

Do Now: Use the link in the chat to add your best remote learning tips and tricks to the Jamboard.

Amplify Science

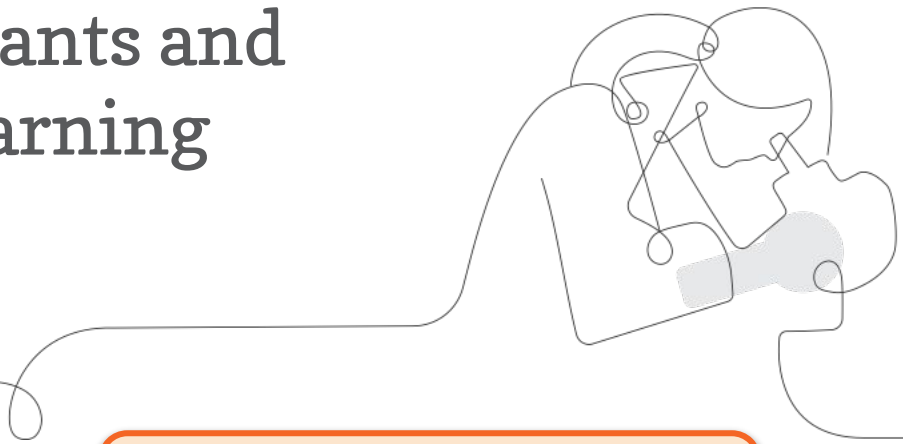
Engineering Internship Unit Internalization & Guided Planning

Deep-dive and strengthening workshop
Grade 6, Metabolism Engineering Internship

LAUSD

xx/xx/2020

Presented by Your Name



In a new tab, please log in to
your Amplify Science account
through Schoology.

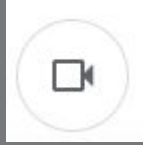
Use two windows for today's webinar

The diagram illustrates the setup for a two-window webinar. An inset shows a mouse cursor clicking the maximize button (the green circle) in the top-left corner of the first window's title bar.

Window #1 displays a Google Meet session titled "Meet - Etiwanda Grade 7 N". The URL is meet.google.com/hcs-dxpk-wrm?aut.... Below the video area, the Amplify Science curriculum content is visible, including sections for "Progress Build Level 1", "Progress Build Level 2", and "Getting Ready to Teach".

Window #2 displays the Amplify Curriculum website at apps.learning.amplify.com/curriculum.... The page title is "Lesson 1.2: Using Fossils to Understand Earth". The page features a large illustration of a dinosaur in a prehistoric landscape. Below the illustration, there are tabs for "Lesson Brief (4 Activities)", "1 WARM-UP Warm-Up", "TEACHER Why Geologists Value Fossils", and "2 TEACHER-LED DISCUSSION Introducing Mesos". The right sidebar contains a "Digital Resources" section with links to "All Projections", "Completed Scientific Argumentation Wall Diagram", "Video: Meet a Paleontologist", and "The Ancient Mesosaurus".

Norms: Establishing a Culture of Learners



- Please keep your camera on, if possible.
- Take some time to orient yourself to the platform
 - *“where’s the chat box? what are these squares at the top of my screen?, where’s the mute button?”*



- Mute your microphone to reduce background noise unless sharing with the group



- The chat box is available for posting questions or responses to during the training



- Make sure you have a note-catcher present



- Be an active participant - chat, ask questions, discuss, share!

Workshop goals

By the end of this workshop, you will be able to:

- Internalize your upcoming unit.
- Plan for collecting evidence of student learning in order to make instructional decisions to support diverse learner needs.
- Gather resources to develop a multi-day plan for implementing Amplify Science within your class schedule and instructional format.

e





Plan for the day

- Framing the day
 - Amplify Science Refresher
 - Introduction to Engineering Internships and Futura workspace
- Unit Internalization
 - Unit overview
 - Research phase
- Planning to teach
 - Collecting evidence of student learning to meet diverse learner needs
- Reflection and closing



Plan for the day

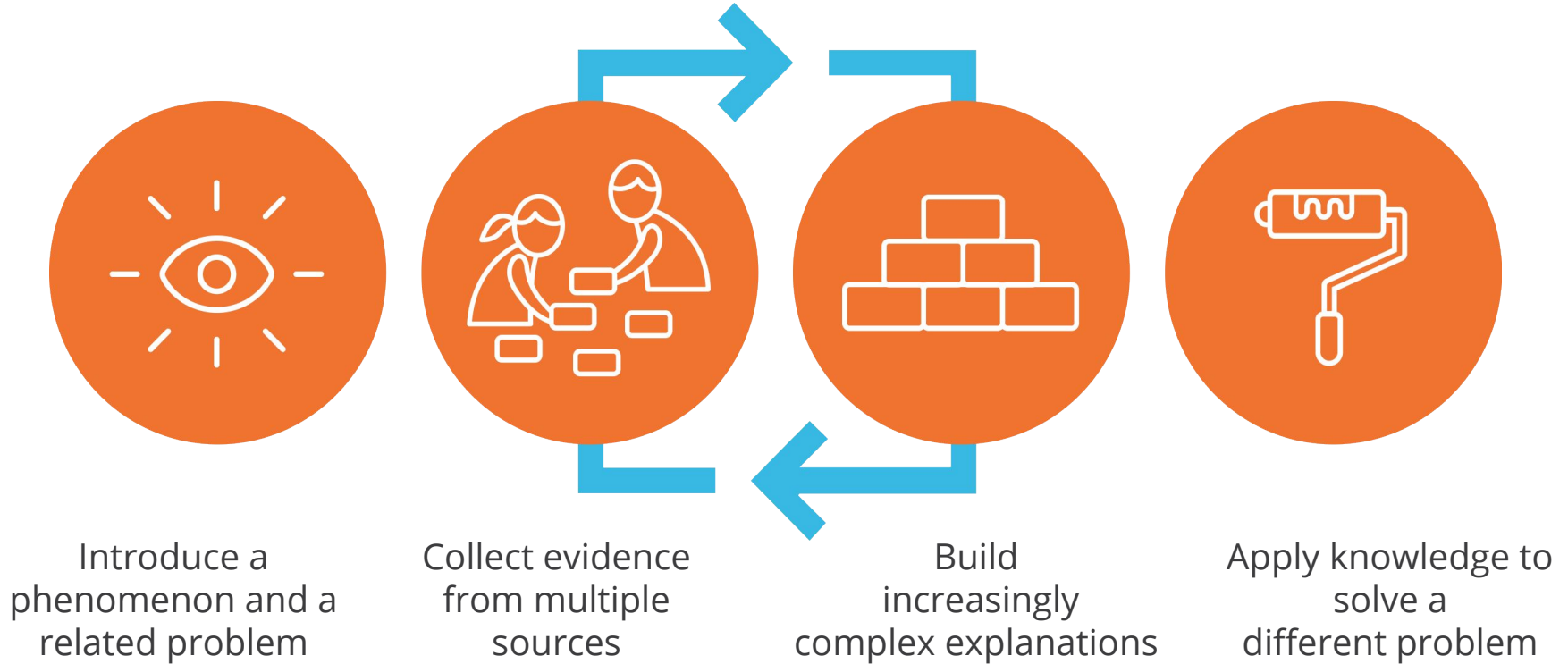
- Framing the day
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Amplify Science Refresher

Amplify Science Instructional Approach



Middle school course curriculum structure

Integrated model*

Grade 6

- Launch: Microbiome
- Metabolism
- Engineering Internship: Metabolism
- Traits and Reproduction
- Thermal Energy
- Ocean, Atmosphere, and Climate
- Weather Patterns
- Earth's Changing Climate
- Engineering Internship: Earth's Changing Climate

Grade 7

- Launch: Geology on Mars
- Plate Motion
- Engineering Internship: Plate Motion
- Rock Transformations
- Phase Change
- Engineering Internship: Phase Change
- Chemical Reactions
- Populations and Resources
- Matter and Energy in Ecosystems

Grade 8

- Launch: Harnessing Human Energy
- Force and Motion
- Engineering Internship: Force and Motion
- Magnetic Fields
- Light Waves
- Earth, Moon, and Sun
- Natural Selection
- Engineering Internship: Natural Selection
- Evolutionary History

AmplifyScience

authored by



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

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Launch units

- First unit
- 11 lessons

Core units

- Majority of units
- 19 lessons

Engineering Internships

- Two per year
- 10 lessons



Introduction to Engineering Internships and Futura workspace

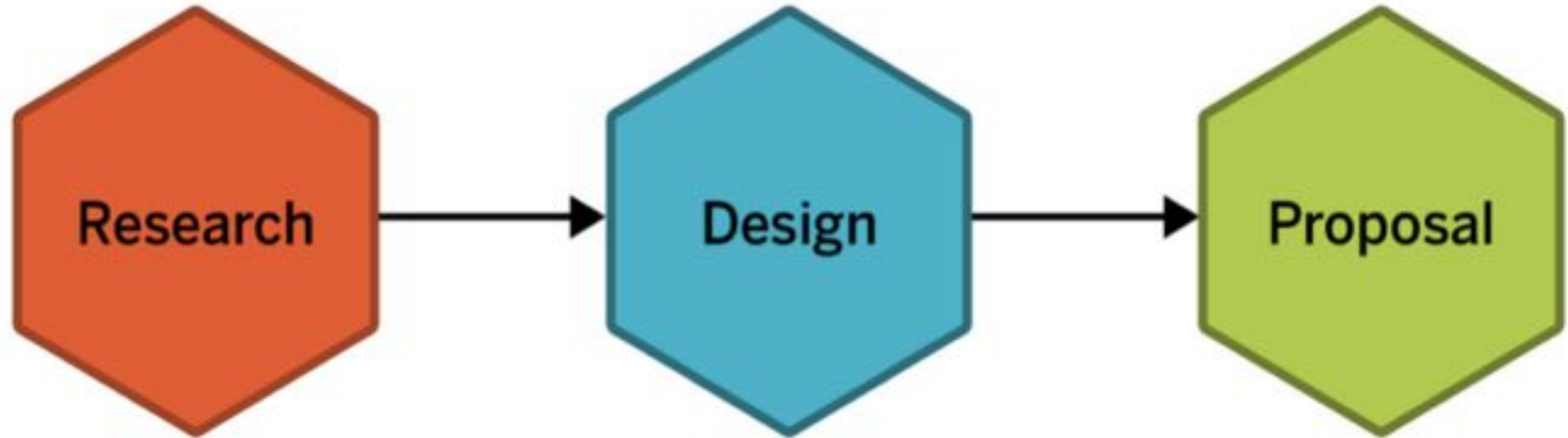
Metabolism Engineering Internship



Engineering Internships

- Engage in Engineering Practices and Engineering DCI's
- Apply science content
- Immerse students in an internship experience within a
- STEM career
- Address an urgent real-world problem
- Provide a student-centered experience

Engineering Internships phases





Questions?



Plan for the day

- Framing the day
 - Amplify Science Refresher
 - Introduction to Engineering Internships and Futura workspace
- **Unit Internalization**
 - **Unit overview**
 - **Research phase**
- Planning to teach
 - Collecting evidence of student learning to meet diverse learner needs
- Reflection and closing

Navigate to the Unit Guide

The screenshot shows the AmplifyScience website interface for the Metabolism Engineering Internship unit. The main header displays the unit title and '10 Lessons'. A red arrow points from the 'JUMP DOWN TO UNIT GUIDE' button in the main content area to the 'Unit Guide' link in the sidebar. The sidebar contains a list of links for planning and resources, and a section for printable resources and offline preparation.

AmplifyScience > Metabolism Engineering Internship

10 Lessons

Metabolism Engineering Internship

▼ JUMP DOWN TO UNIT GUIDE

Health Bars for Disaster Relief

10 Lessons

Unit Guide

Planning for the Unit

- Unit Overview
- Unit Map
- Getting Ready to Teach
- Materials and Preparation
- Science Background
- Standards at a Glance
- Immersive Engineering Internship

Teacher References

- Lesson Overview Compilation
- Standards and Goals
- 3-D Statements
- Assessment System
- Articles in This Unit

Printable Resources

- Article Compilation
- Copymaster Compilation
- Engineering Notebook
- Flextension Compilation
- NGSS Information for Parents and Guardians

Offline Preparation

Teaching without reliable classroom internet? Prepare unit and lesson materials for offline access.

Offline Guide

Unit Internalization Work Time

Page 1

Guided Engineering Internship Unit Internalization Planner

Part 1: Unit-level internalization

Unit title:

What is the phenomenon students are investigating in your unit?

Unit Question:

Student role:

What do students figure out in each phase of the Engineering Internship?

Research Phase:

Design Phase:

Proposal Phase:

What science ideas do students apply from the core unit to solve the engineering problem?

Page 2

Metabolism Engineering Internship

Planning for the Unit

Unit Map



Unit Map

How can we design health bars that meet the metabolic needs of patients or rescue workers?

Students act as food engineering interns to design a health bar to feed people involved in natural disasters, with a particular emphasis on two populations who have health needs beyond what can be provided by emergency meals: patients and rescue workers. These plans must meet three design criteria: 1) addressing the metabolic needs of a target population; 2) tasting as good as possible; and 3) minimizing costs so as many people can be served as possible. Students focus on the practice of considering trade-offs while designing solutions to deepen their understanding of metabolism: students also learn about questions of scale, proportion, and quantity involved as different proportions of types of molecules affect a body's health and metabolism.

Research Phase:

They review information from the Metabolism unit, and learn new related content about carbohydrates and glycemic index (a measure of the rate at which different carbohydrates release glucose into the blood) by reading detailed supporting articles in the project Dossier. They work with the digital Design Tool, RecipeTest, to conduct iterative tests and better understand how different ingredients affect each criterion.

Design Phase:

They use the RecipeTest Design Tool as a part of the Design Cycle. They design health bar recipes for either patients or rescue workers, analyzing the results, and conducting further iterations. Students learn the value of iterative tests, how to balance trade-offs, and how to make sense of the results in order to inform their next decisions. They submit an early version of their recipe to the project director for feedback. They then have a chance to refine these designs in order to create an optimal design that addresses all the project criteria.

Proposal Phase:

They gather evidence and write proposals, supporting their claim about an optimal solution. They focus on the types of evidence for the design decisions that helped them address each criterion. They submit an outline of the proposal to their project director for feedback. They use the feedback letter, proposal rubric, review of the Dossier, and peer discussion to improve the body of their proposals so it is clear how and why each decision led to the proposed optimal design.

Students apply science content:

To design successful health bars, students apply their understanding of digestion of food molecules, the role of glucose in cellular respiration, and the role of protein in growth and repair of the body from the Metabolism unit. They also learn about a new related concept: how different types of carbohydrates are broken down into glucose at different rates. After completing the proposal, students apply their new engineering skills to a define new problem related to food engineering.

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Amplify.

Guided Engineering Internship Unit Internalization Planner

Part 1: Unit-level internalization

Unit title: Metabolism Engineering Internship

What is the phenomenon students are investigating in your unit?

Design a health bar to feed people involved in natural disasters, with a particular emphasis on two populations who have health needs beyond what can be provided by emergency meals: patients and rescue workers

Unit Question:

How can we design health bars that meet the metabolic needs of patients or rescue workers?

Student role:

Food engineers

What do students figure out in each phase of the Engineering Internship?

Research Phase:

Relationship between carbohydrates and glycemic index
Better understand how different ingredients affect each criterion through iterative tests.

Design Phase:

Value of iterative tests, how to balance trade-offs, and how to make sense of the results in order to inform their next decisions

Proposal Phase:

Gather and use multiple pieces of evidence to improve their proposals so it is clear how and why each decision led to the proposed optimal design

What science ideas do students apply from the core unit to solve the engineering problem?

Students apply their understanding of digestion of food molecules, the role of glucose in cellular respiration, and the role of protein in growth and repair of the body from the Metabolism unit.



Questions?

Metabolism Engineering Internship **Research Phase**



Capturing remote and hybrid teaching strategies

	Ideas for synchronous instruction	Ideas for asynchronous instruction
Research phase		
Design phase		
Proposal phase		

Page 8



This icon in the top right corner takes you to the digital design tool. You'll use this tool to test your designs.

The screenshot shows a web-based digital design tool for FuturaBar. The interface is organized into a grid of ingredient selection cards and a right-hand panel for recipe management.

Ingredient Selection Cards:

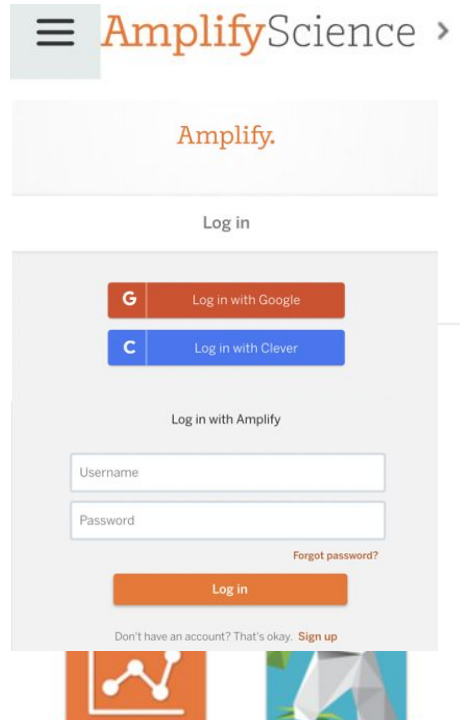
- RAISINS:** Protein % 3, Carbohydrates % 97, Glycemic Index 64, Taste Score 8, Cost/Kilogram \$ 7.41
- PUMPKIN SEEDS:** Protein % 68, Carbohydrates % 32, Glycemic Index 48, Taste Score 7, Cost/Kilogram \$ 13.40
- NONFAT MILK POWDER:** Protein % 43, Carbohydrates % 57, Glycemic Index 40, Taste Score 7, Cost/Kilogram \$ 11.02
- PUFFED WHEAT:** Protein % 19, Carbohydrates % 81, Glycemic Index 80, Taste Score 3, Cost/Kilogram \$ 9.88
- PUFFED RICE:** Protein % 8, Carbohydrates % 92, Glycemic Index 77, Taste Score 4, Cost/Kilogram \$ 10.23
- SOY BEANS:** Protein % 47, Carbohydrates % 53, Glycemic Index 15, Taste Score 4, Cost/Kilogram \$ 10.93
- NUTRITIONAL YEAST:** Protein % 80, Carbohydrates % 20, Glycemic Index 2, Taste Score 2, Cost/Kilogram \$ 24.69
- DARK CHOCOLATE CHIPS:** Protein % 0, Carbohydrates % 100, Glycemic Index 23, Taste Score 10, Cost/Kilogram \$ 22.57
- PRUNES:** Protein % 3, Carbohydrates % 97, Glycemic Index 29, Taste Score 6, Cost/Kilogram \$ 10.67

Right Panel:

- FuturaBar:** A visual representation of the bar with a grid of dots.
- 0 Grams:** A large display showing the current total weight.
- RESET INGREDIENTS:** A button to clear the current selection.
- Protein % Carbohydrates % Glycemic Index:** A summary of the current recipe's nutritional profile.
- Your FuturaBar recipe needs 100 grams of ingredients before you can send it to the lab for testing.** A message indicating the required total weight.
- RESCUE WORKERS PATIENTS:** Two buttons to select a user profile for testing.
- Select an oxygen level for your test users:** Radio buttons for **Normal** and **Low**.
- SEND TO LAB:** A button to submit the recipe for testing.

Log out and then log in as students

Safari or Chrome



1. Navigate to Global Navigation (top left)
2. Select **Log out** of Teacher account
3. Select **Log in with Amplify**
4. Enter your student demo account credentials:

Username: **XXXX@tryamplify.net**

Password: **AmplifyNumber1**

5. Now explore Amplify Science as you wait for others!



Metabolism Engineering Internship

Day 1: Introducing the Engineering Internship

Welcome, engineering interns! I will be your internship coordinator, and I'll guide you through this project with Amina Reid, your project director.



Where have you heard the word **engineer** before? What kind of work do engineers do?

What about **food engineers**? What do you think they do?



Your **project director** is Amina Reid.

Amina has sent a video message to explain more about Futura and your engineering project.



FOOD
ENGINEERING
LAB





Amina wants you to design health bars for disaster relief.



What are some **goals** that might be important to make sure your health bars are successful?



As food engineering **interns**, you will use what you have learned about metabolism to solve a real and important problem.

Remember, Amina Reid will be the **project director** for this internship. She will send you messages, assign you tasks to do, and give you feedback on your work.

The interface displays a grid of ingredient cards, each with a minus, zero, and plus button for adjusting the quantity in grams. The ingredients and their nutritional data are as follows:

Ingredient	Protein %	Carbohydrates %	Glycemic Index	Taste Score	Cost/Kilogram
RAISINS	3	97	64	8	\$7.41
PUMPKIN SEEDS	68	32	48	7	\$13.40
NONFAT MILK POWDER	43	57	40	7	\$11.02
PUFFED WHEAT	19	81	80	3	\$9.88
PUFFED RICE	8	92	77	4	\$10.23
SOY BEANS	47	53	15	4	\$10.93
NUTRITIONAL YEAST	80	20	2	2	\$24.69
DARK CHOCOLATE CHIPS	0	100	23	10	\$22.57
PRUNES	3	97	29	6	\$10.67

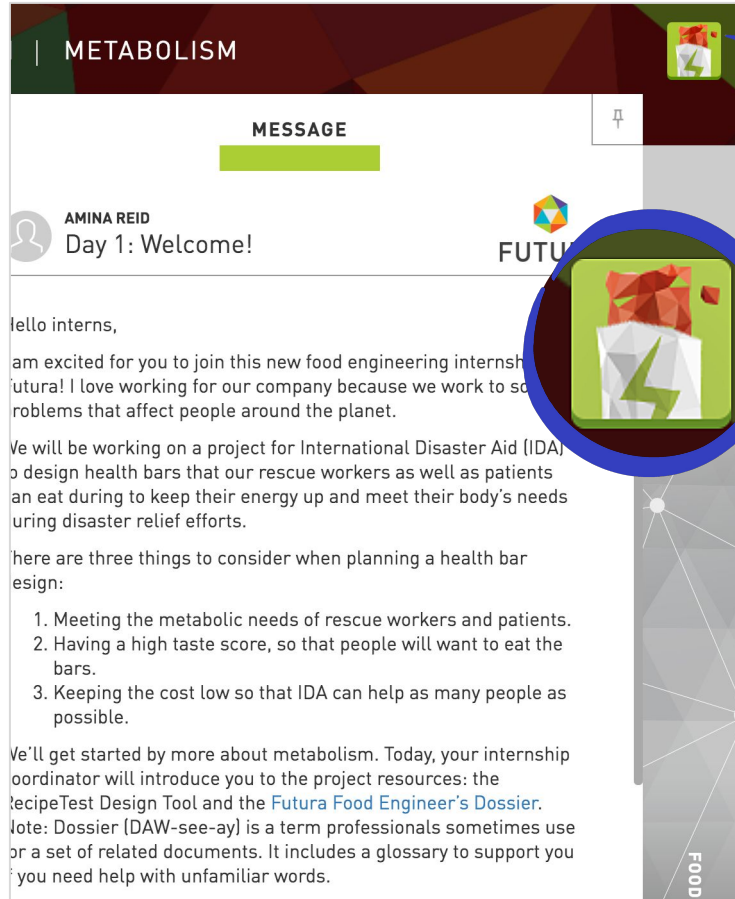
On the right, a FuturaBar wrapper is shown. Below it, the current total is 0 Grams. A 'RESET INGREDIENTS' button is present. A message states: 'Your FuturaBar recipe needs 100 grams of ingredients before you can send it to the lab for testing.' Below this are buttons for 'RESCUE WORKERS' and 'PATIENTS'. At the bottom, there are radio buttons for 'Normal' and 'Low' oxygen levels, and a 'SEND TO LAB' button.

To test different designs for your health bars, you'll use a **digital model** called **RecipeTest**.

This model predicts how well a bar will meet the project criteria.

RecipeTest is **accurate** in many ways: the ingredient details are based on ingredients used in snack and health foods in the real world. The test users have metabolic needs similar to different populations of people.

But like any model, RecipeTest is **simplified and inaccurate** in some ways.



Press the button in the top right corner of Futura Workspace to **open RecipeTest**.

The screenshot shows the FuturaBar recipe builder interface. It features a grid of nine ingredient cards, each with a minus, zero, and plus button to adjust the quantity. The ingredients and their nutritional data are as follows:

Ingredient	Protein %	Carbohydrates %	Glycemic Index	Taste Score	Cost/Kilogram
RAISINS	3	97	64	8	\$7.41
PUMPKIN SEEDS	68	32	48	7	\$13.40
NONFAT MILK POWDER	43	57	40	7	\$11.02
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DARK CHOCOLATE CHIPS	0	100	23	10	\$22.57
PRUNES	3	97	29	6	\$10.67

On the right, a FuturaBar wrapper is shown. Below it, the summary panel displays:

- 0 Grams
- Protein %
- Carbohydrates %
- Glycemic Index
- RESET INGREDIENTS button
- Message: Your FuturaBar recipe needs 100 grams of ingredients before you can send it to the lab for testing.
- Buttons: RESCUE WORKERS, PATIENTS
- Radio buttons for oxygen level: Normal (selected), Low
- SEND TO LAB button



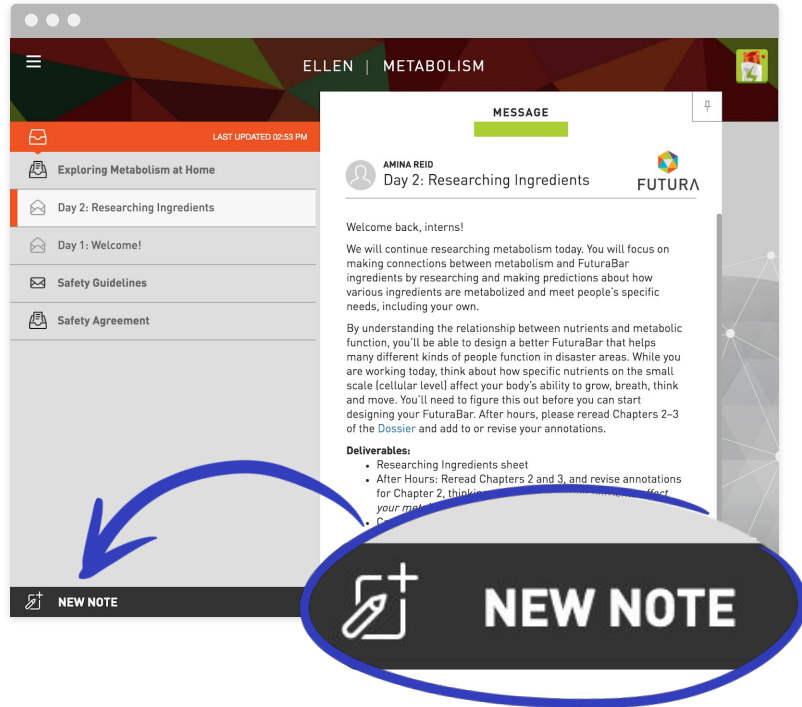
What did you notice about **RecipeTest?**

What did you find interesting?



Metabolism Engineering Internship

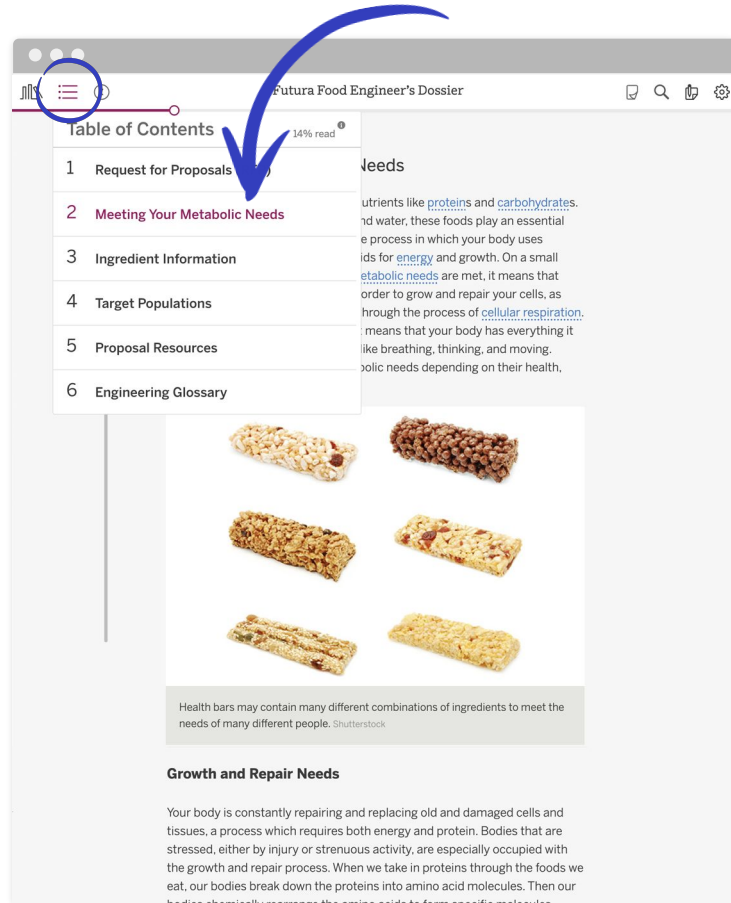
Day 2: Researching Ingredients



You'll need to take notes in order to keep track of important information.



In Futura Workspace, select **NEW NOTE** to create a blank note.



Futura Food Engineer's Dossier


14% read

Table of Contents

- 1 Request for Proposals
- 2 **Meeting Your Metabolic Needs**
- 3 Ingredient Information
- 4 Target Populations
- 5 Proposal Resources
- 6 Engineering Glossary

Needs

utrients like [proteins](#) and [carbohydrates](#).
nd water, these foods play an essential
e process in which your body uses
ids for [energy](#) and growth. On a small
[metabolic needs](#) are met, it means that
order to grow and repair your cells, as
hrough the process of [cellular respiration](#).
means that your body has everything it
like breathing, thinking, and moving.
olic needs depending on their health.



Health bars may contain many different combinations of ingredients to meet the needs of many different people. Shutterstock

Growth and Repair Needs

Your body is constantly repairing and replacing old and damaged cells and tissues, a process which requires both energy and protein. Bodies that are stressed, either by injury or strenuous activity, are especially occupied with the growth and repair process. When we take in proteins through the foods we eat, our bodies break down the proteins into amino acid molecules. Then our bodies chemically rearrange the amino acids to form specific molecules.

It's essential to understand metabolic needs for this project, so you'll read **Chapter 2**.

You can use the Table of Contents to navigate between the chapters.



Metabolism Engineering Internship

Day 4: Analyzing Ingredients

These are your Ingredients Analysis sheets.

You'll use them to record tests for each ingredient.

Ingredients Analysis

Name: _____ Date: _____

1. In your group, that you and your
2. In your pair, de Patients.
3. Test 1 ingredie
4. Compare the r
5. In the table be

Ingredients Analysis (continued)

Name: _____ Date: _____

Based on your research:

1. Which ingredients do you think will make the best tasting bar? Why?

Type	Metabolic Needs Patients	Metabolic Needs Rescue Workers	Taste Score	Cost per Bar	Notes?
Prunes	Notes on Growth & Repair and Energy needs:	Notes on Growth & Repair and Energy needs:			

Type	Metabolic Needs Patients	Metabolic Needs Rescue Workers	Taste Score	Cost per Bar
Raisins	Notes on Growth & Repair and Energy needs:	Notes on Growth & Repair and Energy needs:		

Type	Metabolic Needs Patients	Metabolic Needs Rescue Workers	Taste Score	Cost per Bar
Puffed Rice	Notes on Growth & Repair and Energy needs:	Notes on Growth & Repair and Energy needs:		
	Notes on Patients vs. Rescue Workers:			
Soy Beans	Notes on Growth & Repair and Energy needs:	Notes on Growth & Repair and Energy needs:		
	Notes on Patients vs. Rescue Workers:			
Nutritional Yeast	Notes on Growth & Repair and Energy needs:	Notes on Growth & Repair and Energy needs:		
	Notes on Patients vs. Rescue Workers:			
Chocolate Chips	Notes on Growth & Repair and Energy needs:	Notes on Growth & Repair and Energy needs:		
	Notes on Patients vs. Rescue Workers:			

Metabolism Engineering Internship—Day 4

Metabolism Engineering Internship—Day 4

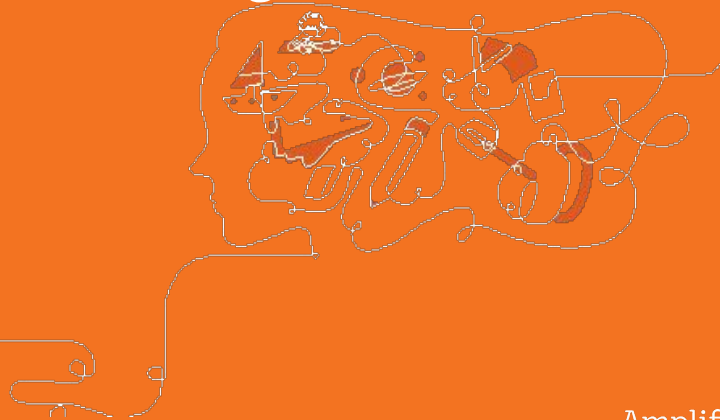
Metabolism Engineering Internship—Day 4

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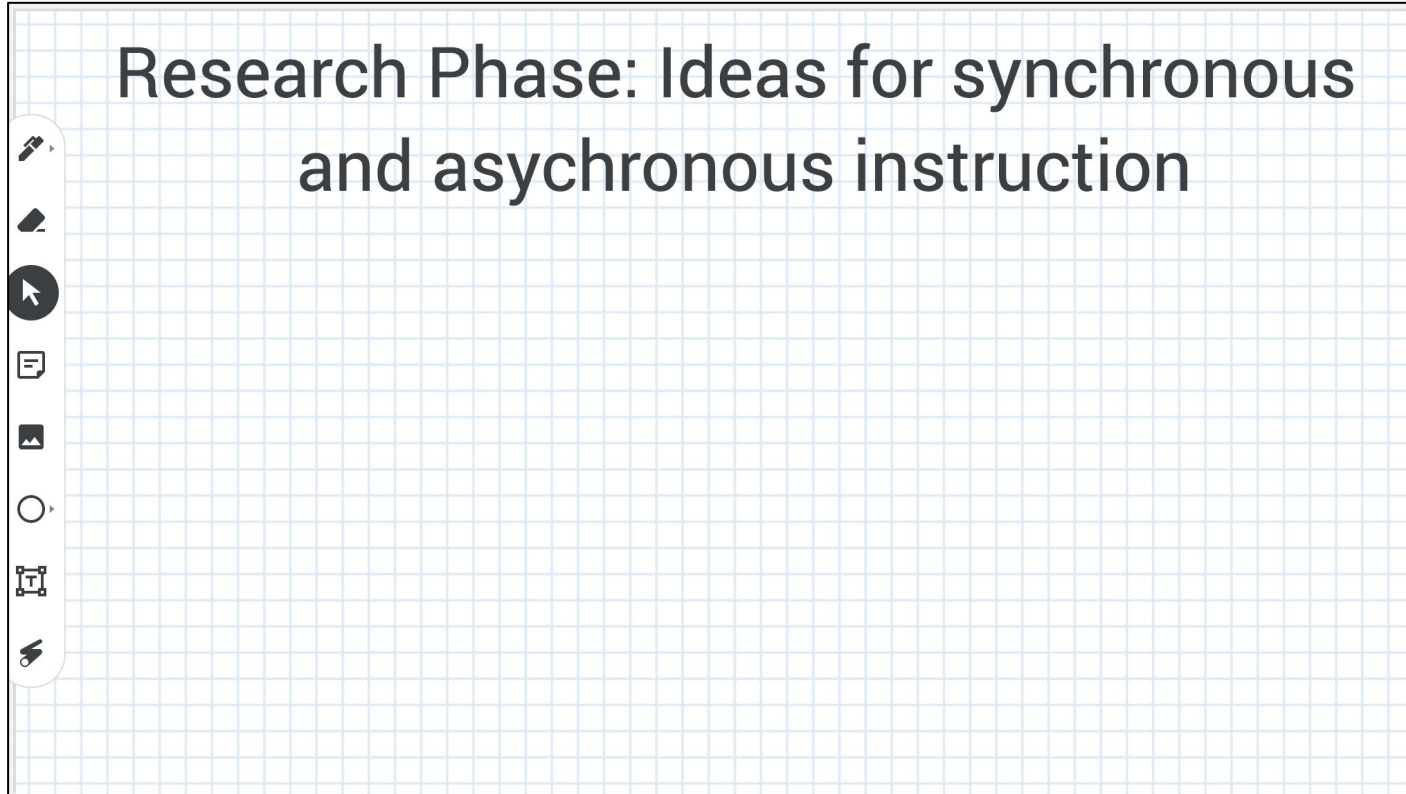
Remote and Hybrid Learning Reflection

How would you adapt instruction you previewed in the Research Phase for synchronous and/or asynchronous learning?

	Ideas for synchronous instruction	Ideas for asynchronous instruction
Research phase		
Design phase		
Proposal phase		



Sample Jamboard reflection #2





Questions?



Plan for the day

- Framing the day
 - Amplify Science Refresher
 - Introduction to Engineering Internships and Futura workspace
- Unit Internalization
 - Unit overview
 - Research phase
- **Planning to teach**
 - **Collecting evidence of student learning to meet diverse learner needs**
- Reflection and closing

Amplify Science @Home Curriculum

The Teacher Overview document gives suggestions for modifying activities for remote learning.

AmplifyScience

Hello Teacher Considine
t.lconsidine@tryamplify.net

Log Out

Go To My Account ⚙️

Classroom Language Settings

LA Science Program Guide

Program Hub

Science Program Guide

Standards Map

Help

6th Grade ▾

11 Lessons
Microbiome

19 Lessons
Metabolism

FUTURA
FOOD ENGINEERING

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<https://www.amplify.com/floridastandards>

Adapting the Amplify Approach for Remote Learning

(Excerpt from the @Home Teacher Overview)

Adapting the Amplify Science Approach for Remote Learning

In Amplify Science units, students figure out phenomena by using science and engineering practices. They gather evidence from multiple sources and make explanations and arguments through multiple modalities: doing, talking, reading, writing, and visualizing. They also make their learning visible by posting key concepts on the classroom wall. While we have retained this core approach in the @Home Lessons, enacting it at home will require adaptations.

The @Home Lessons provide general guidance for these adaptations, but you may need to set up expectations for specific routines or provide additional support to your students. Below are ideas for how different aspects of the Amplify Science approach might be adapted for your learners' particular contexts.

Student talk options

- Talk to a member of their household about their ideas.
- Call a friend or classmate and discuss their ideas.
- Talk in breakout groups in a video class meeting.
- Use asynchronous discussion options on technology platforms.

Student writing options

- Write in a designated science notebook.
- Photograph writing and submit digitally.
- Complete prompts in another format. (Teachers can convert prompts so they are completed in an on-line survey or an editable document so students can submit digitally.)
- Submit audio or video responses digitally, rather than submit a written response.
- Share a response orally with a family member or friend with no submission required.
- For students with technology access, complete written work in the students' Amplify accounts (links to corresponding student activities are provided in the @Home Slides).

Student reading options

- Read printed version of article, included with @Home Packets. (Note: although the articles are originally in color, they are provided in the @Home Packets in grayscale for ease of copying. Most articles translate well into grayscale but there will be some exceptions).

included with @Home Student Sheets.

by the audio feature in the Amplify Science @Home Library (links are

from their home.

nts are likely to have at home. (For activities video.)

ies in the @Home Units, a video / images of

ble. For example,

o students who need them.

Science kit, and have opportunities to teach hands-on activities with student input.

reference for students to track and reflect on or phenomenon and content, has been the list of Chapter Questions, key concepts, are provided in the last lesson of each chapter. Science Wall, you could have students:

@Home Science Wall pages.

ford that is introduced.

rd. These can be then posted on a wall, large

motely, you could create a virtual

routines

support for student reading includes: teacher up discussion of texts; multiple readings of y, as well as suggestions for additional

need more reading support. Some suggestions to offer @Home Lessons are:

ass or in small groups and read the first part of the article ling how you would read the text.

meet after reading to discuss their annotations.

meet with someone in their home to read at least some of the discuss their annotations after reading.

ience units students periodically talk in small groups using onships and Write and Share. You may consider including by having students meet and talk to their peers in small ent to conduct the routine with someone in their home.

unit in Amplify Science 6–8 culminates with a Science lass, student-led argumentation routine. An adapted version been included in the @Home Units. Some suggestions for

seminar in class, if you are meeting in person some of the

your whole class, remotely. Students can participate all at the ight break the group up in thirds or in half and have the t talking take notes using the Science Seminar Observations

pairs or small groups meeting on the phone, on video calls, rooms.

o someone in their household about the Science Seminar

nt considerations

iderations for assessment and feedback in the Amplify e pre-unit and end-of-unit assessments. Generally, we

ormat in which you collect student work. See the "Student

students, you may wish to focus on how students are n and/or the Chapter Questions, if they are using evidence rt their responses to questions, and if they are using in their responses.

onous and in-person learning

ing these asynchronous resources in is. If you are able to choose particular lessons d:

y figuring out the unit phenomenon.

o students can share their initial ideas or omenon.

its can talk as they make sense of evidence, of information, and make an explanation or

n conduct hands-on demonstrations when dents. Solicit student input as you

xy at home, when in-person, you can provide discuss ideas related to the simulations and

Lesson at a Glance

1: Connecting to Futura Workspace

Interns are introduced to the Futura Workspace and their internship by reading a welcome message about the project.

(Teacher Only) Introducing Futura (10 min.)

Interns are introduced to Futura and their role as food engineering interns in this fictional company.

(Teacher Only) Exploring RecipeTest (10 min.)

Interns explore the Design Tool to engage with the context and support beginning background research on this project's science concepts.

2: Reading About Metabolism (20 min.)

Interns use Active Reading to learn about metabolic needs.

3: After-Hours Work

Interns become more familiar with the project details and criteria by reading the Request for Proposals (RFP) in the Dossier.

Modifications needed
for remote learning:

Class discussions and
partner talk

Student talk options

- Talk to a member of their household about their ideas.
- Call a friend or classmate and discuss their ideas.
- Talk in breakout groups in a video class meeting.
- Use asynchronous discussion options on technology platforms.

- **Talk routines.** In Amplify Science units students periodically talk in small groups using routines such as Word Relationships and Write and Share. You may consider including and adapting these routines by having students meet and talk to their peers in small groups or asking each student to conduct the routine with someone in their home.

Suggestions for Online Synchronous Time



Online synchronous time

Online discussions: It's worthwhile to establish norms and routines for online discussions in science to ensure equity of voice, turn-taking, etc.

Digital tool demonstrations: You can share your screen and demonstrate, or invite your students to share their screen and think-aloud as they use a Simulation or other digital tool.

Interactive read-alouds: Screen share a digital book or article, and pause to ask questions and invite discussion as you would in the classroom.

Shared Writing: This is a great opportunity for a collaborative document that all your students can contribute to.

Co-constructed class charts: You can create digital charts, or create physical charts in your home with student input.



Multi-day planning, including planning for differentiation and evidence of student work

Day 1: Lesson 1.1

Minutes for science: 30 min.

Instructional format:

- ☐ Asynchronous
- ☒ Synchronous

Lesson or part of lesson:

Warm up, Introducing Futura, Exploring RecipeTest

Mode of instruction:

- ☐ Preview
- ☐ Review
- ☒ Teach live
- ☐ Students work independently

Students will...

Get connected to Futura workspace, share ideas about engineering, watch and discuss video. Explore RecipeTest and share observations.

Teacher will...

Lead activities using Classroom Slides. Preview independent work (continued exploration of RecipeTest, Active Reading, and After-Hours work).

Minutes for science: _____

Instructional format:

- ☐ Asynchronous
- ☐ Synchronous

Lesson or part of lesson:

Mode of instruction:

- ☐ Preview
- ☐ Review
- ☐ Teach live
- ☐ Students work independently

Students will...

Teacher will...



Multi-day planning, including planning for differentiation and evidence of student work

Day 1: Lesson 1.1

Minutes for science: 30 min.

Instructional format:

- ☐ Asynchronous
- ☒ Synchronous

Lesson or part of lesson:

Warm up, Introducing Futura, Exploring RecipeTest

Mode of instruction:

- ☐ Preview
- ☐ Review
- ☒ Teach live
- ☐ Students work independently

Students will...

Get connected to Futura workspace, share ideas about engineering, watch and discuss video. Explore RecipeTest and share observations.

Teacher will...

Lead activities using Classroom Slides. Preview independent work (continued exploration of RecipeTest, Active Reading, and After-Hours work).

Minutes for science: 30 min.

Instructional format:

- ☒ Asynchronous
- ☐ Synchronous

Lesson or part of lesson:

Exploring RecipeTest, Reading about Metabolism, After-Hours Work

Mode of instruction:

- ☐ Preview
- ☒ Review
- ☐ Teach live
- ☒ Students work independently

Students will...

Further explore RecipeTest, reflect on RecipeTest as a model. Read and annotate Chapters 1 and 2 of dossier and submit annotations.

Teacher will...

Review students' annotations on dossier chapter reading.

Look at the *Students will* columns. What are students working in the lesson(s) that you could collect, review, or provide feedback on?

See Some Types of Written Work in Amplify Science to the right for guidance.

If there isn't a work product listed above, do you want to add one? Make notes below.

Synchronous: no written work

Asynchronous: Jot down Ideas about RecipeTest as a model, annotate Chapters 1 and 2 of dossier

How will students submit this work product to you?

See the Completing and Submitting Written Work tables to the right for guidance on how students can complete and submit work.

Synchronous: n/a

Asynchronous: Submit annotations through Amplify Science platform. Bring RecipeTest model reflection to next synchronous lesson to review and discuss as a class.

Some Types of Written Work in Amplify Science

- Daily written reflections
- Homework tasks
- Investigation notebook pages
- Written explanations (typically at the end of Chapter)
- Diagrams
- Recording pages for Sim uses, investigations, etc

Completing Written Work

- Plain paper and pencil (videos include prompts for setup)
- (6-8) Student platform
- Investigation Notebook
- Record video or audio file describing work/answering prompt
- Teacher-created digital format (Google Classroom, etc)

Submitting Written Work

- Take a picture with a smartphone and email or text to teacher
- Through teacher-created digital format
- During in-school time (hybrid model) or lunch/materials pick-up times
- (6-8) Hand-in button on student platform

How will you differentiate this lesson for diverse learners? (Navigate to the lesson level on the standard Amplify Science platform and click on differentiation in the left menu.)

Look at the St that you could See!

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English-Arabic Glossary

carbohydrate: a group of molecule types that is broken down by the digestive system into glucose
المركبات الكربوهيدرات هي مجموعة من أنواع الجزيئات التي تتحلل إلى السكر البسيط في الجهاز الهضمي إلى الجلوكوز

English-Tagalog Glossary

carbohydrate: a group of molecule types that is broken down by the digestive system into glucose
karbohidreyt: isang grupo ng mga uri ng molekula na pinaghihiwalay ng sistema ng pagtukoy maging glukos

criteria: standards by which something may be judged
saligan: mga pamantayan batay kung saan maaaring hugahan ang isang bagay

deliverable: a thing to be delivered, usually in a development or design process
naihahatid: isang bagay na inihahatid, kaniwan sa proseso ng pagpapaulat o pagdidisyo

disaster relief: help, usually food and supplies, that is given to people who have survived disaster
tulong sa sakuna: tulong, na kaniwan ay pagkain at mga suplay, na binibigay sa mga tao nakaligtas sa sakuna (Sa Futura, ang tulong sa sakuna ay isa sa mga paraan na ginagamit ng pag-iirihyero upang tulungan ang mga tao sa buong mundo.)

dossier: a set of related documents about a particular topic
kaso: isang hanay ng magkakasagay na dokumento tungkol sa partikular na paksa

energy: the ability to make things move or change
enerhiya: ang kakayahang na mapagalaw o mabago ang isang bagay

engineer: a person who uses math and science to design things
inhinyero: isang tao na gumagamit ng matematika at siyensiya para makapagdisyeno ng mga bagay

glucose: a molecule that organisms can use to release energy, and that is made of carbon, hydrogen, and oxygen atoms
glukos: isang molekula na magagamit ng mga organismo para maglabas ng enerhiya, na yari ng karbon, hidroheno, at oksiheno ng mga atom

interns: beginners at a workplace who do work that is closely supervised because they are on the job
mga interns: mga baguhan sa isang lugar ng trabaho na mahigpit na sinusubaybayan ang kanilang matututo pa lang sila habang nasa trabaho

iterate: to repeat a process in a way that considers the results of a previous design
pag-uulit/ulitin: pag-ulit sa proseso sa paraang isinasalang-alang ang resulta ng nakaraang disyeno

optimize: to improve (a design) as much as possible, considering all criteria and the trade-offs among the criteria
optimisasyon: pagpapalitan (ang isang disyeno) hangga't maaari, habang isinasalang-alang ang lahat ng pamantayan at ang mga pagpapalitan ng mga pamantayan

Metabolism Engineering Internship—Multi-Language Glossary
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15

Working in the lesson(s)

Guidance.

one? Make notes below

Some Types of Written Work in Amplify Science

- Daily written reflections
- Homework tasks

Look pages (typically at the end of Chapter)

Sim uses, investigations, etc

ork

Submitting Written Work

- Take a picture with a smartphone and email or text to teacher
- Through teacher-created digital format
- During in-school time (hybrid model) or lunch/materials pick-up times
- (6-8) Hand-in button on student platform

Target Populations

International Disaster Aid (IDA) has identified two groups of people who could benefit from health bars. These are referred to as the “**target populations**.”

a group of people who are supposed to be served by a designed product
[población objetivo: un grupo de gente que debe ser servido por un producto diseñado]

Within each target population, several people have volunteered to test out FuturaBars to see how each bar meets their needs. These people are referred to as “**test users**,” and they are examples of the kinds of people in the target populations. Below is more information on each target population and its volunteer test users.

How will you differentiate this lesson for diverse learners? (Navigate to the lesson level on the standard Amplify Science platform and click on differentiation in the left menu.)

Supports:

- Partner or small group reading
- Multi-language glossary
- Reveal tool in Amplify Library to click difficult words for definition

Extension:

- Consider metabolic needs of a specific target population: teenagers, pregnant women, the very elderly

Planning Resource

pages 5 & 6

Day 2: _____		Day 3: _____	
Minutes for science: _____		Minutes for science: _____	
Instructional format: <input type="checkbox"/> Asynchronous <input type="checkbox"/> Synchronous		Instructional format: <input type="checkbox"/> Asynchronous <input type="checkbox"/> Synchronous	
Lesson or part of lesson:		Lesson or part of lesson:	
Mode of instruction: <input type="checkbox"/> Preview <input type="checkbox"/> Review <input type="checkbox"/> Teach full lesson live <input type="checkbox"/> Teach using synchronous suggestions <input type="checkbox"/> Students work independently using: <input type="checkbox"/> @Home Packet <input type="checkbox"/> @Home Slides and @Home Student Sheets <input type="checkbox"/> @Home Videos		Mode of instruction: <input type="checkbox"/> Preview <input type="checkbox"/> Review <input type="checkbox"/> Teach full lesson live <input type="checkbox"/> Teach using synchronous suggestions <input type="checkbox"/> Students work independently using: <input type="checkbox"/> @Home Packet <input type="checkbox"/> @Home Slides and @Home Student Sheets <input type="checkbox"/> @Home Videos	
Students will...	Teacher will...	Students will...	Teacher will...

Types of Written Work in Amplify Science	
ten reflections work tasks tion notebook pages explanations (typically at the end of Chapter)	
g pages for Sim uses, investigations, etc	
Written Work	Submitting Written Work
r and pencil lude prompts ent platform on Notebook leo or audio file vering prompt eated digital oogle y, etc)	<ul style="list-style-type: none"> • Take a picture with a smartphone and email or text to teacher • Through teacher-created digital format • During in-school time (hybrid model) or lunch/materials pick-up times • (6-8) Hand-in button on student platform
Science platform and click on differentiation in the left menu.)	

Sample Jamboard #2

Research Phase: Ideas for synchronous
and asynchronous instruction





Questions?



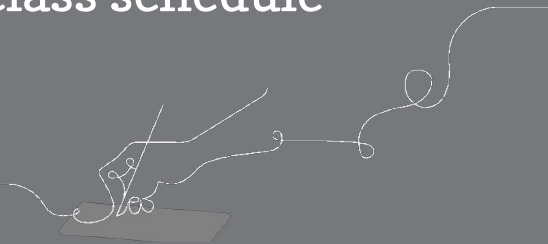
Plan for the day

- Framing the day
 - Amplify Science Refresher
 - Introduction to Engineering Internships and Futura workspace
- Unit Internalization
 - Unit overview
 - Research phase
- Planning to teach
 - Collecting evidence of student learning to meet diverse learner needs
- **Reflection and closing**

During this workshop did we meet our objectives?

- Were you able to internalize your upcoming unit?
- Do you know how to plan for collecting evidence of student learning in order to make instructional decisions to support diverse learner needs?
- Do you have the resources you need to develop a multi-day plan for implementing Amplify Science within your class schedule and instructional format?

e



Program Hub: Self Study Resources

The screenshot displays the Amplify Science Program Hub interface. On the left, a sidebar menu is visible with a hamburger icon circled in orange. The menu includes options like 'Hello Teacher Considine', 'Log Out', 'Go To My Account', 'Classroom Language Settings', and icons for 'LA Science Program Guide', 'Program Hub' (highlighted with an orange arrow), 'Science Program Guide', 'FLORIDA EDITION Standards Map', and 'Help'. The main content area features a 'Welcome' message, a list of resources including 'Remote learning: Amplify Science@Home', 'Hands-on investigations support', 'Unit extensions' (circled in orange), and 'Using this site for self study' (circled in orange). Below these are sections for 'Video Synopses', 'Video Pathway: Amplify Science K-5', 'Video Pathway: Amplify Science 6-8', 'Program Overview', 'Navigation and Materials', 'Planning', 'Student Assessments and Work', 'Unit Orientation Videos', and 'Support'. On the right, a 'Video Pathway: Amplify Science 6-8' section provides a description of the pathway and lists 'Getting Started' and 'Main Topics' resources. The bottom of the page shows a 'FUTURA FOOD ENGINEERING' logo and a URL.

AmplifyScience

Welcome

Remote learning: Amplify Science@Home

Hands-on investigations support

Unit extensions

Using this site for self study

Video Synopses

Video Pathway: Amplify Science K-5

Video Pathway: Amplify Science 6-8

Program Overview

Navigation and Materials

Planning

Student Assessments and Work

Unit Orientation Videos

Support

Video Pathway: Amplify Science 6-8

You'll start with the big picture ("Getting Started"), then move on to examining increasingly detailed aspects of the program ("Main Topics"). Finally, you'll take a closer look at content from your specific grade level ("Unit orientation videos").

Getting Started

- 6-8 Program Overview
- 6-8 Navigation and logging in

Main Topics

- 6-8 Unit Level
- 6-8 Chapter Level
- 6-8 Lesson Level

Unit Orientation Videos

- Grade 6 Core: Metabolism
- Grade 7 Core: Plate Motion
- Grade 8 Core: Force and Motion

11 Lessons

Microbiome

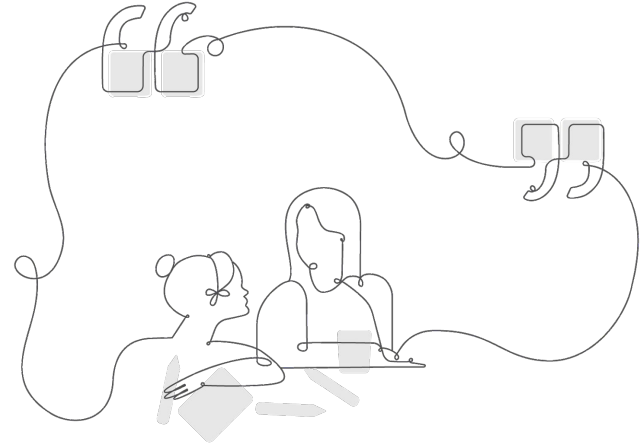
FUTURA
FOOD ENGINEERING

© 2020 Amplify Education, Inc.
<https://www.amplify.com/floridastandards>

Upcoming LAUSD Office Hours

Monthly through January

- Thursday, 12/10 (3-4pm)
- Thursday, 1/14 (3-4pm)



<http://bit.ly/LAUSDMSOfficeHours>

Additional Amplify resources



Caregivers site

Provide your students' families information about Amplify Science and what students are learning

amplify.com/amplify-science-family-resource-intro/

Additional Amplify resources



Program Guide

Glean additional insight into the program's structure, intent, philosophies, supports, and flexibility.

<http://amplify.com/science/california/review>

Amplify Help

Find lots of advice and answers from the Amplify team.

my.amplify.com/help

Additional Amplify Support

Customer Care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-7PM EST.



scihelp@amplify.com



800-823-1969



Amplify Chat

When contacting the customer care team:

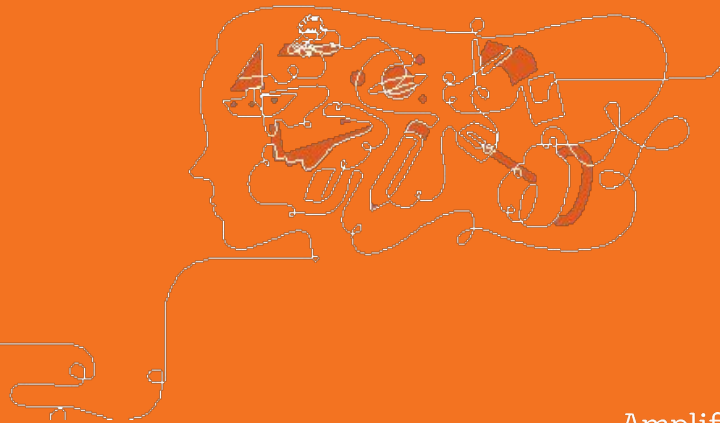
- Identify yourself as an Amplify Science user.
- Note the unit you are teaching.
- Note the type of device you are using (Chromebook, iPad, Windows, laptop).
- Note the web browser you are using (Chrome or Safari).
- Include a screenshot of the problem, if possible.
- Copy your district or site IT contact on emails.

Please provide us feedback!

URL: <https://www.surveymonkey.com/r/JK2NQWV>

Presenter names (choose 1): xx

Date: xx



Creating Assignments in Schoology

- Click Add Materials.
- Select Add Assignment.
- Fill out the Create Assignment form.
- Options. Use Options to turn on/off the following features: Use Individually Assign to only display the assignment to a specific member of the course or a grading group.
- Click Create to complete

Elementary Student Apps Shared Logins

English

- Username: **ampsci123**
- Password: **ampsci123**

Spanish

- Username: **ampsci123sp**
- Password: **ampsci123sp**



Elementary Student Apps