creative Commons 4.0 licensing](#).

The Remote Learning Resources linked below contain detailed information about adapting specific routines to a remote learning environment and a wide variety of options including those for students who do not have internet access:

- [Leading an Anchor Phenomenon Routine](#)
- [Navigation Routine](#)
- [Discourse](#)
- [Problematizing Routine](#)

Synchronous vs. Asynchronous Learning

The inquiryHUB remote learning resources use the terms synchronous and asynchronous to distinguish activities that occurs when teacher and students are interacting live (virtual class meetings) and activities that occur over time (independent assignments, teacher feedback).

Pedagogical Strategies to Support Navigation in Remote Learning Environments: Looking Back

	Synchronous	Asynchronous	Without Technology
Looking Back: Reviewing what we figured out last time	<ul style="list-style-type: none">• If using Google Jamboard for the Anchoring Phenomenon Routine, copy or move questions and ideas for investigations into a new lesson space. Pinup.com is another alternative app.• Create a Padlet or	<ul style="list-style-type: none">• Create a short video clip reminding students what they figured out last time. Using a tool like Flipgrid allows students to view and respond to each other.• Use Google Jamboard's "pen" features to add symbols for agreement/disagreement on what's already been done.• Show images from last time of what was	<ul style="list-style-type: none">• In between sending out packets, send a summary of everyone's ideas to students, and ask students to write a reflection on how their ideas compare to other students'.• If students have phones they can use apps like Poll Everywhere to ask questions in a closed-ended format.

Norming Language

The first section of this document contains a table labeled “Norming Language.” These are terms used throughout the guidance documents to describe the tools used to adapt routines to a distance learning model.

Norming Language	
Term	Description
Virtual Class Pre-Work	Assignments that students should do prior to virtual class meetings in order to be prepared to engage in discussions, there may be multiple assignments throughout a given lesson
Virtual Class Post-Work	Assignments designed for students to apply learning from virtual class meetings, there may be multiple assignments throughout a given lesson
Virtual Class	Live sessions with students through any digital conferencing platform, teachers may choose to allow students without internet to call in during these sessions and record virtual class sessions to share with those who cannot join

Norming Language

Virtual Class Pre-Work: Asynchronous and Independent

- Examples of tasks in which students might engage include: notice and wonder charts, generating initial models, reading related texts, brainstorming about investigations

Virtual Class: Synchronous and Collaborative

- Examples of tasks in which students might engage include: creating the DQB, sharing and comparing models, observing investigations and making sense of data through discussion

Virtual Class Post-Work: Asynchronous and Independent

- Examples of tasks in which students might engage include: revising models, reflecting on virtual class discussions, drawing conclusions and formulating claims

Norming Language

The following resources, described in the norming language, are essential elements for having students progress through the lesson with a combined asynchronous and synchronous model.

Lesson Slideshows	Lesson progression specific to each lesson that can be shared with students in their entirety at the beginning of the lesson or broken into small portions and shared as needed. They will contain assignments for students to complete before, during, and after virtual classes, discussion boards, and home investigations. They are intended to replace the SAS documents from iHUB. These can be copied and delivered directly to students using google classroom or another platform, modified for use in your platform of choice, or printed and delivered to students without internet access.
Assignment	An assignment should be posted on a virtual platform (Google Classroom, Schoology) that can be accessed and edited by students. Assignments should have the option to “make a copy” for each student so that students can individually complete work and turn in that individual work to the teacher for review, feedback, and assessment..

Norming Language

In adapting inquiryHub to a remote learning setting, opportunities for asynchronous work around hands on science practice and discourse are built in outside of virtual class meetings.

Discussion Boards	Assignments designed for students to share ideas and engage in discussion with one another over time rather than a live environment, students will use their Thinking Deeper Documents to brainstorm prior to submitting; teachers may choose to allow students without internet to text in responses and may screenshot/download and share portions of or full discussions via text (ex. through apps like Remind)
Home Investigations	Investigations with readily available materials designed for students to perform at home; teachers may choose to substitute videos or photos of data collection for students who cannot complete investigations at home

Lesson Overview

Lesson 1 - How did this little girl (Addie) get so sick?

In this **Lesson**, students will need the following materials to appropriately engage in learning:

- [Lesson Slideshow](#) (links to all videos and documents are embedded in the slideshow)
- [Incremental Modeling Tracker](#) (*to be used throughout Bend 1*)

In this **Lesson**, students who don't have home Internet need the following print-outs or files to best engage in learning:

- Anchor Phenomenon Videos: [Frontline Video: Hunting the Nightmare Bacteria](#)
- [Video transcript](#)
- [Lesson Slideshow](#)
- Virtual Class recording - *after completion*
- [Incremental Modeling Tracker](#)

Lesson overviews at the beginning of each lesson provide a list of materials students will need for that lesson as well as additional materials that will need to be provided to students without internet access.

Lesson Guidance

Lesson Components	Distance Learning Plan	
	Teacher	Student
VIRTUAL CLASS PRE-WORK (Slides: 3-7) Parts 1 - 2	<ol style="list-style-type: none"> 1. Share Lesson Slideshow with students as assignment so that each student gets an individual copy of the slideshow (example - Google Classroom, Schoology, etc) 2. Review Notice/Wonder responses from students in preparation to facilitate VIRTUAL CLASS discussions 	<ol style="list-style-type: none"> 1. Watch Frontline Bacteria video 2. Complete Notice/Wonder chart using video and transcript (embedded in Google Slide)
VIRTUAL CLASS (Slides: 8 - 22) Parts 3 - 7, 8	<ol style="list-style-type: none"> 1. Discuss and share out timelines to create class consensus. 2. Complete “Kinds of Bacteria” Chart 3. Engage students in discussion with prompts from the Lesson Slideshow 4. Students create initial models. 5. Students share and compare initial models. 6. Introduce IMT and collaborate to fill out the first row 	

Lesson Resources - Lesson Slideshows

Lesson slideshows each begin with an introduction slide that maps out the features found on the slides that follow for students.

Directions look like this:
BLUE highlighted directions

Your answers will be recorded in blue boxes that look like this:

****click here to type your answers!****

Slide numbers are here

1

Lesson Resources - Lesson Slideshows

Slides have clear labeling from the norming language that lets students know what will need to be completed before, during and after virtual class meetings.



Pre-Work
Complete the following 3
slides BEFORE coming to
virtual class

Lesson Resources - Lesson Slideshows

There are also places within slideshows where teacher can customize their instructions to students.



You are finished
with your **Pre-work**

In our next virtual class we will work together to answer the following questions:

- What is the difference between antibiotic resistant and non-resistant bacteria?
- How can we model what happened to Addie?

Virtual Class

Date:
Time:
Platform:

Teachers--add your specific details here!

Lesson Resources - Lesson Slideshows

Teachers have the option to leave slides in for students to fill in or create a separate assignment.

Incremental Modeling Tracker:

Driving Question: Why is it that Addie got sick, then got a little better, then sick again, then a little better, then eventually VERY sick?

Lesson Question (What question were we trying to answer - refer to the beginning of the slideshow if needed)	What did we figure out? (in this blank, explain what you learned in this lesson. Then highlight which parts might help you revise your model)	Based on our progress in this lesson, how can we add to or revise our model ? How should we represent our ideas in our model?
type here	***type here***	***type here***

Unit Overview by Bend

The Bend Overview contains all of the information that each lesson guide contains for all of the lessons in that set with embedded links to all resources for teacher planning.

Unit 1 Bend 1	
Resources Students Will Need	Additional Materials for Students Without Internet Access
<p>Lesson Slideshows for each lesson:</p> <p>Lesson 1, Lesson 2, Lesson 3, Lessons 4 & 5, Lesson 6, Lesson 7, Lesson 8, Lesson 9, Lesson 10, Lesson 11, Lesson 12, Lesson 13, LA Lesson LSSS-HS-LS1-8</p> <p>Additional Materials Lesson 1:</p> <ul style="list-style-type: none"> Incremental Modeling Tracker - used throughout Bend 1 Video transcript 	<p>Prior to Lessons (videos and documents): *Print Copies of All Slideshows and SEETs*</p> <ul style="list-style-type: none"> Lesson 1: Frontline Video: Hunting the Nightmare Bacteria Lesson 2: Articles for Investigation (Slide 9 of Lesson Slideshow) <ul style="list-style-type: none"> (A. What is MRSA?, B. About Resistant Bacteria in Public Transit System, C. Timeline Chart of MRSA Resistance, D. Antibiotic Resistant Threats in the US, 2013, E. About Resistant Bacteria in Public Transit System) Lessons 4&5: Bacterial Growth Time-Lapse Video & Optional Binary Fission video (suggestion - edit to 2:10) Lesson 6: Student Investigation Data & Lesson 6 Simulation video Tutorial Lesson 7: Virtual Lesson Video & SEET Exit ticket (teachers make a copy for yourself)

Unit Overview by Bend

The Bend Overview also contains an overview of when virtual class meetings occur and an additional section that offers guidance about assessment opportunities in each lesson.

Students should ideally join VIRTUAL CLASS on the following Lessons:

1, 2, 3, 4 /5, 8, 9, 11, 12, 13 (pre-assessment); Could be altered for discussion board if virtual class time is limited: 2, 3 , 9
Intended for asynchronous assignments: 6, 7, 10

Formative and Summative Assessment Opportunities:

All Slides where students fill in answers and notes can be used for formative assessment. These are to be turned in to the teacher.
Feedback can be delivered through comments and work revised if needed.

All Discussions (whether live or on a board) can be used for formative assessment

IMTs updates - check for understanding

SEETs - focus quiz type assessments

Lesson 13 is the Summative Assessment for Bend 1 ([Rubric](#))

Project Timeline

Project Timeline (DRAFT)

Inquiry Hub Biology					
Unit 1 Bend 1	Unit 1 Bend 2	Unit 2 Bend 1	Unit 2 Bend 2	Unit 3 Bend 1	Unit 3 Bend 2
Available Now	September	October	October	November	November

Questions, Feedback, Closing

Any additional questions: STEM@la.gov