

Sample Jamboard # 1

Remote Learning Tips and Tricks

Give extra wait time to provide students an opportunity to process the question, and prepare their answer in a digital setting.

Allow students to preview/explore digital tools/articles ahead of synchronous lessons.

Give time for students jot down their ideas before engaging in a virtual discussion.

Amplify Science

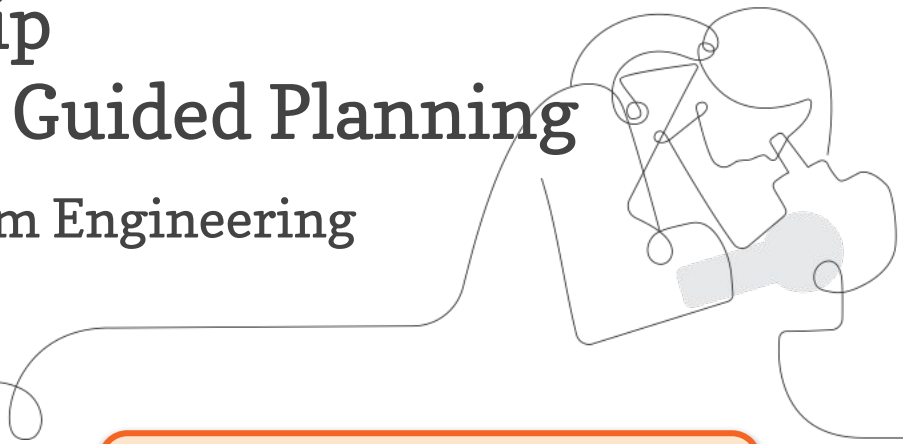
Engineering Internship Unit Internalization & Guided Planning

Elementary Grade 6, Metabolism Engineering
Internship

LAUSD

November 20, 2021

Presented by Jolene Hori

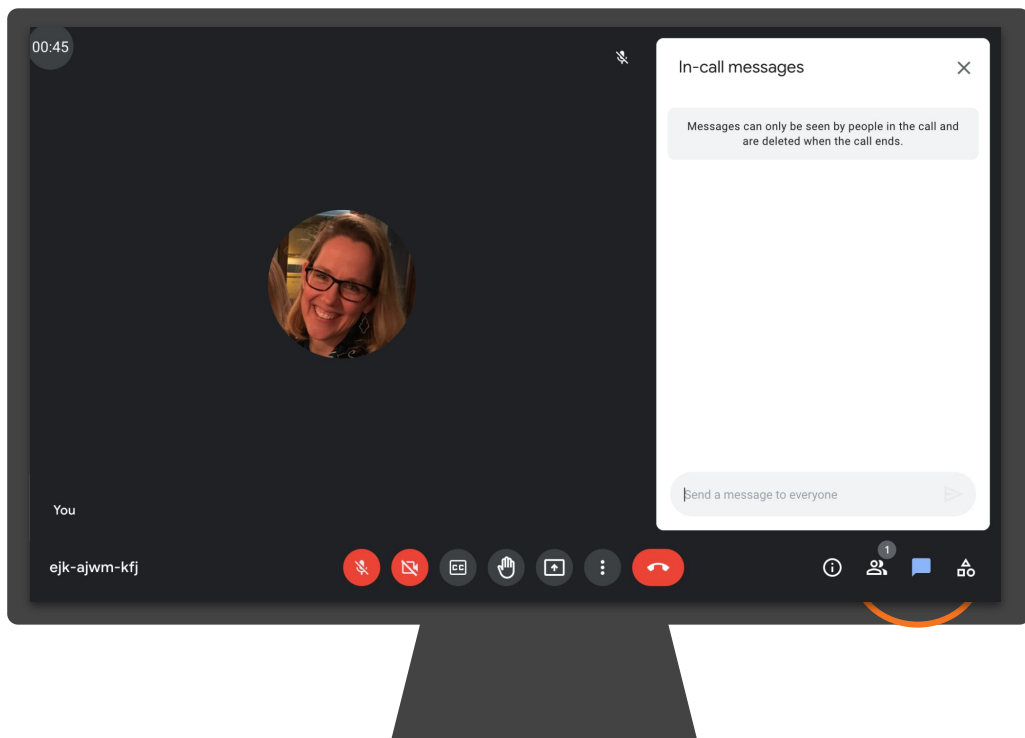


In a new tab, please log in to
your Amplify Science account
through Schoology.

Ice Breaker!

Who do we have in the room today?

- **Question 1:** Which aspects of implementing the Standard Amplify Science Engineering Internship curriculum are you most excited or hopeful about?
- **Question 2:** What are you most apprehensive about?



Amplify's Purpose Statement

Dear teachers,

You do a job that is nearly impossible and **utterly essential**.

We are in your corner – extending your reach, saving you time, and enhancing your understanding of each student.

Thank you for working with us to craft rigorous and riveting learning experiences for your classroom.

We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.

Sincerely,
Amplify

Norms: Establishing a culture of learners

- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.


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 window title bar of the first window.

Window #1 displays a Google Meet link: `meet.google.com/hcs-dxpk-wrm?aut...`. Below the meeting interface, the Amplify Curriculum website is open, showing the "Plate Motion" section. The page includes a "Progress Build Level 1" section with text about Earth's outer layer, a "Progress Build Level 2" section about plate boundaries, and a sidebar with links to "Flexension Compilation", "Investigation Notebook", "NGSS Information for Parents and Guardians", "Print Materials (11" x 17")", and "Print Materials (8.5" x 11")".

Window #2 displays the Amplify Curriculum website, specifically the "Lesson 1.2: Using Fossils to Understand Earth" page. The page features a large illustration of a dinosaur in a prehistoric landscape. The sidebar on the right includes a "Lesson Brief (4 Activities)" section with a "1 WARM-UP Warm-Up" and a "2 TEACHER-LED DISCUSSION Introducing Mesos" section. Below this, there are sections for "Lesson Brief", "Overview", "Materials & Preparation", "Differentiation", and "Digital Resources".


Last year's Amplify apps.



[Home](#)
[About Los Angeles Unified](#)
[Find a School](#)
[Offices](#)
[Classic View](#)

LOS ANGELES UNIFIED SCHOOL DISTRICT


[mCLASS Student](#)



Content Area: ELA
Grade Level: ES
Content Type: Assessment
Integration Type: App (Left Navigation)
Purchase Type: District
[Getting Started Guide](#)
Other Info: App to be installed for all course members.

Vendor Support Desk:
P: 800.823.1969
E: help@amplify.com
S: amplify.com/support/
Textbook Title(s):
NA


[mCLASS Assessment](#)



Content Area: ELA
Grade Level: ES
Content Type: Assessment
Integration Type: App (Left Navigation)
Purchase Type: District
[Getting Started Guide](#)
Other Info: App to be installed for Course Admins only


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[mCLASS Portal](#)




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NA



LOS ANGELES UNIFIED

COURSES



Course Options

Materials

Updates

Gradebook

Grade Setup

Mastery

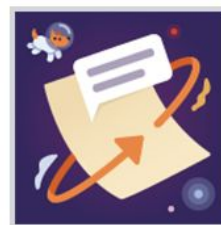
Amplify Reading: Teac...

Amplify Science: Eleme...


Amplify Science: Middl...

mCLASS Portal

mCLASS Student



This year's app(s).



LOS ANGELES UNIFIED SCHOOL DISTRICT


About Los Angeles Unified Find a School Offices Classic View

LMS App Center

The LMS App Center provides a catalog of District-approved digital content and learning tools (including digital components of adopted textbooks) that are available for classroom teachers and students to access within the learning management system, Schoology.

For information on District-approval policies and procedures, please visit: udidpl.lausd.net.

- To search the full list of digital learning tools, click "Submit".
- To search by Publisher Name or Textbook Title, type in a word associated to your adopted publisher, then click "Submit".
- To narrow your search with filters such as Content Area, Grade Level, or Content Type, select from the dropdown menu, then click "Submit".



LOS ANGELES UNIFIED SCHOOL DISTRICT

About Los Angeles Unified Find a School Offices Classic View Families Employees

COURSES GROUPS RESOURCES TOOLS

← Back to Schoology Home Page

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To learn more about using the LMS App Center, please refer to the following [video overview](#).

Publisher Name Starts With

Content Area All

Grade Level All

Content Type All

Textbook Title Starts With

Submit

All Amplify Products

Grade Sync for MS Science

← Search Again

Amplify

Content Area: ELA
Grade Level: ES
Content Type: Supplemental
Integration Type: App (Left Navigation)
Purchase Type: District and School
[Getting Started Guide](#)
Other Info: School licenses required
mCLASS
CKLA
Amplify Reading
Amplify Science
Fractions

Vendor Support Desk:
P: 800.823.1969
E: help@amplify.com
S: amplify.com/support/
Textbook Title(s):
NA

Amplify Classwork

Content Area: ELA
Grade Level: ES
Content Type: Supplemental
Integration Type: App (Left Navigation)
Purchase Type: District and School
[Getting Started Guide](#)
Other Info: School licenses required. This app is for teacher use only (install for Course Admins only)

Vendor Support Desk:
P: 800.823.1969
E: help@amplify.com
S: amplify.com/support/
Textbook Title(s):
NA

 mCLASS Educators: To view or make changes to your account go to mclass.amplify.com.

Hi, Terin

Classes

Programs & Licenses

Account Settings

Help Center 



[CKLA Hub](#)



[CKLA Resource Site](#)



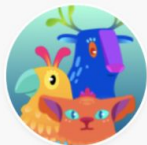
[mCLASS Assessment](#)



[mCLASS Reporting](#)



[Reading 6-8](#)



[Reading K-5](#)



[Science](#)



[Vocabulary](#)



Amplify. on Schoology

2021-2022



Join Amplify Science Schoology Group

To join Amplify Science Schoology

ES Group: W4PK-W466-63F5B

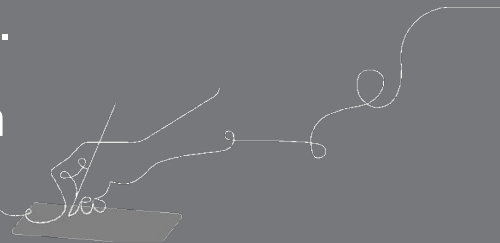
To join Amplify MS Group: SPG7G-K7BT9

Part 1

Overarching goals

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

- ❑ Navigate the Amplify Science Engineering Internship curriculum.
- ❑ Understand the Amplify Science Engineering Internship approach.
- ❑ Apply the program essentials to prepare to teach.
- ❑ Plan for collecting evidence of student learning in order to make instructional decisions to support diverse learner needs.





Plan for the day - Part 1

- Framing the day
 - Amplify Science Refresher
 - Introduction to Engineering Internships and Futura workspace
- Navigating the Program Essentials
- Unit Internalization
 - Unit Planning
- Closing





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Amplify Science Refresher

6th Grade Elementary course curriculum 2021-2022

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

Launch units

- First unit
- 11 lessons

Core units

- Elementary 6th Grade will be teaching 4 Core Units

Engineering Internships

- Elementary 6th Grade will be teaching only one: Metabolism

**These are the possible prioritized units for 6th grade elementary*

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

Next Generation Science Standards

Phenomenon-based learning and teaching

A scientific phenomenon is an **observable event** that occurs in the universe that we can use science ideas to explain or predict.

Comparing topics and phenomena

Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.

Next Generation Science Standards

How might learning be different?

Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.
Electric circuits	A flashlight won't turn on, even though it used to work.
Natural selection	A population of newts has become more poisonous over time.

Comparing topics and phenomena

A shift in science instruction

from learning about

(like a student)



to figuring out

(like a scientist)

Amplify Science Approach

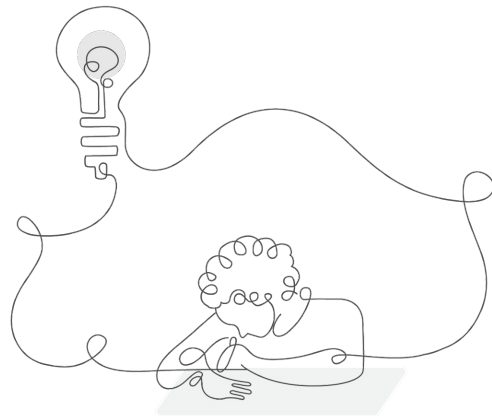


Previewing the unit

Introducing the phenomenon

Amplify Science units are designed around complex phenomena that drives student learning through the unit.

Pay attention to the phenomenon, or observable event, students will figure out in your unit.





Your **project director** is Amina Reid.

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



FOOD
ENGINEERING
LAB





Introduction to Engineering Internships and Futura Workspace

Metabolism Engineering Internship

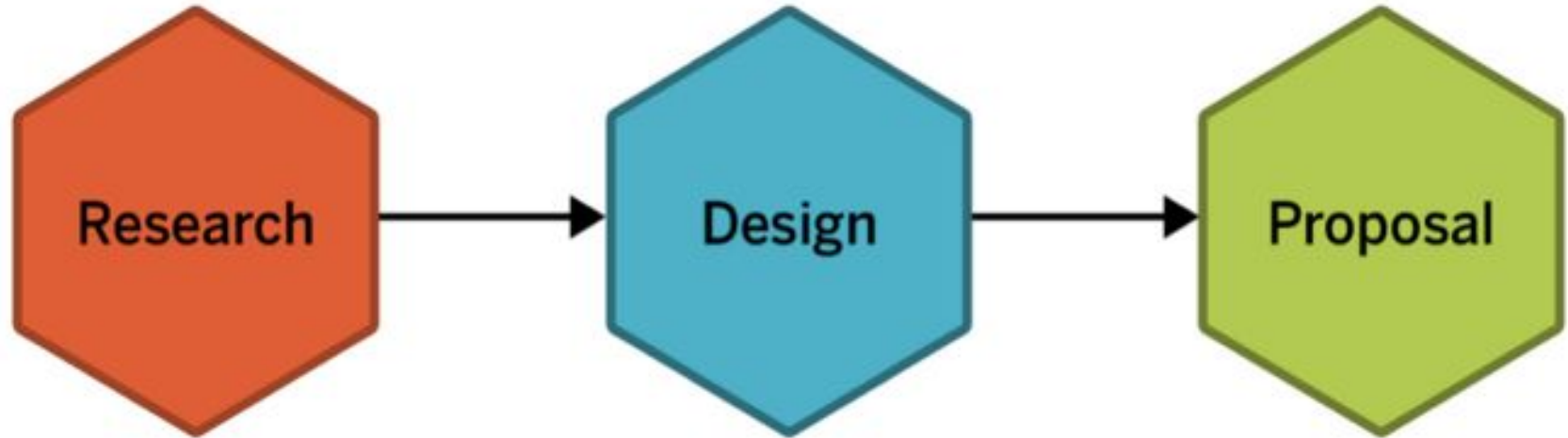


- Role of Food Engineers
- Solve real world **DESIGN** problem

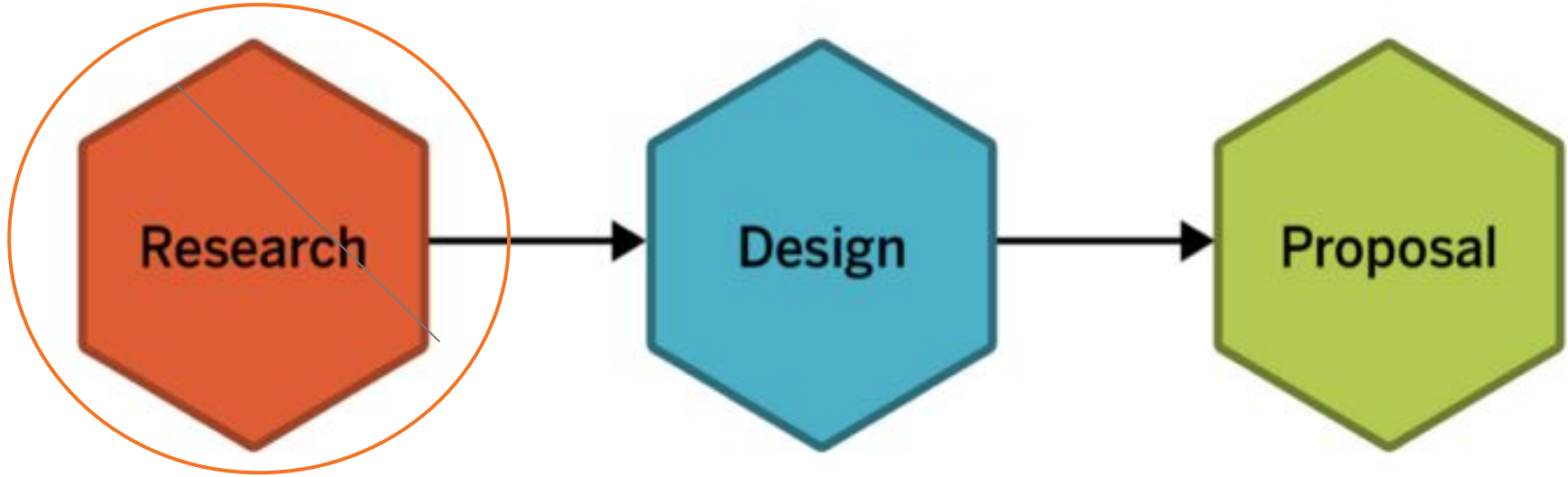
Engineering Internships

- 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

The 3 Engineering Internships phases

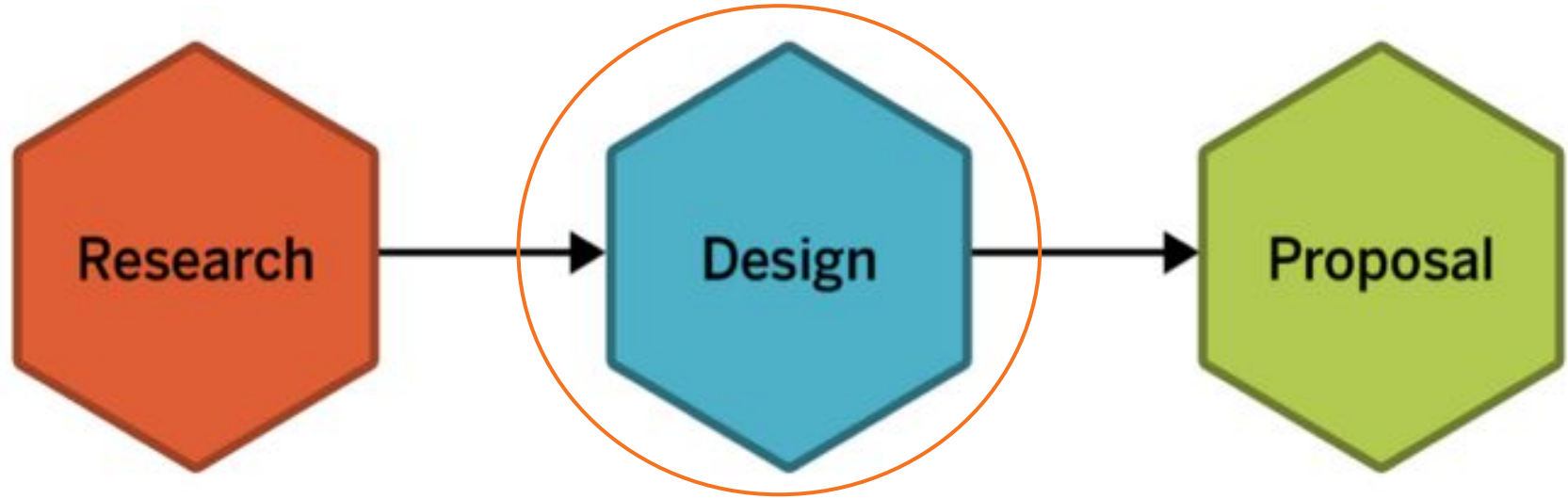


The 3 Engineering Internships phases



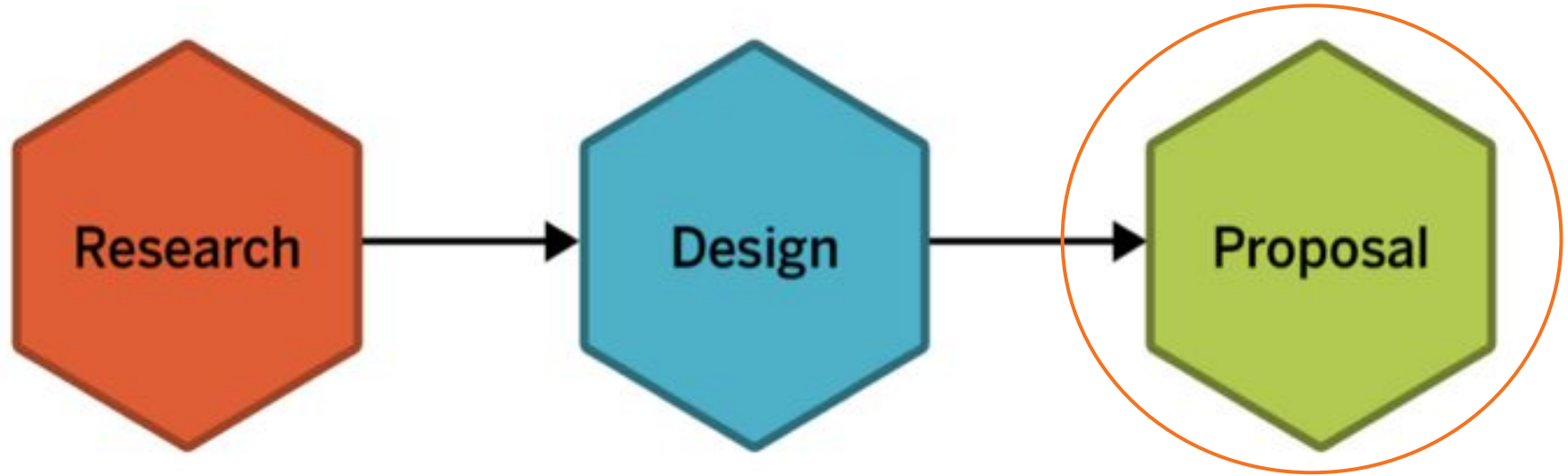
*In the RESEARCH phase, interns **define the design problem** and **gather evidence** from articles, hands-on experiences, and a digital design tool.*

The 3 Engineering Internships phases



*In the DESIGN phase, interns use understanding from their research to **iteratively design and test possible solutions**. The digital design tool allows them to gather and analyze data about their designs.*

The 3 Engineering Internships phases



*In the PROPOSAL phase, interns select their optimal design, and **write an engineering argument** supporting their design. In the final lesson, they **define criteria and constraints** for a new, related design problem.*

Engineering Internships use an interface called Futura Workspace.

The screenshot shows the Amplify Science Futura Workspace interface. The top navigation bar includes the Amplify Science logo, a user profile for 'californiasci1 Teacher', and a breadcrumb trail: 'Metabolism Engineering Internship > Chapter 1 > Day 1'. A blue banner at the top right states: 'Classroom Slides are now available for this lesson! Find them in the Digital Resources below.' The main content area has a red background with the text 'Day 1: Introducing the Engineering Internship' and an illustration of a person in a hard hat. A sidebar on the left lists various simulations, with 'Futura Workspace' circled in red. The bottom navigation bar shows three tabs: '1 WARM-UP Connecting to Futura Workspace', '2 READING Reading About Metabolism', and '3 HOMEWORK After-Hours Work'. The '1' tab is active, displaying an 'Overview' section with text about the Engineering Internship project and a 'Digital Resources' section with links to classroom slides, videos, and guidelines.

Amplify Science CALIF EDITED

fyScience CALIFORNIA EDITION > Metabolism Engineering Internship > Chapter 1 > Day 1

Hello californiasci1 Teacher
californiasci1@pd.tryamplify.net

Log Out

Go To My Account ⚙️

Classroom Language Settings

Ecosystem Restoration Sim

Energy Conversions Sim

Evolutionary History Sim

Force and Motion Sim

Futura Workspace

Harnessing Human Energy Sim

Light Waves Sim

Magnetic Fields Sim

Matter and Energy in Ecosystems Sim

Metabolism Sim

Modeling Matter Sim

Natural Selection Sim

Classroom Slides are now available for this lesson!
Find them in the [Digital Resources](#) below.

Day 1:
Introducing the
Engineering Internship

1 WARM-UP
Connecting to Futura
Workspace

2 READING
Reading About Metabolism

3 HOMEWORK
After-Hours Work

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

ASSIGN

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Unplugged?

Overview

Students are introduced to the Engineering Internship project and begin the Research phase in preparation for proposing solutions to an engineering problem; to design a health bar to meet the metabolic needs of rescue workers and patients during a natural disaster. Interns read the Welcome to Futura! message and watch a video that introduces the project director and the Request for Proposals (RFP). Interns explore the Futura RecipeTest Design Tool and then use Active Reading strategies to begin background research on metabolic needs in the Dossier. The purpose of these activities is to introduce interns to the food engineering problem they will work to solve, and for them to become familiar with the tools and resources they have in order to

Digital Resources

- Classroom Slides Day 1 | PowerPoint
- Classroom Slides Day 1 | Google Slides
- All Projections
- Classroom Videos Day 1 | Zip
- Video: Welcome to Futura
- Active Reading Guidelines

Futura Workspace.

This functions as a company inbox where students get messages and forms to complete.

CE > Plate Motion Engineering Internship > Chapter 1 > Day 1

WARM-UP
Connecting to Futura Workspace

TEACHER
Introducing Futura

TEACHER
Exploring TsunamiAlert

2 READING
Reading

Connecting to Futura Workspace

Interns access the Futura Workspace and read the Welcome Message to internship.(5 min)

[Open the Futura Workspace.](#)

1. Select the **Plate Motion Engineering Internship** from the login page.
2. Select the **Day 1: Welcome to Futura!** message and read about your new interns

NATIONALSCI184-7 | PLATE MOTION

MESSAGE

HANA WONG
Day 1: Welcome to Futura!

FUTURA

Hello interns,

I am excited for you to join this new geohazards engineering internship at Futura! I love working for our company because we work to solve problems that affect people around the planet.

We will be working on a project for the World Ocean Administration (WOA) to design a warning system that helps people in Sri Lanka, an island nation in the Indian Ocean, get to safety in the event of a tsunami. A *tsunami* (soo-NAH-mee) is a rare, destructive ocean wave that moves a large amount of ocean water, often resulting in extreme flooding.

There are three things to consider when planning a tsunami warning system:

1. having long warning times so people can get somewhere safe;
2. avoiding false alarms, which are warnings for tsunamis that never arrive in Sri Lanka; and
3. keeping costs low, both for setup and long term maintenance.

We'll get started by understanding tsunamis. Today, your internship coordinator will introduce you to the project resources: the TsunamiAlert Design Tool and the [Futura Geohazards Engineer's Dossier](#). Note: *Dossier* (DAW-see-ay) is a term professionals sometimes use for a set of related documents. It includes a glossary to support you if you need help with unfamiliar words.

Deliverables:

- Annotations for Chapter 2: "Tsunamis: Rare but Dangerous"
- After-Hours: Annotations for Chapter 1: "Request for Proposals"

I am looking forward to working with you,

Hana

Hana Wong, Project Director
Futura | Geohazards Engineering Division

NEW NOTE

Futura Workspace.

Students use it to access their digital design tools and articles in their “Dossier”.

CE > Plate Motion Engineering Internship > Chapter 1 > Day 1

WARM-UP
Connecting to Futura Workspace

TEACHER
Introducing Futura

TEACHER
Exploring TsunamiAlert

2 READING
Reading About Metabolism

Connecting to Futura Workspace

Interns access the Futura Workspace and read the Welcome Message to internship.(5 min)

[Open the Futura Workspace.](#)

1. Select the **Plate Motion Engineering Internship** from the login page.
2. Select the **Day 1: Welcome to Futura!** message and read about your new internship.

CALIFORNIASCI160 | METABOLISM

DAY 1

Agenda

Introducing the Engineering Internship

To Do in the Workspace Before Day 1:

Review and send these items below to interns' inboxes in the Futura Workspace in the following order (repeat this step for each class section):

1. Safety Agreement (optional)
2. Safety Guidelines (optional)
3. Day 1: Welcome! message

To Do in the Workspace After Day 1:

If you asked students to submit the Safety Agreement form, review interns' submissions using the Submissions & Feedback tab. Address any questions or issues with submitting forms in the next workday.

Workday Summary:

- Connecting to Futura Workspace
- Introducing Futura
- Exploring RecipeTest
- Reading About Metabolism
- After-Hours Work

SENT

DAILY AGENDAS

SUBMISSIONS & FEEDBACK

MANAGE GROUPS

MANAGE ROLES

- 1 Introducing the Engineering Internship
 - Safety Agreement
 - Safety Guidelines
 - Day 1: Welcome!
- 2 Researching Ingredients
- 3 Learning About Target Populations
- 4 Analyzing Ingredients
- 5 Designing FuturaBars
- 6 Choosing an Optimal Design
- 7 Composing Proposal Outlines
- 8 Writing Design Decisions
- 9 Completing the Proposal
- 10 Applying Engineering Skills

FOOD

SEND ALL DAY 1 MATERIALS ▶

Teach from the Standard Curriculum

The screenshot displays the AmplifyScience California Edition user interface. On the left sidebar, the 'Futura Workspace' icon is circled in orange. The main content area is titled 'Day 1: Introducing the Engineering Internship'. Below the title, there is a navigation bar with three sections: 'Lesson Brief (3 Activities)', 'Teacher', and 'Homework After-Hours Work'. The 'Lesson Brief' section is active, showing a 'WARM-UP Connecting to Futura Workspace' activity. The 'Teacher' section shows 'Introducing Futura' and 'Exploring RecipeTest'. The 'Homework' section shows 'Reading About Metabolism'. Below the navigation bar, there is a 'RESET LESSON' button and a 'GENERATE PRINTABLE LESSON GUIDE' button. The main content area is divided into three columns: 'Overview', 'Digital Resources', and 'Assignments'. The 'Overview' column contains a list of topics: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. The 'Digital Resources' column lists: Classroom Slides Day 1 | PowerPoint, Classroom Slides Day 1 | Google Slides, All Projections, Classroom Videos Day 1 | Zip, Video: Welcome to Futura, and Active Reading Guidelines. The 'Assignments' column is empty.

AmplifyScience CALIFORNIA EDITION > Metabolism Engineering Internship > Chapter 1 > Day 1

Hello californiasci1 Teacher
californiasci1@pd.tryamplify.net

Log Out

Go To My Account

Classroom Language Settings

Ecosystem Restoration Sim

Energy Conversions Sim

Evolutionary History Sim

Force and Motion Sim

Futura Workspace

Harnessing Human Energy Sim

Light Waves Sim

Magnetic Fields Sim

Matter and Energy in Ecosystems Sim

Metabolism Sim

Modeling Matter Sim

Natural Selection Sim

Classroom Slides are now available for this lesson!
Find them in the [Digital Resources](#) below.

Day 1: Introducing the Engineering Internship

Lesson Brief (3 Activities)

1 WARM-UP
Connecting to Futura
Workspace

TEACHER
Introducing Futura

TEACHER
Exploring RecipeTest

2 READING
Reading About Metabolism

3 HOMEWORK
After-Hours Work

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

ASSIGN

Overview

Students are introduced to the Engineering Internship project and begin the Research phase in preparation for proposing solutions to an engineering problem: to design a health bar to meet the metabolic needs of rescue workers and patients during a natural disaster. Interns read the Welcome to Futura! message and watch a video that introduces the project director and the Request for Proposals (RFP). Interns explore the Futura RecipeTest Design Tool and then use Active Reading strategies to begin background research on metabolic needs in the Dossier. The purpose of these activities is to introduce interns to the food engineering problem they will work to solve, and for them to become familiar with the tools and resources they have in order to

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- Classroom Slides Day 1 | Google Slides
- All Projections
- Classroom Videos Day 1 | Zip
- Video: Welcome to Futura
- Active Reading Guidelines

Use Futura Workspace before class to send materials to students' inboxes and send feedback on their designs and proposals

The Language of the Internship

Typical school language	Internship language
<i>class</i>	<i>work, workday</i>
<i>student</i>	<i>intern</i>
<i>assignment</i>	<i>deliverable</i>
<i>homework</i>	<i>after-hours work or deliverable</i>
<i>teacher</i>	<i>internship coordinator</i>
<i>articles</i>	<i>Dossier</i>
<i>peer or neighbor</i>	<i>colleague</i>



Questions?




Plan for the day - Part 1

- Framing the day
 - Amplify Science Refresher
 - Introduction to Engineering Internships and Futura workspace
- Navigating the Program Essentials
- Unit Internalization
 - Unit Planning
- Closing



Let's Go Live!




AmplifyScience CALIF EDIT

fyScience CALIF EDITION


Metabolism Engineering Internship > Chapter 1 > Day 1


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Ecosystem Restoration Sim



Energy Conversions Sim



Evolutionary History Sim



Force and Motion Sim



Futura Workspace



Harnessing Human Energy Sim



Light Waves Sim


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Metabolism Sim


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Natural Selection Sim

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Day 1:
Introducing the
Engineering Internship



1 WARM-UP
Connecting to Futura
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T TEACHER
Introducing Futura

T TEACHER
Exploring RecipeTest



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Reading About Metabolism

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After-Hours Work

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
Digital Resources


 Classroom Slides Day 1 | PowerPoint

 Classroom Slides Day 1 | Google Slides


 All Projections

 Classroom Videos Day 1 | Zip

 Video: Welcome to Futura

 Active Reading Guidelines

Explore the Program Essentials!




AmplifyScience CALIF EDITORIAL
fyScience CALIFORNIA EDITION


Metabolism Engineering Internship > Chapter 1 > Day 1


Hello californiasci1 Teacher
californiasci1@pd.tryamplify.net


Log Out


Go To My Account 


Classroom Language Settings



Ecosystem Restoration Sim



Energy Conversions Sim



Evolutionary History Sim



Force and Motion Sim



Futura Workspace



Harnessing Human Energy Sim



Light Waves Sim


Magnetic Fields Sim



Matter and Energy in Ecosystems Sim


Metabolism Sim


Modeling Matter Sim


Natural Selection Sim

Classroom Slides are now available for this lesson!
Find them in the [Digital Resources](#) below.



Day 1: Introducing the Engineering Internship

1 WARM-UP
Connecting to Futura
Workspace

T TEACHER
Introducing Futura

T TEACHER
Exploring RecipeTest


2 READING
Reading About Metabolism

3 HOMEWORK
After-Hours Work

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

ASSIGN









Overview
Materials & Preparation
Differentiation
Standards
Vocabulary
Unplugged?

Overview

Students are introduced to the Engineering Internship project and begin the Research phase in preparation for proposing solutions to an engineering problem; to design a health bar to meet the metabolic needs of rescue workers and patients during a natural disaster. Interns read the Welcome to Futura! message and watch a video that introduces the project director and the Request for Proposals (RFP). Interns explore the Futura RecipeTest Design Tool and then use Active Reading strategies to begin background research on metabolic needs in the Dossier. The purpose of these activities is to introduce interns to the food engineering problem they will work to solve, and for them to become familiar with the tools and resources they have in order to

Digital Resources

-  Classroom Slides Day 1 | PowerPoint
-  Classroom Slides Day 1 | Google Slides
-  All Projections
-  Classroom Videos Day 1 | Zip
-  Video: Welcome to Futura
-  Active Reading Guidelines



Plan for the day - Part 1

- Framing the day
 - Amplify Science Refresher
 - Introduction to Engineering Internships and Futura workspace
- Navigating the Program Essentials
- **Unit Internalization**
 - **Unit Planning**
- Closing


Navigate to the Unit Guide

AmplifyScience > Metabolism Engineering Internship

10 Lessons

Metabolism Engineering Internship

☒ JUMP DOWN TO UNIT GUIDE



Health Bars for Disaster Relief

10 Lessons

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

Navigate to the Unit Guide Documents

The screenshot shows a web interface for unit guide documents. It is divided into two main columns. The left column is titled 'Planning for the Unit' and contains a list of items, each with a dropdown arrow: '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', and 'Articles in This Unit'. The right column is titled 'Printable Resources' (circled in orange) and contains a list of PDF documents: 'Article Compilation', 'Copymaster Compilation', 'Engineering Notebook', 'Flextension Compilation', and 'NGSS Information for Parents and Guardians'. Below this list is a section titled 'Offline Preparation' with the text 'Teaching without reliable classroom internet? Prepare unit and lesson materials for offline access.' and a button labeled 'Offline Guide'. Five orange arrows point to the left column items, and one orange arrow points to the 'Printable Resources' section.

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

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.

Navigation Temperature Check

Rate yourself on your comfort level accessing Amplify Science materials and navigating a digital curriculum.

1 = Extremely Uncomfortable

2 = Uncomfortable

3 = Mild

4 = Comfortable

5 = Extremely Comfortable



Questions?



Plan for the day - Part 1

- Framing the day
 - Amplify Science Refresher
 - Introduction to Engineering Internships and Futura workspace
- Navigating the Program Essentials
- Unit Internalization
 - Unit Planning
- **Closing**

Closing reflection

Based on our work in Part 1,
share:

Head: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

Additional resources

Welcome, caregivers!

We hope you enjoy learning more about Amplify Science and what students are learning in science this year.

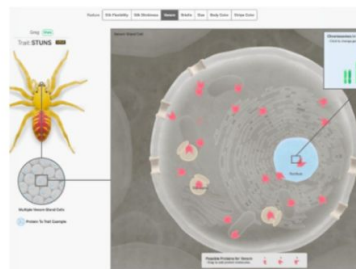
[Para acceder a este sitio en español haga clic aquí.](#)

Amplify welcomes you and your learner to the Science program for the new school year. We are very excited to provide you with exceptional learning opportunities through Science. Below are resources and helpful guides for enabling your student to have the most productive experience with our platform throughout the year.

 [Contact Us](#)



Grades 6-8



LAUSD Microsite-

<https://amplify.com/laUSD-science>

Welcome to Amplify Science!

This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- Access the [Amplify Science Program Hub](#) (To help orient you to the new design, watch this [video](#) and view this [reference guide](#).)
- Find out more about [Amplify Science@Home](#)
- Share the [Caregiver Hub](#) (Eng/Span) with your families
- For LAUSD ES Teachers- [Amplify Science & Benchmark Advance Crosswalk](#)
- Instructional guidance for a [Responsive Relaunch of Amplify Science in 21-22](#)

Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!



Additional resources and ongoing support

Customer Care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-10PM EST and weekends 10AM-6PM EST.



help@amplify.com



800-823-1969



Amplify Chat



Please provide feedback!

Presenter name:

Workshop title:

Part 1: Relaunching the Standard Curriculum

Part 2: Guided Planning (Planning for a Lesson)

Modality:

Remote



End of Part 1

Break

10:00 - 10:30

Sample Jamboard # 1

Remote Learning Tips and Tricks

Give extra wait time to provide students an opportunity to process the question, and prepare their answer in a digital setting.

Allow students to preview/explore digital tools/articles ahead of synchronous lessons.

Give time for students jot down their ideas before engaging in a virtual discussion.

Amplify Science

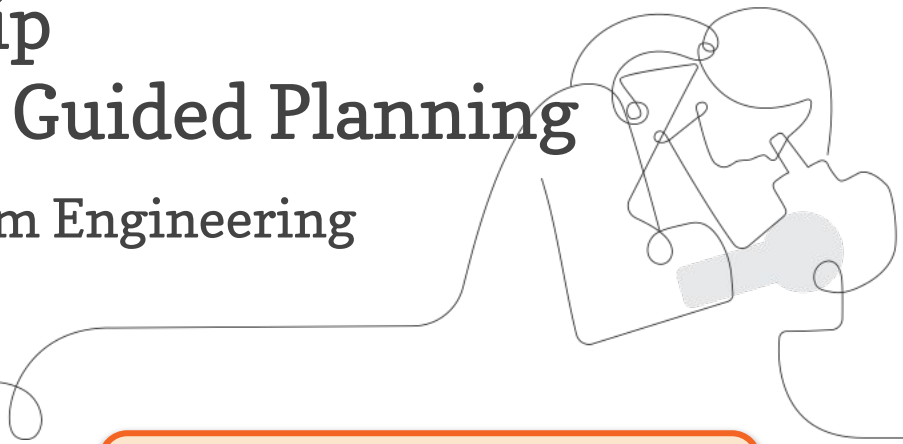
Engineering Internship Unit Internalization & Guided Planning

Elementary Grade 6, Metabolism Engineering
Internship

LAUSD

November 20, 2021

Presented by Jolene Hori

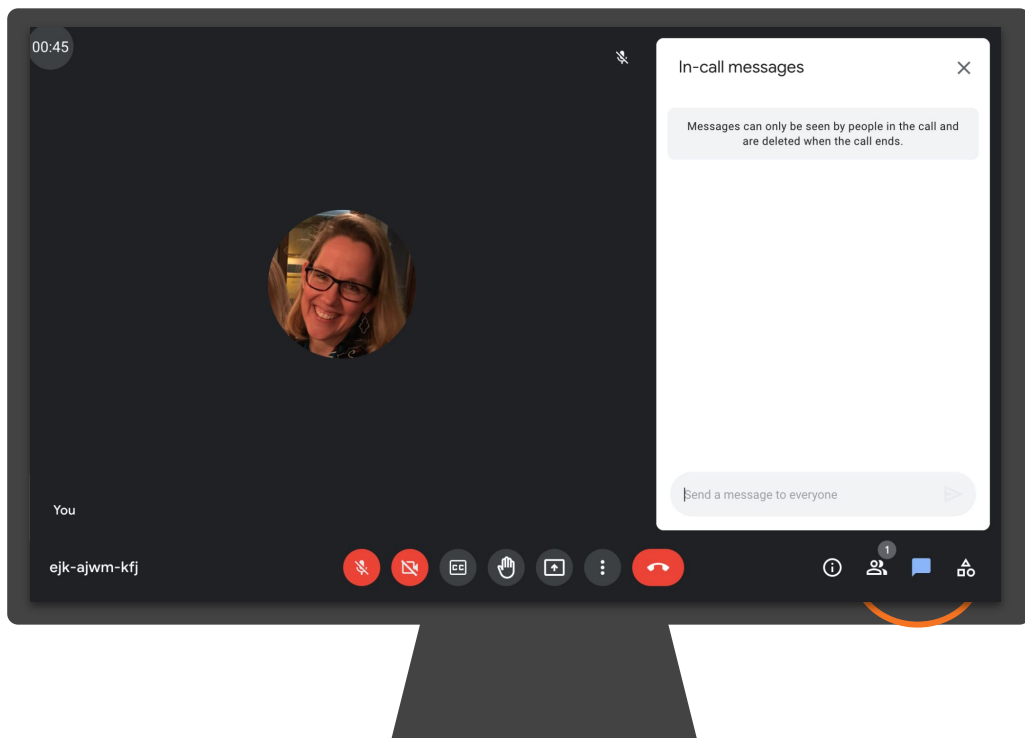


In a new tab, please log in to
your Amplify Science account
through Schoology.

Ice Breaker!

Who do we have in the room today?

- **Question:** Now that we have gone through Part 1, which aspects of Amplify Science Engineering Internship do you feel more comfortable with or have a greater understanding of?



Amplify's Purpose Statement

Dear teachers,

You do a job that is nearly impossible and **utterly essential**.

We are in your corner – extending your reach, saving you time, and enhancing your understanding of each student.

Thank you for working with us to craft rigorous and riveting learning experiences for your classroom.

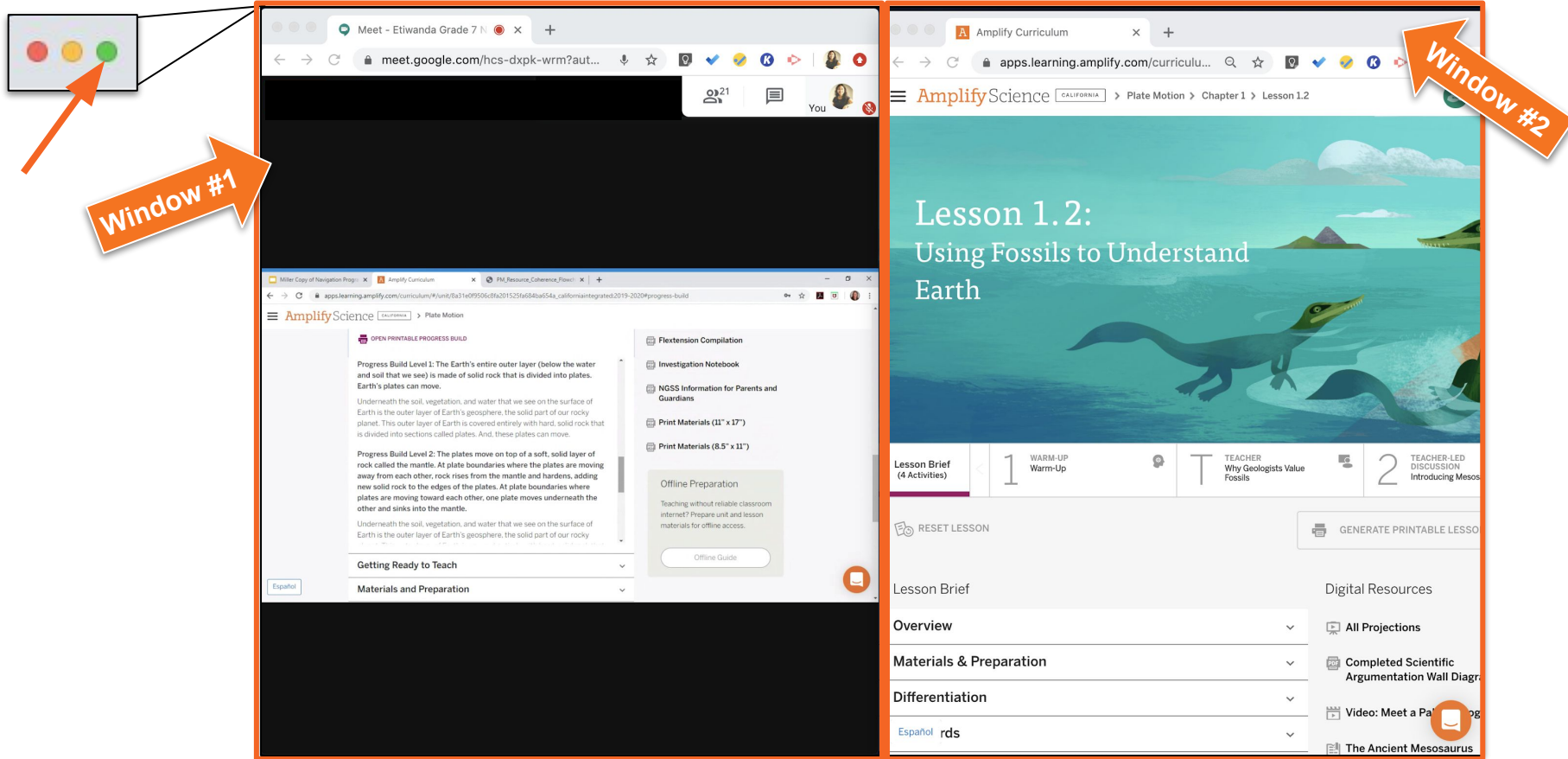
We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.

Sincerely,
Amplify

Norms: Establishing a culture of learners

- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.

Use two windows for today's webinar





Plan for the day- Part 2

- Teaching and Learning in an Amplify Science Engineering Internship Unit
- Planning a Lesson
- Closing





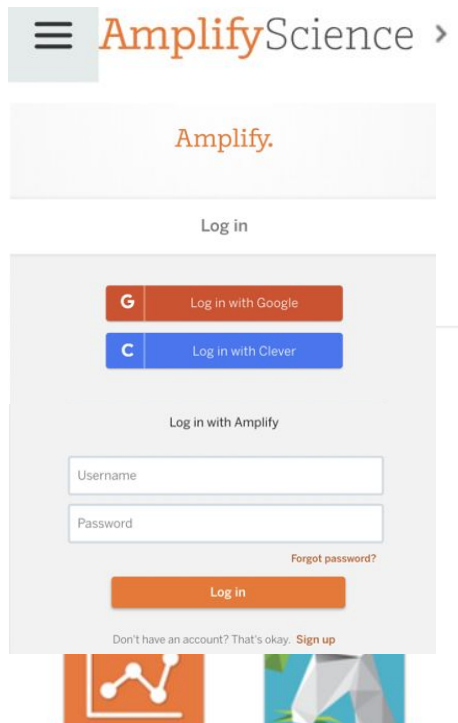
Plan for the day- Part 2

- Teaching and Learning in an Amplify Science Engineering Internship Unit
- Planning a Lesson
- Closing



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@pd.tryamplify.net**
Password: **AmplifyNumber1**
5. Now explore Amplify Science as you wait for others!

Metabolism Engineering Internship

Research Phase

- Days 1
 - Start Class
- Futura Workspace
 - Groupings
 - Submissions and Feedback



Metabolism Engineering Internship

Design Phase

- Day (5-6)
 - Start Class
- Futura Workspace
 - Groupings
 - Submissions and Feedback



Metabolism Engineering Internship

Proposal Phase


- Day (7-10)
 - Start Class
- Futura Workspace
 - Groupings
 - Submissions and Feedback



Research Phase: Day 1

1. Download slides
2. Look at
Differentiation/Standards
3. Open Futura Workspace
 - a. Send emails
4. Start Class





Day 1: Introducing the Engineering Internship

Metabolism Engineering Internship

Activity 1

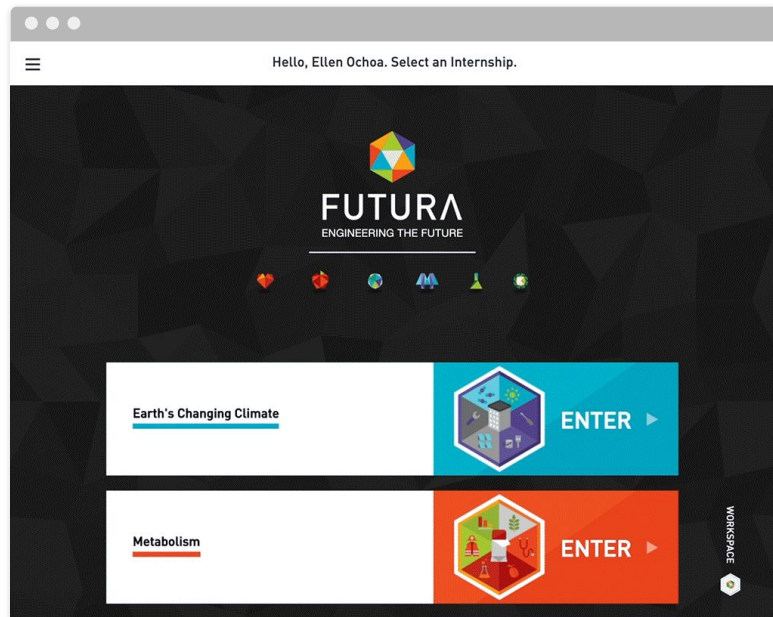
Connecting to Futura Workspace





Starting today, you will be working as **engineering interns** for a company called Futura.

You will start each day of your internship by reading a **new message**.



You'll open **Futura Workspace** and select *Metabolism* Engineering Internship.

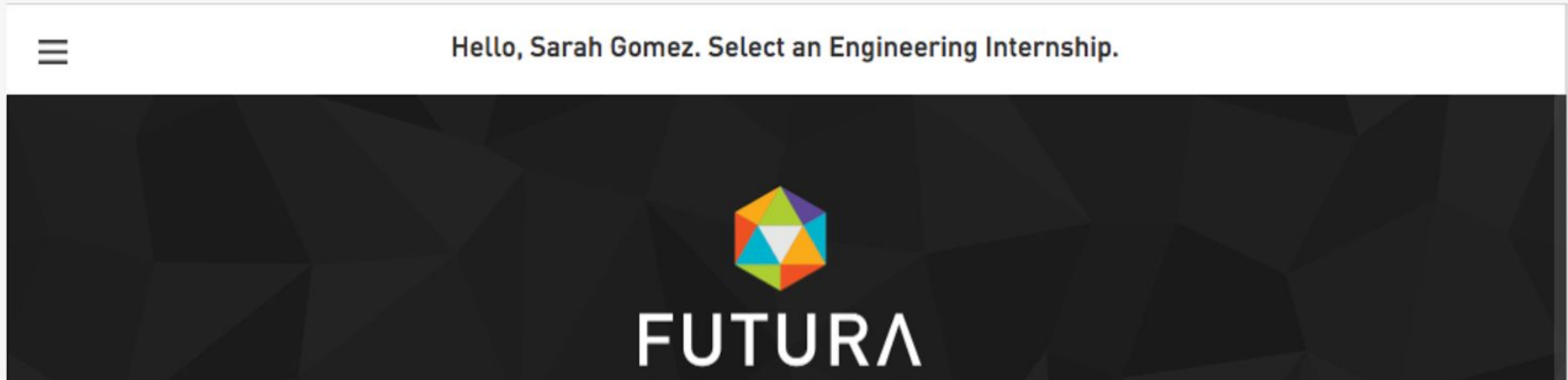
Then, you'll open the **Day 1 message** to read about your **new internship**.



Connecting to Futura Workspace

Open [Futura Workspace](#).

1. Select the *Metabolism Engineering Internship* from the login page.
2. Select the Day 1: Welcome! message to open it. Then, read about your new internship.



Activity T

Introducing Futura

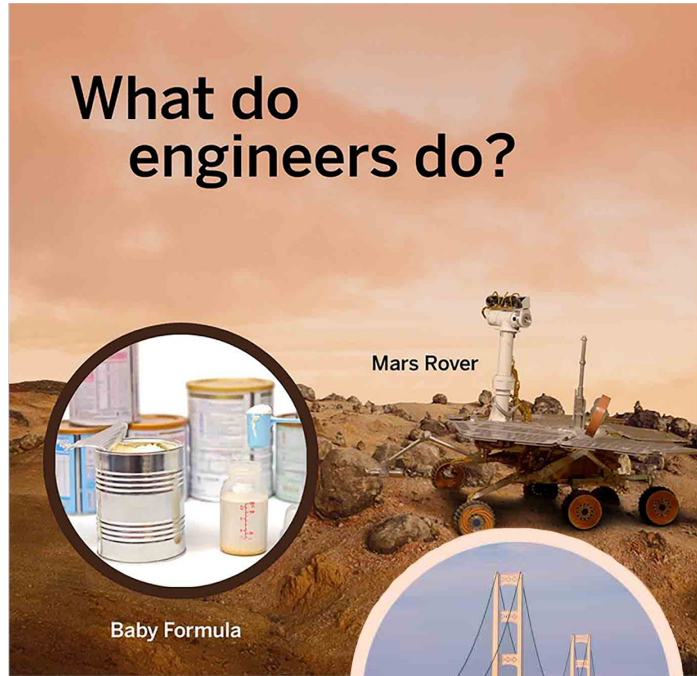


Welcome, engineering interns! I will be your internship coordinator, and I'll guide you through this project with Amina Reid, your project director.



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?

What do engineers do?



All engineers design solutions to problems. **Food engineers** solve problems related to food materials, safety, storage, and distribution. You will be working as food engineering interns.



Let's talk about what you already know about how foods are made.



What are some different ways that foods can be made?



What are some of your **favorite foods**?
Let's discuss whether any of these foods may
have been designed by a **food engineer**.



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?





Let's discuss what you learned in the video about your internship.



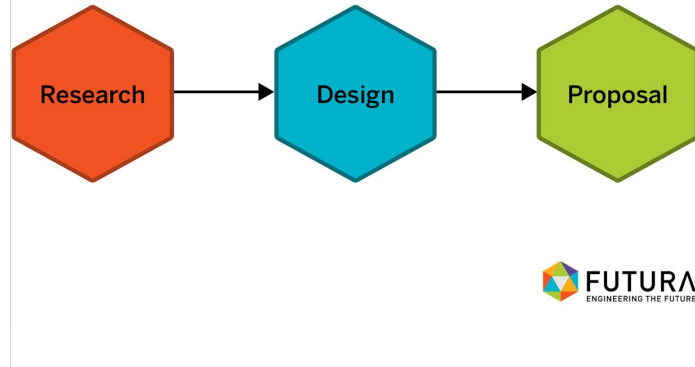
What is the **project** you will work on?

Do you have any **questions?**

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.

Futura Internship Phases



Your internship will have **three phases**: Research, Design, and Proposal. I'll give you a quick overview of what will happen in each phase.

criteria: standards by which something may be judged

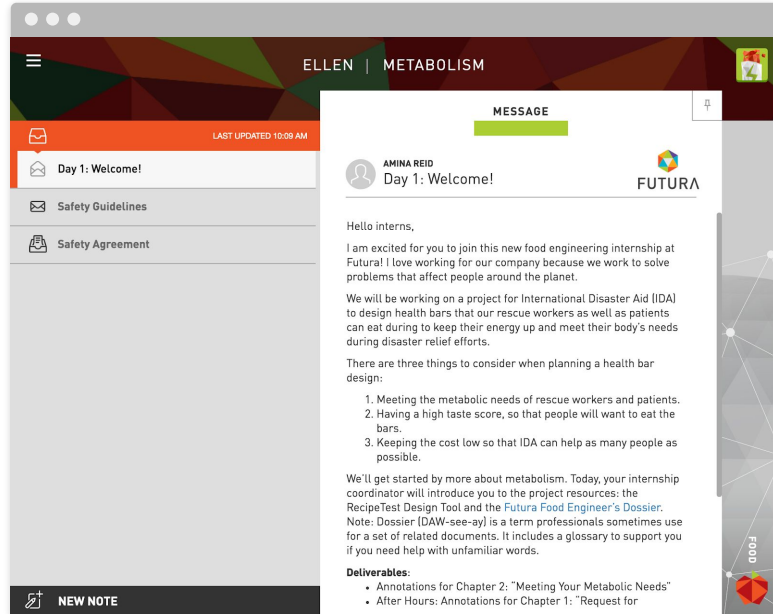
At Futura, we have many *criteria* for every product.



Let's discuss the **three criteria** for your health bars and why each one is important:

1. meet metabolic needs
2. high taste score
3. keep costs low

metabolic needs: what the body needs in order to undergo cellular processes for growth and repair and energy release



Throughout your internship, you'll be using **Futura Workspace** to read messages, record notes, and submit work. Let's see how it works.

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 creating FuturaBar recipes. The interface is organized into a grid of ingredient selection cards and a central recipe configuration area.

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

Recipe Configuration Area:

- FuturaBar:** A visual representation of the bar with a grid of dots.
- 0 Grams:** The current total weight of the recipe.
- RESET INGREDIENTS:** A button to clear the current selection.
- Protein % Carbohydrates % Glycemic Index:** Summary statistics for the current recipe.
- 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.

Activity T

Exploring RecipeTest



The interface displays a grid of nine ingredients, each with a 0 Grams slider and associated nutritional data:

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 with a 0 Grams slider and a 'RESET INGREDIENTS' button. Below it, a message states: 'Your FuturaBar recipe needs 100 grams of ingredients before you can send it to the lab for testing.' At the bottom, there are buttons for 'RESCUE WORKERS' and 'PATIENTS', a selection for oxygen level (Normal or Low), 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.

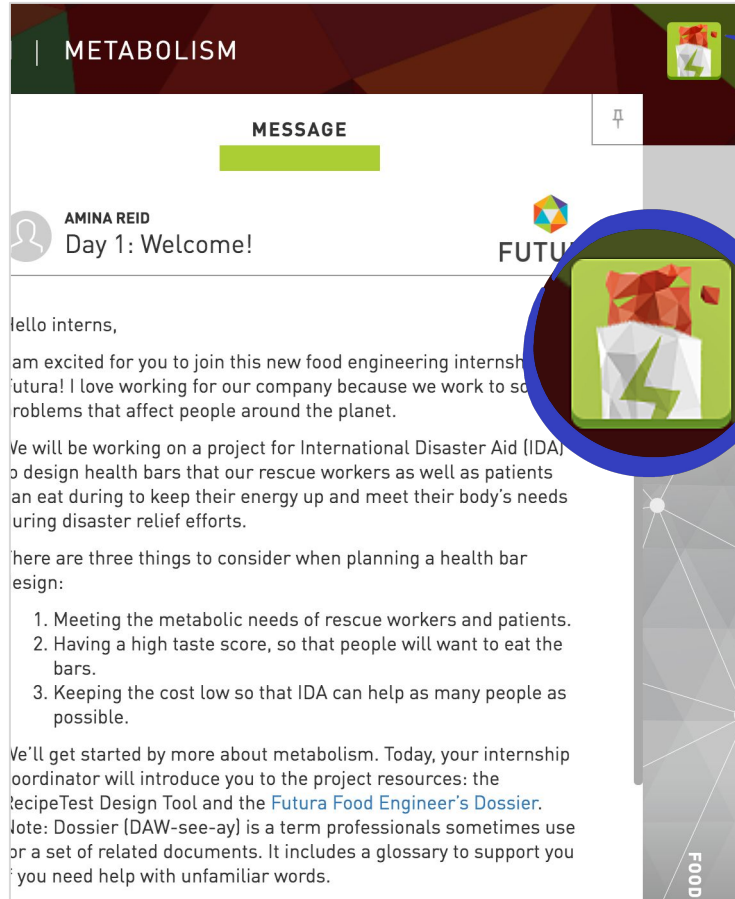
The interface displays a grid of ingredient cards, each with a minus, zero, and plus button for adjusting the quantity in grams. The ingredients and their nutritional data are as follows:

Ingredient	Protein %	Carbohydrates %	Glycemic Index	Taste Score	Cost/Kilogram
RAISINS	3	97	64	8	\$ 7.41
PUMPKIN SEEDS	68	32	48	7	\$ 13.40
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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 total weight 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.

Engineers use models like RecipeTest to **predict** what will happen. They can **change variables** and see what outcomes happen as a result.

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.



METABOLISM

MESSAGE

AMINA REID
Day 1: Welcome!

Hello interns,

I am excited for you to join this new food engineering internship at Futura! I love working for our company because we work to solve problems that affect people around the planet.

We will be working on a project for International Disaster Aid (IDA) to design health bars that our rescue workers as well as patients can eat during to keep their energy up and meet their body's needs during disaster relief efforts.

Here are three things to consider when planning a health bar design:

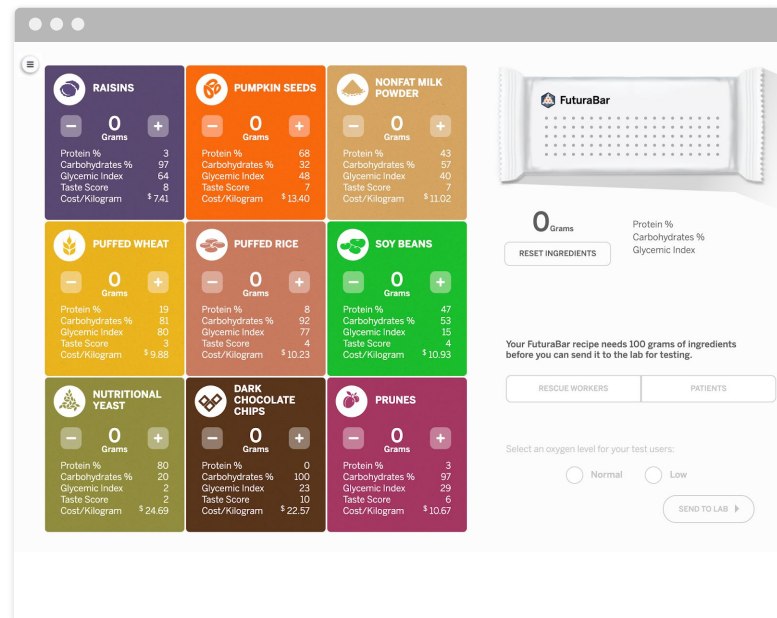
1. Meeting the metabolic needs of rescue workers and patients.
2. Having a high taste score, so that people will want to eat the bars.
3. Keeping the cost low so that IDA can help as many people as possible.

We'll get started by more about metabolism. Today, your internship coordinator will introduce you to the project resources: the RecipeTest Design Tool and the [Futura Food Engineer's Dossier](#).
(Note: Dossier [DAW-see-ay] is a term professionals sometimes use for a set of related documents. It includes a glossary to support you if you need help with unfamiliar words.)

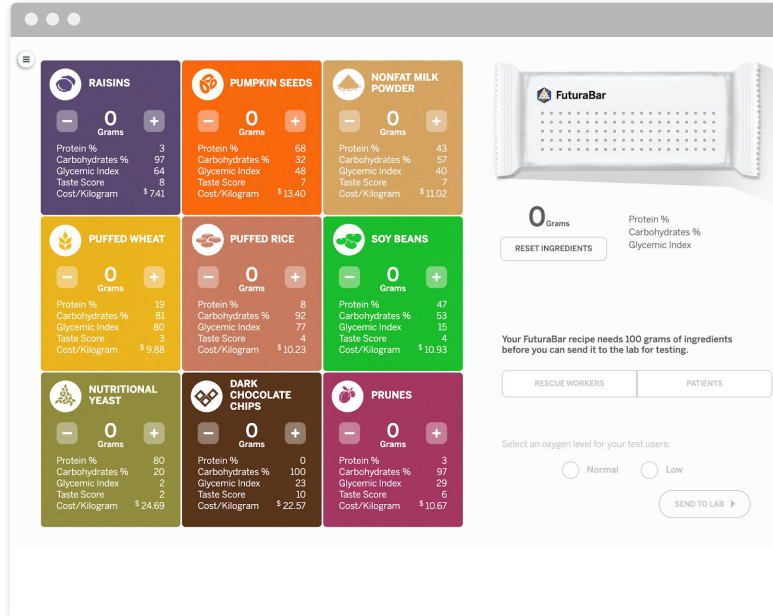
FOOD



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



Explore **RecipeTest**.
As you explore, think
about ways the model is
accurate and ways it is
simplified.




What did you notice
about **RecipeTest**?
What did you find
interesting?

The interface displays a grid of nine ingredients, each with a 0 Grams slider and associated nutritional data:

Ingredient	Protein %	Carbohydrates %	Glycemic Index	Taste Score	Cost/Kilogram
RAISINS	3	97	64	8	\$ 7.41
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Let's summarize what we noticed about the RecipeTest digital model.



What is **accurate** about the model?

What seems **simplified**?

Activity 2

Reading About Metabolism

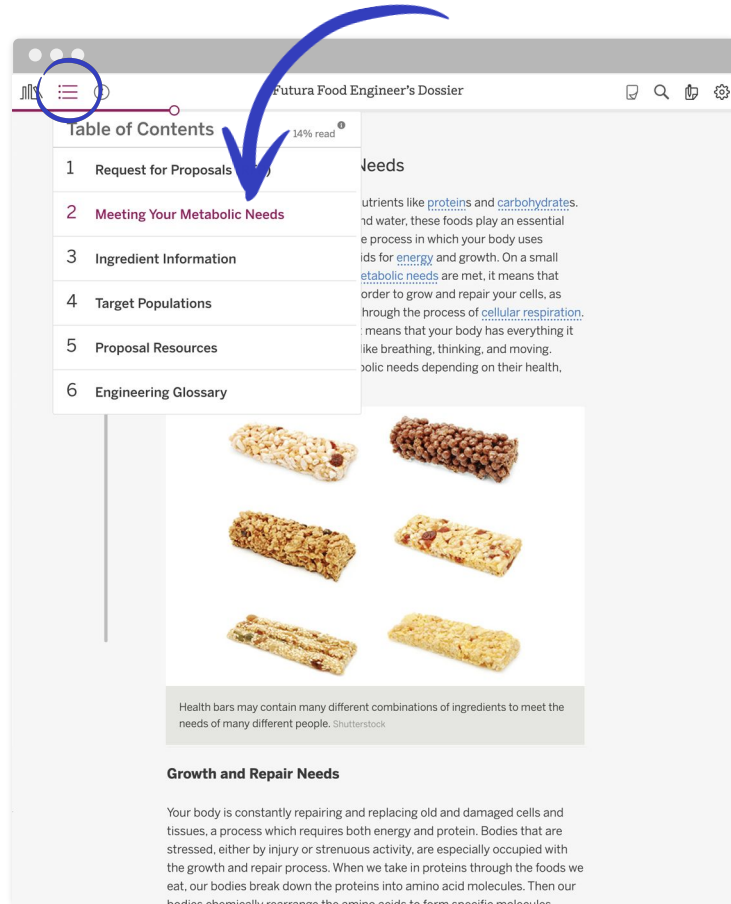




FUTURA FOOD ENGINEER'S DOSSIER



You will begin your **research** on metabolism by reading part of the **Futura Food Engineer's Dossier.**



The screenshot shows a web browser window titled "Futura Food Engineer's Dossier". A blue arrow points from the top-left corner of the browser window to the "Table of Contents" section. The "Table of Contents" is a list of six items: 1. Request for Proposals, 2. Meeting Your Metabolic Needs, 3. Ingredient Information, 4. Target Populations, 5. Proposal Resources, and 6. Engineering Glossary. The second item, "Meeting Your Metabolic Needs", is highlighted in pink. Below the table of contents, there is an image of six different health bars. Below the image, there is a caption: "Health bars may contain many different combinations of ingredients to meet the needs of many different people. Shutterstock". Below the caption, there is a section titled "Growth and Repair Needs" with a paragraph of text: "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."

Table of Contents

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

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.

Engineers read like scientists: **reading multiple times, making connections** to things they already know about, and **asking critical questions.**

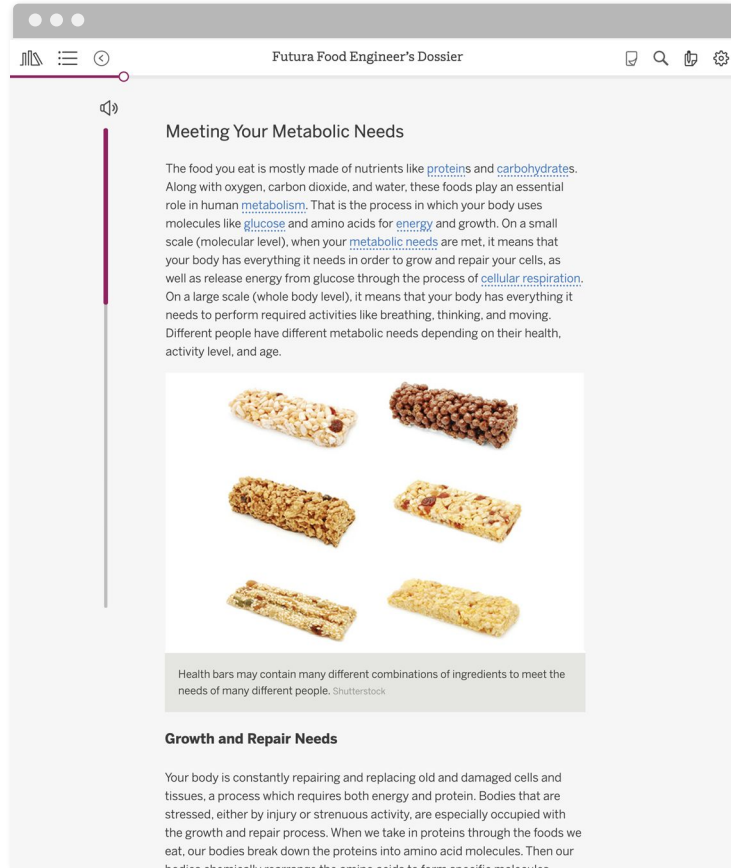
As engineering interns, you should practice these skills, just as you have been doing in science class by using **Active Reading.**

Active Reading Guidelines

1. Think carefully about what you read. Pay attention to your own understanding.
2. As you read, annotate the text to make a record of your thinking. Highlight challenging words and add notes to record questions and make connections to your own experience.
3. Examine all visual representations carefully. Consider how they go together with the text.
4. After you read, discuss what you have read with others to help you better understand the text.


What kinds of metabolic needs do people have?

In addition to recording your own questions and connections as you read, you can make annotations to help you answer this **focus question**.



Meeting Your Metabolic Needs

The food you eat is mostly made of nutrients like [proteins](#) and [carbohydrates](#). Along with oxygen, carbon dioxide, and water, these foods play an essential role in human [metabolism](#). That is the process in which your body uses molecules like [glucose](#) and amino acids for [energy](#) and growth. On a small scale (molecular level), when your [metabolic needs](#) are met, it means that your body has everything it needs in order to grow and repair your cells, as well as release energy from glucose through the process of [cellular respiration](#). On a large scale (whole body level), it means that your body has everything it needs to perform required activities like breathing, thinking, and moving. Different people have different metabolic needs depending on their health, activity level, and age.



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.

You can open the Dossier using the link in the Welcome message.



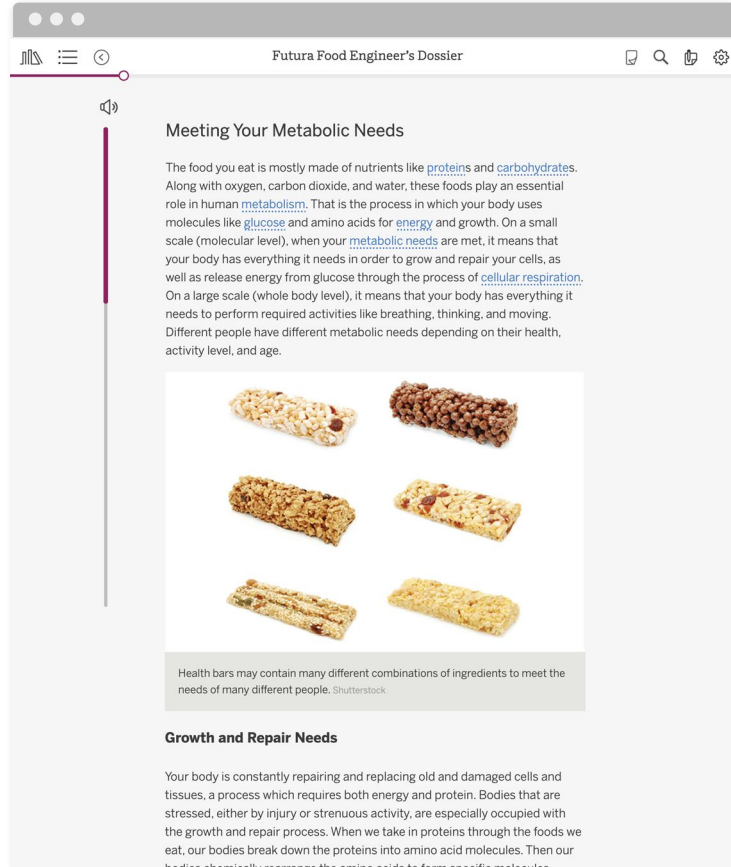
Read and annotate
Chapter 2: “Meeting Your Metabolic Needs” in the Dossier.



Discussing Annotations

After reading, discuss the following questions with your partner:


- While you were reading, what connections did you make to what you already know?
- What questions do you have about metabolism and metabolic needs?
- What words are you unsure about?
- What information did you find to help you answer the focus question?



The image shows a web browser window titled "Futura Food Engineer's Dossier". The browser has a grey header with three dots on the left and icons for home, search, and settings on the right. The page content is on a light grey background. On the left side of the page, there is a vertical purple bar with a speaker icon and a vertical line. The main content area has a section titled "Meeting Your Metabolic Needs". Below the title is a paragraph of text explaining metabolism. Underneath the text is a photograph of six different health bars arranged in two rows of three. Below the photograph is a caption. At the bottom of the page, there is another section titled "Growth and Repair Needs" followed by a paragraph of text.

Meeting Your Metabolic Needs

The food you eat is mostly made of nutrients like [proteins](#) and [carbohydrates](#). Along with oxygen, carbon dioxide, and water, these foods play an essential role in human [metabolism](#). That is the process in which your body uses molecules like [glucose](#) and amino acids for [energy](#) and growth. On a small scale (molecular level), when your [metabolic needs](#) are met, it means that your body has everything it needs in order to grow and repair your cells, as well as release energy from glucose through the process of [cellular respiration](#). On a large scale (whole body level), it means that your body has everything it needs to perform required activities like breathing, thinking, and moving. Different people have different metabolic needs depending on their health, activity level, and age.



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Let's work together to summarize the key points of what you read in Chapter 2.



Reading About Metabolism

Submitting Annotations

Review your annotations, answer the reflection question below the article, and then select HAND IN to submit your article.



Request for Proposals (RFP)

International Disaster Aid (IDA) is a large nonprofit organization providing relief and medical services to areas affected by natural disasters, such as forest fires, floods,

Activity 3


After-Hours Work



Futura Food Engineer's Dossier

Request for Proposals (RFP)

International Disaster Aid (IDA) is a large nonprofit organization providing relief and medical services to areas affected by natural disasters, such as forest fires, floods, hurricanes, earthquakes, and tornadoes. IDA provides medical care for the sick and wounded and has a team of trained rescue workers who search for and provide help to individuals who are still in danger.



Aid organizations like International Disaster Aid give food, medical supplies, and other useful things to people who have been affected by disasters. This rescue worker is giving out bags of everyday items people might need. Shutterstock

IDA would like to provide its staff and patients with health bars to help them meet their nutritional needs during a natural disaster. Rescue workers are active and need to keep their [energy](#) up while they are providing [disaster relief](#), while people with injuries need extra energy and [protein](#) to help their body recover. IDA seeks [proposals](#) for a health bar to feed the rescue workers and patients at disaster sites. Health bars can be packed with nutrients, carried easily, and eaten quickly, making them ideal for disaster sites. Futura Engineering's Nutrition Division will focus on designing a recipe for a health bar that will help IDA meet its goal.

For this task, you'll **read and annotate** Chapter 1: "Request for Proposals (RFP)" in the Dossier. Then, you'll submit your annotations and respond to some questions.



After-Hours Work

Return to [Futura Workspace](#) and be sure you've completed all internship tasks for the day.

- Open the Dossier.
- Read and annotate Chapter 1: "Request for Proposals" (RFP).
- If your internship coordinator has told you to submit your annotations, move on to the next student screen to hand them in.
- Your internship coordinator may have asked you to complete additional tasks. Double-check your Workspace inbox to see if there are Safety Guidelines to read and a Safety Agreement to submit.

Remember to select the **Metabolism Engineering Internship** from the login page for Futura Workspace.



End of Lesson



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HALL OF SCIENCE
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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

Research Phase



Day 1: Introduce interns to the food engineering problem they will work to solve.



Day 2: Help interns prepare for designing an energy bar that meets various metabolic needs of test users.



Day 3: Help interns learn more about the different metabolic needs of the different target populations.



Day 4: Interns get baseline information about the ingredients they will use in their health bar designs.



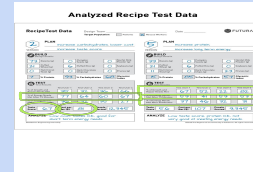
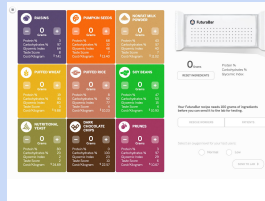
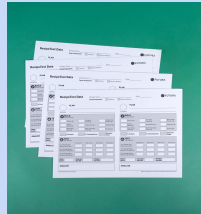
Design Phase



Day 5: Give interns structured practice with iterative testing.



Day 6: Interns think critically about their quantitative data in order to identify an optimal design.



Research Phase



Day 7: Interns create proposal outlines.



Day 8: Interns complete the Design Decisions, the core of the Final Proposal.



Day 9: Interns prepare their Final Proposals



Day 10: Interns reflect on and expand their knowledge of engineering by defining a design problem and criteria that apply scientific principles.



Rubric: Design Decisions

Needs Assessment	Designing	Prototyping	Evaluating
<ul style="list-style-type: none"> Identify the problem Identify the audience Identify the constraints Identify the resources Identify the stakeholders Identify the goals Identify the success criteria 	<ul style="list-style-type: none"> Generate ideas Develop a plan Develop a prototype Develop a solution Develop a presentation Develop a timeline Develop a budget Develop a risk management plan 	<ul style="list-style-type: none"> Develop a prototype Develop a solution Develop a presentation Develop a timeline Develop a budget Develop a risk management plan Develop a user interface Develop a user experience 	<ul style="list-style-type: none"> Evaluate the solution Evaluate the presentation Evaluate the timeline Evaluate the budget Evaluate the risk management plan Evaluate the user interface Evaluate the user experience

Sources of evidence include design test results, goals, comparisons with other designs, and background research.

Types of Evidence

Design	Design	Design
<ul style="list-style-type: none"> Design brief Design plan Design prototype Design solution Design presentation Design timeline Design budget Design risk management plan 	<ul style="list-style-type: none"> Design brief Design plan Design prototype Design solution Design presentation Design timeline Design budget Design risk management plan 	<ul style="list-style-type: none"> Design brief Design plan Design prototype Design solution Design presentation Design timeline Design budget Design risk management plan



Questions?



Plan for the day- Part 2

- Teaching and Learning in an Amplify Science Engineering Internship Unit
- Planning a Lesson
- Closing



4 Steps for Starting Your Lesson

1. Download **Classroom Slides** and review them.
2. Read the **Overview**.
3. Review the **Materials & Preparation** document.
4. Read the **Differentiation** document.

The screenshot shows the Amplify lesson interface. At the top, there is a navigation bar with tabs for 'TEACHER Introducing Futura', 'TEACHER Exploring RecipeTest', '2 READING Reading About Metabolism', and '3 HOMEWORK After-Hours Work'. Below this, there is a 'RESET LESSON' button and a 'GENERATE PRINTABLE LESSON GUIDE' button. The main content area is titled 'Overview' and contains text about the Engineering Internship project. To the left of the main content, there is a sidebar with a list of documents: 'Overview', 'Materials & Preparation', 'Differentiation', 'Standards', 'Vocabulary', and 'Unplugged?'. To the right of the main content, there is a 'Digital Resources' section with links to 'Classroom Slides Day 1 | PowerPoint', 'Classroom Slides Day 1 | Google Slides', 'All Projections', 'Classroom Videos Day 1 | Zip', 'Video: Welcome to Futura', and 'Active Reading Guidelines'. Four numbered orange arrows point to specific elements: arrow 1 points to 'Classroom Slides Day 1 | PowerPoint', arrow 2 points to the 'Overview' document in the sidebar, arrow 3 points to the 'Materials & Preparation' document in the sidebar, and arrow 4 points to the 'Differentiation' document in the sidebar.

2

3

4

1

Lesson ____	Activity Overview	
What is the purpose of this lesson? Access prior knowledge about rocks. Make observations of rocks.	Activity 1 (##min)	
What will students learn?	Activity 2 (##min)	
3-D Statement (identify SEP, CCC, and DCI):	Activity 3 (##min)	
Student Resources:	Activity 4 (##min)	
Assessment Opportunities:	Activity 5 (##min)	

Lesson <u>Day 1</u>	Activity Overview	
<p>What is the purpose of this lesson?</p> <p>To introduce interns to the food engineering problem they will work to solve, and for them to become familiar with the tools and resources they have in order to design solutions.</p>	<p>Activity 1 (10 min)</p>	<p>(Teacher Only) Introducing Futura</p>
<p>What will students learn?</p> <p>-Engineers design physical objects and processes that try to solve real-world problems.-Criteria define the engineering problem.-Background research is necessary when solving an engineering problem.-Metabolic needs for survival are energy and cellular growth and repair.-Food provides carbohydrates and proteins necessary to meet metabolic needs.-Glycemic index measures how fast carbohydrates break down into glucose.</p>	<p>Activity 2 (10 min)</p>	<p>(Teacher Only) Exploring RecipeTest</p>
<p>3-D Statement (identify SEP, CCC, and DCI):</p> <p>Students obtain and evaluate information by reading in their Dossier about the design criteria for their health bars, including meeting the needs of the target population for energy and matter from food (energy and matter) in order to define their engineering problem.</p>	<p>Activity 3 (20 min)</p>	<p>Reading About Metabolism</p>
<p>Student Resources: Futura Workspace</p>	<p>Activity 4 (# min)</p>	<p>After-Hours Work</p>
	<p>Activity 5 (##min)</p>	

Remember to plan for...

Student work:

- How do you plan to collect evidence of student work?

Differentiation:

- How do you plan to differentiate the lesson for diverse learners?

4 Steps for Starting Your Lesson

1. Download **Classroom Slides** and review them.
2. Read the **Overview**.
3. Review the **Materials & Preparation** document.
4. Read the **Differentiation** document.
5. If you have time, navigate to **Lesson 1.3** and repeat steps 1-4.

The screenshot shows the Amplify lesson interface. At the top, there is a navigation bar with tabs for 'TEACHER Introducing Futura', 'TEACHER Exploring RecipeTest', '2 READING Reading About Metabolism', and '3 HOMEWORK After-Hours Work'. Below the navigation bar, there is a 'RESET LESSON' button and a 'GENERATE PRINTABLE LESSON GUIDE' button. On the left side, there is a sidebar menu with the following items: 'Overview', 'Materials & Preparation', 'Differentiation', 'Standards', 'Vocabulary', and 'Unplugged?'. On the right side, there is a 'DIGITAL RESOURCES' section with the following items: 'Classroom Slides Day 1 | PowerPoint', 'Classroom Slides Day 1 | Google Slides', 'All Projections', 'Classroom Videos Day 1 | Zip', 'Video: Welcome to Futura', and 'Active Reading Guidelines'. Four numbered orange arrows point to the following elements: 1. 'Classroom Slides Day 1 | PowerPoint' (labeled '1'), 2. 'Overview' (labeled '2'), 3. 'Materials & Preparation' (labeled '3'), and 4. 'Differentiation' (labeled '4').

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

ASSIGN

Digital Resources

- Classroom Slides Day 1 | PowerPoint
- Classroom Slides Day 1 | Google Slides
- All Projections
- Classroom Videos Day 1 | Zip
- Video: Welcome to Futura
- Active Reading Guidelines

Overview

Students are introduced to the Engineering Internship project and begin the Research phase in preparation for proposing solutions to an engineering problem: to design a health bar to meet the metabolic needs of rescue workers and patients during a natural disaster. Interns read the Welcome to Futura! message and watch a video that introduces the project director and the Request for Proposals (RFP). Interns explore the Futura RecipeTest Design Tool and then use Active Reading strategies to begin background research on metabolic needs in the Dossier. The purpose of these activities is to introduce interns to the food engineering problem they will work to solve, and for them to become familiar with the tools and resources they have in order to design solutions.



Questions?



Plan for the day- Part 2

- Teaching and Learning in an Amplify Science Engineering Internship Unit
- Planning a Lesson
- Closing



Additional resources

Welcome, caregivers!

We hope you enjoy learning more about Amplify Science and what students are learning in science this year.

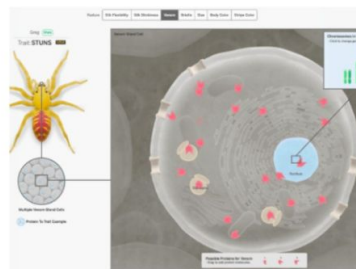
[Para acceder a este sitio en español haga clic aquí.](#)

Amplify welcomes you and your learner to the Science program for the new school year. We are very excited to provide you with exceptional learning opportunities through Science. Below are resources and helpful guides for enabling your student to have the most productive experience with our platform throughout the year.

 [Contact Us](#)



Grades 6-8



LAUSD Microsite-

<https://amplify.com/laUSD-science>

Welcome to Amplify Science!

This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- Access the [Amplify Science Program Hub](#) (To help orient you to the new design, watch this [video](#) and view this [reference guide](#).)
- Find out more about [Amplify Science@Home](#)
- Share the [Caregiver Hub](#) (Eng/Span) with your families
- For LAUSD ES Teachers- [Amplify Science & Benchmark Advance Crosswalk](#)
- Instructional guidance for a [Responsive Relaunch of Amplify Science in 21-22](#)

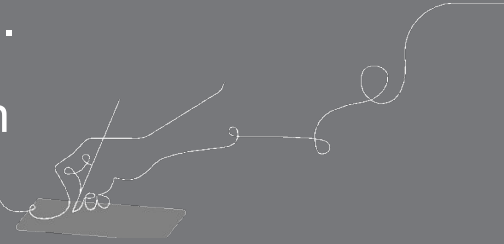
Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!



Overarching goals

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

- ✓ Navigate the Amplify Science Engineering Internship curriculum.
- ✓ Understand the Amplify Science Engineering Internship approach.
- ✓ Apply the program essentials to prepare to teach.
- ✓ Plan for collecting evidence of student learning in order to make instructional decisions to support diverse learner needs.



Closing reflection

Based on our work today in Part
2, share:

Head: something you'll keep in mind

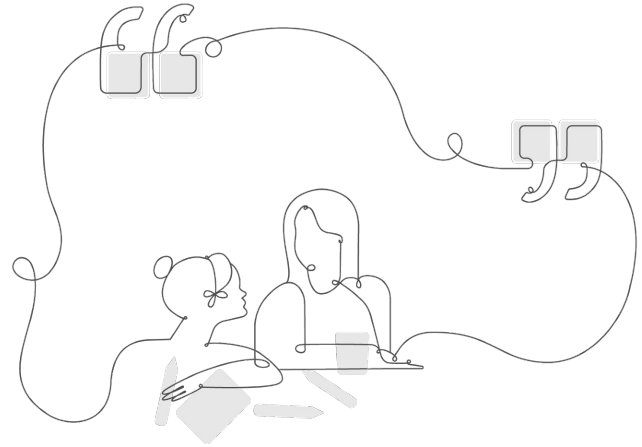
Heart: something you're feeling

Feet: something you're planning to do

Upcoming LAUSD Office Hours

Monday, 11/29 (4-5pm)

meet.google.com/uwc-uuaz-qdc



Additional resources and ongoing support

Customer Care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-10PM EST and weekends 10AM-6PM EST.



help@amplify.com



800-823-1969



Amplify Chat



Please provide feedback!

Presenter name:

Workshop title:

Part 1: Relaunching the Standard Curriculum

Part 2: Guided Planning (Planning for a Lesson)

Modality:

Remote



Thank you!

