

## Planning an Integrated Project



### Quick Question:

What do you think parents, students, teachers (like yourself) and members of your community might say when asked the question, “What do we want our students to learn?”

### Defining “Integrated Instruction”

Students explore an **authentic or “real world” problem by using content and skills from multiple subject areas.** This is the “umbrella” under which all the subjects will integrate their content. A well-designed integrated project is based on:

- Standards-based Content from each teacher
- Natural Connections between subjects
- A Real-World Problem
- A Culminating Product that students can share

### Example of an Integrated Instruction Project

#### **Project Title: Creating a Martian Society**

**Real-World Problem:** How can we plan a human colony that can live on Mars?

- **Engineering:** Students will design and construct a model of a sustainable habitat that allows colonists to survive and thrive on Mars.
- **Social Science:** Students will create a constitution for their colony which includes a plan for the colony's economics, political and legal system, as well as a colonist Bill of Rights.
- **Language Arts:** Students will create a Martian dialect, language, customs and social norms, as well as develop a book of common phrases and a recruitment video including those components.
- **Mathematics:** Students will research and analyze a US city's population and growth and then predict how population growth will impact initial and future resources in the colony.



## Brainstorming your Project Idea: Key Steps

### Project Brainstorm Time

It's time for you to gather together in your teams and identify your project!

Arm yourselves with adhesive notes, pens or pencils, and (most importantly) an open mind. You can use the space on the next page for sharing ideas.

*Note: Use as many adhesive notes as needed. This process may take several cycles before your final project idea is decided.*



### Step 1.

**What content does each teacher cover in their course?**

- Use adhesive notes to write down the main content or topic areas that each teacher covers in their class throughout the year.
- After completing your list, share with your Team.
- Important: The final project must connect to content from each teacher or course.

### Step 2.

**What natural connections are there across these content areas that could support a common Project?**

- What topics overlap? For example, culinary and biology could both explore the nutritional value of food; business and math might use algebra to explore sales; and history and manufacturing could look at how world-wide events affected manufacturing.
- As a group, make a list of all the possible connections you can think up!



### Step 3.

**Using the connections from the last step, is there an authentic or "real world" problem that students could be asked to explore?**

- The skills students learn should mirror those needed for or used in "the real world"
- Consider issues involving technology, controversial issues, disasters, entrepreneurship, etc.

### Step 4.

**Consider these final thoughts as a group:**

- What could be the **culminating assessment or final product** that allows students to show what they learned? (Ideas include a model, a PSA, a help document, a debate...)
- What **skills** will students to obtain? (Academic skills, 21st Century skills, etc.)
- Are there links to **careers**?



## Project Work Space

Use this space for planning with adhesive notes

### Teacher #2 Course Content:

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

### Teacher #1 Course Content:

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

### Teacher #3 Course Content:

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

### Natural Connections:

### "Real World" Problem:

### Culminating Assessment or Final Product:





## Brainstorming Your Individual Lesson Plans

The core of every project is made up of the individual lesson plans written by each teacher. Here you will brainstorm the four lessons you will write as part of your team's project. Take out your trusty pack of adhesive notes and start to come up with ideas. Use the next page as a work space.

### Step 1.

**What specific content / skills will your students need to obtain, given your team's Project idea and culminating assessment?**

Keep in mind your own content standards for your subject area, as well as Common Core/21st Century skills.

- ☐ Each lesson only covers 1-2 days, so don't try to cover too much per lesson.
- ☐ Write down the content/skills for each lesson on adhesive notes and place them on the Lesson Work Space on the next page.

### Step 2.

**How will you incorporate your team Project's "real world" problem into each lesson?**

- ☐ Could you have students explore a case study, make calculations, read some informational text, evaluate unintended consequences, develop a PSA, debate sides, or evaluate a position?
- ☐ Write down ideas for integration for each lesson on your adhesive notes.

### Step 3.

**Ask your Team Lead to review and provide feedback on your four lesson ideas.**



### How do you sequence your lessons?

As an example, here are the four engineering lessons written by Nancy Brown for the integrated project, "Creating a Martian Society."

Lesson #1: The Mars Environment: Students will see what happens if humans are exposed to the Mars environment without protection. As a class, students will develop a list of what humans need to survive. They will explore what Mars is like and compare it to the Earth. After identifying environmental factors on Mars that would be harmful for humans, they will design a structure to protect the colonists.

Lesson #2: Thirsting for Mars Adventure: A challenge for developing a colony on Mars is finding water. In this lesson, students will find out why water is so important for human survival, brainstorm ways to get water, and analyze some approaches based on scientific evidence.

Lesson #3: Hungry for Mars Knowledge: Food is a challenge for developing a colony on Mars, both supplying food for the trip and producing food once there. In this lesson, students will find out what happens if you stop eating food, explore how food is perceived and how food affects morale, and participate in a lab that may change the way they think about food.

Lesson #4: Mars Power: This lesson ties together the engineering concerns behind establishing a colony on Mars. Air, food, and water are all necessary for human survival. But how will we provide power for the systems that deliver those necessities? Students will discuss possible energy sources, and construct a solar oven to cook S'mores here on Earth.



## Lesson Work Space

Course/Subject:

Teacher:

As you start to sketch out your four lesson plan ideas, keep in mind they should naturally build on each other while still tying in to your Team's project theme or problem.

Tip:  
Use adhesive notes  
to brainstorm your  
lesson ideas

### Lesson #1

Skills or content students will obtain:

Integration connection(s):

### Lesson #2

Skills or content students will obtain:

Integration connection(s):

### Lesson #3

Skills or content students will obtain:

Integration connection(s):

### Lesson #4

Skills or content students will obtain:

Integration connection(s):



## Notes

